



PROJECT IDENTIFICATION FORM (PIF)¹

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

PART I: PROJECT IDENTIFICATION

Project Title:	Protect human health and the environment from unintentional releases of POPs originating from incineration and open burning of health care- and electronic-waste.		
Country(ies):	Egypt	GEF Project ID: ²	4392
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	4567
Other Executing Partner(s):		Submission Date:	2012-08-15
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration(Months)	48
Name of parent program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/>		Agency Fee:	389,500

A. FOCAL AREA STRATEGY FRAMEWORK³:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Indicative Financing from relevant TF (GEF/LDCF/SCCF) (\$)	Indicative Cofinancing (\$)
(select) CHEM-1	Outcome 1.3: POPs releases to the environment reduced.	Indicator 1.3 Amount of un-intentionally produced POPs releases avoided or reduced from industrial and non-industrial sectors; measured in grams TEQ against baseline as recorded through the POPs tracking tool.	2,800,000	12,200,000
(select) CHEM-1	Outcome 1.5: Country capacity built to effectively phase out and reduce releases of POPs.	Indicator 1.5.2 Progress in developing and implementing a legislative and regulatory framework for environmentally sound management of POPs, and for the sound management of chemicals in general, as recorded through	300,000	800,000

¹ It is very important to consult the PIF preparation guidelines when completing this template.

² Project ID number will be assigned by GEFSEC.

³ Refer to the reference attached on the Focal Area Results Framework when filling up the table in item A.

		the POPs tracking tool.		
(select) CHEM-3	Outcome 3.1: Country capacity built to effectively manage Mercury in priority sectors.	Indicator 3.1 Countries implement pilot mercury management and reduction activities.	550,000	1,600,000
(select) CHEM-3	Outcome 3.2: Contribute to the overall objective of the SAICM of achieving the sound management of chemicals (SMC) throughout their life-cycle in ways that lead to the minimization of significant adverse effects on human health and the environment.	Indicator 3.2 Countries implement SAICM relevant activities that generate global environmental benefits and report to the International Conference on Chemicals Management.	254,762	1,400,000
(select) (select)				
(select) (select)				
(select) (select)				
(select) (select)				
(select) (select)				
(select) (select)				
(select) (select)	Others			
Project management cost ⁴			195,238	781,000
Total project costs			4,100,000	16,781,000

⁴ GEF will finance management cost that is solely linked to GEF financing of the project.

B. PROJECT FRAMEWORK

Project Objective: Protect human- and environmental health by reducing releases of POPs and other hazardous releases (e.g. mercury, lead, etc.) resulting from the unsound management of waste, in particular the incineration and open burning of hazardous health care waste (Component 1&2) and electronic waste (Component 3&4) by demonstrating and promoting Best Available Techniques (BAT) and Best Environmental Practices (BEP) to soundly manage and dispose of such wastes.					
Project Component	Grant Type (TA/IN V)	Expected Outcomes	Expected Outputs	Indicative Financing from relevant TF (GEF/LDCF/SCCF) (\$)	Indicative Cofinancing (\$)
1. HCWM: Reduction of UPOPs emissions through capacity building, introduction and demonstration of BEP and BAT and strengthening of the legislative and policy framework	TA	<p>1.1 UPOPs emissions reduced through support to HCWM initiatives at health-care facility(ies) level, Central Treatment Facility (CTF) level and training institutions.</p> <p>1.2 Nat. policy and regulatory framework strengthened/dev eloped with respect to HCWM and UPOPs emissions</p>	<p>1.1.1 UPOPs baseline determined.</p> <p>1.1.2 Facility assessments conducted.</p> <p>1.1.3 BEP implemented at selected model hospitals, health-care facilities (HCFs) and one central treatment facility (CTF).</p> <p>1.1.4 Facilities evaluated to ensure that they have successfully implemented BEP.</p> <p>1.1.5 Identification of technology requirements, competitive procurement, selection and installation of BAT technology at the CTF.</p> <p>1.1.6 National HCWM training opportunities enhanced to reach out to additional hospitals/HCFs.</p> <p>1.2.1 Nat. HCW policies, regulations and plans reviewed and enhanced.</p> <p>1.2.2 HCWM guidelines revised and tailored to facility types.</p>	1,850,000	7,000,000

			<p>1.2.3 Country/Governor ate enabled to expand BAT/BEP to remainder of hospitals and HCFs.</p> <p>1.2.4 Government enabled to monitor hospitals and HCFs (provision of incentives and enhanced compliance capacity).</p> <p>1.2.5 Institutional capacity of chemical waste management sectors strenghtened</p>		
<p>2. HCWM: Reduction of Mercury emissions through capacity building, demonstration and introduction of mercury-free medical instruments and strengthening of the legislative/policy frameworks (in combination with component 1)</p>	TA	<p>2.1 Mercury emissions in HCWM sector are reduced</p>	<p>2.1.1 Mercury baseline determined.</p> <p>2.1.2 Facility assessments conducted.</p> <p>2.1.3 BEP related to the safe management, storage, phase-out and disposal of Mercury containing devices implemented at all model facilities (hospitals, HCFs and the CTF)</p> <p>2.1.4 Mercury-free device specifications determined.</p> <p>2.1.5 Hospitals/HCFs prepared for the introduction/use/ maintenance of non-mercury devices.</p> <p>2.1.6 Non-Mercury containing devices competitively procured and introduced at all participating facilities.</p>	500,000	1,500,000

		2.2 Nat. policy and regulatory framework strengthened/ developed with respect to sequestration, phase-out, storage and disposal of Mercury waste in HCWM sector.	2.2.1 Policies/ guidelines on sequestration, and handling of mercury waste from HCFs developed. 2.2.2 Standards for non-mercury devices promulgated. 2.2.3 Mercury guidelines related to HCWM sector revised and tailored to facility types.		
3. E-Waste: Reduction of emissions of UPOPs, and POPs through capacity building, introduction and demonstration of BEP and BAT (refurbishment and end-of-life) and strengthening of the legislative and policy framework	TA	3.1 Emissions of UPOPs (including new POPs) and POPs reduced through support to e-Waste Management at municipality- and national-level. 3.2 National policy and regulatory framework strengthened with respect to e-	3.1.1. National mapping of e-waste processors and refurbishers and applied practices completed and baseline on POPs and UPOPs releases from e-waste processing determined. 3.1.2 Capacity/ awareness among key among key stakeholders at national and municipal level built. 3.1.3 Introduction of BEP/BAT to priority municipalities, selected formal and informal e-waste processors/refurbi shers. 3.1.4 Replication of project results at international, regional, national and municipality level. 3.2.1 National policy and regulatory framework (incl rules and regulations) on e-	1,200,000	6,000,000

		waste management.	waste management reviewed, revised and improved (pertaining to processing, refurbishing, storage, disposal, illegal trade etc.) and fully integrated into the national policy and regulatory framework for waste management.		
4. E-Waste: Reduction of emissions of other hazardous substances (mercury, lead, cadmium) through capacity building, introduction and demonstration of BEP and BAT (in combination with Component 3's investments for the end-of-life management) and strengthening of the legislative and policy framework	TA	4.1 Emissions of other associated hazardous substances (mercury, lead, cadmium) reduced through support to e-waste management at municipality- and national-level. 4.2 National policy and regulatory framework on associated hazardous releases from e-waste processing strengthened.	4.1.1. Baseline on associated hazardous releases (mercury, lead, cadmium) from e-waste processing determined (as part and parcel of Component 3). 4.1.2 Introduction of BEP/BAT to formal and informal e-waste processors. (as part and parcel of Component 3). 4.1.3 Capacity/ awareness among key stakeholders built (as part and parcel of Component 3). 4.2.1 National policy and regulatory framework on e-waste management and recycling with respect to associated hazardous releases (mercury, lead, cadmium) reviewed/ improved (as part and parcel of Component 3).	254,762	1,400,000
5. Monitoring, learning, adaptive	(select)	5.1. Project's results sustained	5.1.1. M&E and adaptive	100,000	100,000

feedback, outreach, and evaluation		and replicated	management applied to project in response to needs, mid-term evaluation findings with lessons learned extracted. 5.1.2. Lessons learned and best practices are disseminated at national level.		
	(select)				
	(select)				
	(select)				
	(select)				
	(select)				
Project management Cost ⁵				195,238	781,000
Total project costs				4,100,000	16,781,000

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Cofinancing for baseline project	Name of Cofinancier	Type of Cofinancing	Amount (\$)
National Government	Ministry of Health and Population, Ministry of Communication and Information Technology and Ministry of State for Environmental Affairs	Grant	3,681,000
Bilateral Aid Agency (ies)	Swiss State Secretariat for Economic Affairs (SECO)	Grant	7,000,000
Private Sector	TBC, participating private sector partners listed in section B.5.	Grant	6,000,000
GEF Agency	UNDP	In-kind	50,000
GEF Agency	UNDP	Grant	50,000
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Cofinancing			16,781,000

⁵ Same as footnote #3.

D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal area	Country name/Global	Project amount (a)	Agency Fee (b)²	Total c=a+b
UNDP	GEF TF	Persistent Organic Pollutants	Egypt	4,100,000	389,500	4,489,500
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
(select)	(select)	(select)				0
Total Grant Resources				4,100,000	389,500	4,489,500

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table

² Please indicate fees related to this project.

PART II: PROJECT JUSTIFICATION

A. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

A. 1.1. THE GEF FOCAL AREA STRATEGIES

The project is fully consistent with the GEF-5 Chemicals focal area strategy, Objective 1: Phase-out POPs and reduce POPs releases as well as Objective 3: Pilot sound chemicals management and mercury reduction. The project will contribute to the achievement of GEF's main indicators under this strategic programming area through the following interventions:

Relevant GEF-5 Strategy Indicator	Project's contribution
<i>Outcome 1.3: POPs releases to the environment reduced</i>	
Indicator 1.3 Amount of un-intentionally produced POPs releases avoided or reduced from industrial and non-industrial sectors; measured in grams TEQ against baseline as recorded through the POPs tracking tool	<p>The project will reduce emissions of UPOPs, POPs as well as other hazardous releases (e.g. mercury, lead, etc) resulting from the unsound management, disposal and recycling of a) Health-Care Waste (HCW), in particular inadequate incineration and open burning of HCW; and, b) Electronic Waste, in particular the practice of unsound recycling activities and open burning of electronic waste.</p> <p>The project will achieve this by i) determining the baseline for releases of UPOPs, POPs and other hazardous substances (e.g. mercury, lead) resulting from unsound HCW and E-waste practices; ii) conducting facility assessments; iii) building capacity among key stakeholders; iv) implementing BEP at selected model hospitals, health-care facilities (HCFs) and central treatment facility (CTF); v) introducing BAT and BEP to formal and informal e-waste processors; vi) preparing HCFs for the use/maintenance of non-mercury devices followed by introduction of mercury-free devices; vii) evaluating facilities to ensure that they have successfully implemented BEP; viii) installing BAT technology(ies) at one Central Treatment Facility which satisfied evaluation criteria; and, xi) enhancing national HCWM training opportunities to reach out to additional hospitals/HCFs.</p>
<i>Outcome 1.5: Country capacity built to effectively phase out and reduce releases of POPs</i>	
Indicator 1.5.2 Progress in developing and implementing a legislative and regulatory framework for environmentally sound management of POPs, and for the sound management of chemicals in general, as recorded through the POPs tracking tool	The project will strengthen and enhance national policies and regulatory frameworks with respect to the management of Health-Care Waste Management, sequestration and storage of mercury waste (Components 1 and 2) and E-Waste (Components 3 and 4).
<i>Outcome 3.1: Country capacity built to effectively phase out and reduce releases of POPs</i>	
Indicator 3.1 Countries implement pilot mercury management and reduction activities.	<p>One of the project's objectives is to reduce mercury emissions from health-care. To this end the project will aim to i) determine the baseline for releases of Mercury from Healthcare through facility assessments; ii) built capacity among participating hospitals, HCFs and the CTF in the safe management, storage and disposal of Mercury-containing devices; iii) prepare HCFs on the use and maintenance of non-mercury devices; iv) promulgate standards for non-mercury devices; v) phase-in non-mercury thermometers and sphygmomanometers at HCFs; and, vi) develop policies and guidelines on sequestration and storage of mercury waste from HCFs.</p> <p>The project will also be addressing mercury emissions from the e-waste sector, resulting from Mercury contained in electronic products.</p>
<i>Outcome 3.2: Contribute to the overall objective of the SAICM of achieving the sound management of chemicals (SMC) throughout their life-cycle in ways that lead to the minimization of significant adverse effects on human health and the environment</i>	
Indicator 3.2 Countries implement SAICM relevant activities that generate global environmental benefits and report to the International Conference on Chemicals Management	The project will aim to reduce emissions of Persistent Toxic Substances and other associated heavy metals (cadmium, lead etc) from the inadequate processing and recycling of e-waste streams, by i) determining the baseline on associated hazardous releases (mercury, lead, cadmium) from e-waste processing; ii) introducing BEP to formal and informal e-waste processors. (BAT will be introduced in combination with Component 3); iii) build capacity/ awareness among key stakeholders; and, iv) review/improve the regulatory framework on e-waste management/recycling with respect to associated hazardous releases (mercury, lead, cadmium).

A.1.2. FOR PROJECTS FUNDED FROM LDCF/SCCF: THE LDCF/SCCF ELIGIBILITY CRITERIA AND PRIORITIES: N/A

A.1.3 FOR PROJECTS FUNDED FROM NPIF, RELEVANT ELIGIBILITY CRITERIA AND PRIORITIES OF THE FUND: N/A

A.2. NATIONAL STRATEGIES AND PLANS OR REPORTS AND ASSESSMENTS UNDER RELEVANT CONVENTIONS, IF APPLICABLE, I.E. NAPAS, NAPS, NBSAPS, NATIONAL COMMUNICATIONS, TNAS, NIPS, PRSPs, NPFE, ETC.:

1. Egypt's 2005 National Implementation Plan (NIP) with respect to the management of dioxins and furans identifies open burning of wastes, medical waste incinerators and industrial processes as the three largest emitters of UPOPs. NIP priorities related to dioxins and furans are: prevention of uncontrolled waste combustion, sound environmental management of waste, implementation of BAT/BEP measures for the reduction of dioxin and furan emissions, adjustment of national legislation to adequately address POPs/UPOPs issues as well as the provision of education and awareness building.
2. Egypt's 2007-2011 Country Strategy Paper (CSP) highlights solid waste management, including municipal, agricultural-, industrial- and other types of wastes and residues as a priority.
3. The 2002 -2017 National Environment Action Plan (NEAP) lists programmes on waste management, pollution abatement, transferring clean technologies, environmental monitoring and evaluation, technical assistance and capacity building among the nine main priorities.
4. Health Care Waste Management (HCWM): Following a request from the Prime Minister's Office in 2009, the Egyptian Environmental Affairs Agency (EEAA) and the Ministry of Health and Population (MoHP) have been collaborating on the revision of the Health Care Waste Management (HCWM) Strategy. Its 2010 finalized version is soon expected to be officially launched and identifies seven priority governorates (Cairo, Alexandria, Giza, Qalyoubia, Dakhalia, Sharkia and Gharbia) which combined are responsible for the generation of 60 percent of Egypt's Health-Care Waste. The 2010 strategy is founded upon three priority interventions in order to tackle Egypt's critical HCWM situation:
 - Establishment of centralized treatment facilities rather than small scale treatment units currently located on health-care premises.
 - Revision of the code of practice and use of centralized treatment technologies under the supervision of MoHP and the Ministry of State for Environmental Affairs (MSEA).
 - Revitalizing the medical waste management situation in health-care establishments (training, separation, collection, storage and transportation) according to new guidelines.

The Government of Egypt (GoE) has been putting a lot of effort in the revision of the HCWM Strategy and is creating the necessary political platform for its implementation. The GoE has identified its priorities with respect to HCWM as well as the priority locations where implementation of the strategy has to start the soonest. The MoHP has allocated a significant amount of its operating budget (50 million EGP = ~ 8.8 million US\$) for the construction, installation and operation of centralized hazardous waste treatment disposal sites in five locations in the Greater Cairo. The GoE is actively engaging with partners (such as the Embassy of Switzerland in Cairo and the GEF through UNDP) to identify additional funds for technical assistance which is urgently needed to ensure the success of the 2010 Strategy, to allow priority governorates, for which currently sufficient funding is lacking, to advance their HCWM situation.

The proposed UNDP supported project is fully in line with the HCWM priorities identified in the 2010 HCWM Strategy as well as those under the NIP. The project is particularly relevant at a time when Egypt

is at the forefront of "rolling out" its 2010 HCWM strategy across the country. The scope for replication of BAT and BEP would be optimal considering other facilities (whether HCFs, CTFs, training institutions) would soon be requested by law to abide by the new regulations and would be able to adopt best practices implemented by the project's model facilities.

5. Electronic-Waste (e-waste) Management: The Ministry of Communications and Information Technology (MoCIT) is very conscious of the fact that to date the management of e-waste in Egypt has mostly been in the hands of the informal sector and that little or no awareness or capacity exists at national and local levels (including customs) to:

- Manage rapidly growing health and environmental challenges posed by illegal imports of such waste, inadequate recycling or processing of e-waste;
- Take advantage of the economic opportunities the e-waste sector has to offer.

It is for these reasons the Ministry has recently signed a Memorandum of Understanding (MoU) with MSEA and initiated a multi-stakeholder approach towards the formulation of a Green ICT strategy including the management of e-waste, with the following objectives:

- Raise awareness on the role of ICT in improving performance across the Egyptian Information Society;
- Adopt a multi-stakeholder approach to address various Green ICT challenges;
- Promote the use of ICT in delivering green applications and services (e.g. e-learning, e-government), and;
- Develop Green ICT skills and capacities.

In addition, the MoCIT coordinates closely with private sector initiatives, such as the one initiated by CompMe which aims to refurbish 30,000 computer and notebooks a year.

The above initiatives will cover a lot of new terrain while at the same time building national capacity with respect to Green ICT and economic opportunities in e-waste management. Nevertheless, the scope of on-going initiatives is limited in the sense that health and environmental challenges originating from inadequate e-waste management practices (e.g. inadequate disassembly and recovery processes e.g. open burning) resulting in harmful releases such as POPs and UPOPs (mostly occurring in the informal sector, see section B1), are not being addressed.

The scope of the proposed e-waste component is fully in line with priorities identified under the NIP to reduce releases of UPOPs from uncontrolled burning and is complementary to on-going initiatives in Egypt. In addition, Egypt would be an excellent country for an e-waste demonstration project, considering its location (North-Africa, Mediterranean region & South-West Asia) creating the opportunity to serve as an example of best practices to neighbouring countries, and not the least because within its region Egypt is currently the largest recipient of used-electronics.

B. PROJECT OVERVIEW:

B.1. DESCRIBE THE BASELINE PROJECT AND THE PROBLEM THAT IT SEEKS TO ADDRESS:

With respect to the management of dioxins and furans, Egypt's 2005 NIP identifies open burning of wastes, medical waste incinerators and industrial processes as the three largest emitters of UPOPs (see also section A1). In this regard, the EEAA has requested UNDP to prepare a GEF project that will focus on the following four critical areas:

1. HCWM: Reduction of UPOPs emissions through capacity building, introduction and demonstration of BEP and BAT and strengthening of the legislative and policy framework:

The EEAA and MoHP estimate that Egypt's health care sector produces between 150,000 – 170,000 kg/day of Hazardous Health Care Waste (HCW). This quantity is made up of 77,500 kg/day from Government health care facilities with the remainder produced by private hospitals and clinics, teaching hospitals, military hospitals and other health facilities. About 30 percent of hazardous HCW is treated through the use of technologies either operated on health-care premises or in a few cases in a centralized manner by private operators. The remaining 70 percent of hazardous HCW is either diverted to informal recycling facilities or mixed with regular municipal waste and ultimately ends up on municipal landfill sites and is burned in the open. The mentioned figures are rough estimates as most health care facilities and privately owned HCW transportation companies have no waste tracking systems in place and as a consequence are unable to report to MoHP on actual waste generation amounts.

The current HCWM situation in Egypt poses significant threats to human and environmental health. The approximate 150 incinerators (including 90 locally manufactured by the Egyptian Military Factory) are often operated on the premises of health-care facilities located within neighborhoods and are among the three largest emitters of UPOPs in Egypt (see NIP). While untreated HCW (~ 70 percent of HCW generated) as well as HCW improperly managed within and outside of HCFs poses immediate health threats to health care personnel, waste handlers and scavengers who are most often unprotected and insufficiently trained to handle such wastes, resulting in the spread of infectious diseases such as HIV/AIDS, hepatitis and other infectious diseases.

The NIP indicates that medical waste incinerators, of which over 140 in 27 cities were accounted for in the inventory, were among the top three categories of emitters, amounting to 10 g-TEQ/yr (air) and 11.44 g-TEQ/year (residue). However, data on UPOPs emissions seem unrealistically low. Applying the guidance on baseline assessment of dioxin releases from HCW incinerators developed under the GEF/UNDP/WHO global medical waste project, dioxin releases resulting from open burning of 30 percent of HCW alone could approximately produce 120 g-TEQ (air) + 11.1 g-TEQ (residue). If in addition 30 percent of HCW (~18,500 tonnes/yr) is treated by incineration, it is expected to produce 10 g-TEQ/yr (according to the NIP these emissions correspond to the use of incinerators with good residence time, good temperature control, and electrostatic precipitator or baghouse filter).

However, according to an inventory recently conducted by the MoHP/EEAA, out of the 89 incinerators located in six priority governorates (Cairo, Alexandria, Giza, Qalyoubia, Dakhalia, Sharkia) 25 percent was either not working or under maintenance. Even though more realistic data on dioxin emissions (using the standardized methodology presented in the UNEP toolkit in combination with the UN/GEF Guidance on Estimating Baseline Dioxin Releases) will be obtained during the PPG phase of the proposed project as part of a rapid assessment, it can be concluded that actual dioxin emissions from medical waste incinerators are most likely significantly higher than reported in the NIP.

The main challenge for MoHP and EEAA in implementing the 2010 HCWM strategy will be to ensure that currently un-treated and/or inadequately treated HCW will in the future be treated through the application of BEP and BAT, moving away from open burning and inadequate incineration to Best Available Technologies, with the ultimate goal to reduce releases of UPOPs and mercury and minimize threats to human and environmental health.

As expressed by the MoHP and EEAA, there is great scope for a GEF/UNDP supported project that would build upon the current GEF/UNDP/WHO HCWM project. Outputs of the current project, that will be relevant to Egypt HCWM situation and which will be applied throughout the implementation of the proposed project are guidelines that define BAT/BEP (in addition to BAT/BEP guidelines under the Stockholm Convention these also integrate WHO waste management guidelines, international standards on microbial inactivation, and best practices related to hospital hygiene, infection control and prevention, occupational safety, patient safety, and other closely related fields) as well as tools, international standards, policy options, effective training techniques, and other resources for the planning and implementation of sustainable healthcare waste management practices.

The proposed project anticipates to implement the following activities to achieve the sound management of HCW in Egypt:

1. Undertake a rapid assessment of a priority Governorate (to be identified during the PPG phase) to verify HCW generation rates, determine UPOPs emissions from HCW (applying standardized methodology presented in the UNEP toolkit, UN/GEF Guidance on Estimating Baseline Dioxin Releases from incinerators as well as the UN/GEF Individualized Rapid Assessment Tool (I-RAT));
2. Develop a Governorate action plan including the selection and prioritization of hospitals and healthcare facilities for BAT/BEP implementation;
3. Work with a team of national experts to implement BEP in the priority hospitals and healthcare facilities as well as at a Centralized Treatment Facility (CTF) (including: obtaining commitment of facility management, promulgation of facility policies, development of a healthcare waste management plan, training, the adoption of BEP, regular monitoring, and the set-up of operating and management systems necessary to properly operate and maintain BAT technologies);
4. Evaluate priority hospitals and healthcare facilities and well as the Central Treatment Facility to ensure they have successfully implemented BEP for healthcare waste management and are ready for the installation of BAT technologies (at the CTF but possibly also at HCFs that are too remote and can not be serviced by a CTF);
5. Prepare the CTF and possible some hospitals/HCFs (see point 4) for the deployment of BAT technologies, with the aim to replicate across the country (including the application of costing tools for the selection of treatment scenarios, criteria and technical specifications for technologies, operating and testing protocols, etc.)
6. Based on determined technical specification, undertake competitive procurement, selection and commissioning of BAT technology(ies).
7. Install BAT technologies in facilities;
8. Enhance the national action plan for the development of national training programs and policy enhancements;
9. Develop national training programs to reach out to other hospitals and healthcare facilities;
10. Enhance the legal framework and national regulations related to health-care waste management;
11. Create an enabling environment and remove barriers to the adoption of BAT/BEP to the remainder of Egypt's hospitals and healthcare facilities beyond the duration of the project;
12. Create an enabling environment to allow MoHP and EEAA to monitor hospitals and health-care facilities, provide incentives for improvement, and enforce compliance with regulations that mandate a basic level of healthcare waste management practices.

With respect to the selection and procurement of best available technologies for HCWM for commissioning in the priority hospitals, HCFs and the CTF, the project will apply costing tools for the selection of treatment scenarios, prepare criteria and technical specifications for technologies and subsequently undertake competitive procurement (through national and international bidding), followed by the selection and commissioning of BAT technologies. (UNDP has extensive experience with supporting the selection of HCW BAT technologies and their procurement, e.g. as a part of GEF/UNDP/WHO HCWM project).

An accurate baseline estimate will be developed as part of the PPG phase of the proposed project to determine UPOPs emission reductions which the proposed project will be able to achieve directly and indirectly (through replication across the country).

However for the purposes of this PIF, calculations concentrate as an example on Al-Dakhlya Governorate (during the PPG phase the governorate in which the project will be implemented will be decided upon). Al-

Dakhlya is one of the priority governorates which produces 1,700 tonnes of hazardous HCW a year (accounting for 6% of HCW generated at national level) and counts 4,376 Government HCFs as well as 2,133 Private HCFs. 30 percent of HCW generated in this governorate is assumed by the MoHP to be burned in the open, producing 3.4 g-TEQ/yr (air) and 0.3 g-TEQ/yr (residue), while 25 percent is being incinerated using Hoval incinerators collectively producing another 1.4 g-TEQ/yr. In addition to the five Hoval incinerators, Al- Dakhlya Governorate counts an additional 10 incinerators, mostly locally produced. It can be safely assumed that combined Al-Dakhlya Governorate emits approximately 9 g-TEQ/yr.

Through the implementation of BEP and BAT the proposed project is expected to reduce UPOPs emissions by at least 9 g-TEQ/yr. Through replication and adoption of BEP and BAT across the country it is expected that an additional 40 g-TEQ/yr UPOPs reduction could be achieved.

2. HCWM: Reduction of Mercury emissions through capacity building, demonstration of mercury-free medical instruments, strengthening of the legislative and policy framework:

The second project's component related to HCWM is the reduction of mercury releases in the health-care sector. The challenges associated with this is the use of mercury in medical instruments – mercury in products. The use of mercury containing devices, such as thermometers and sphygmomanometers, result in substantial releases of mercury into the global environment, as a result of breakages, spills and improper disposal or self-repair.

On the use of Mercury-containing devices currently no detailed and accurate information is available due to previous low level awareness about the associated risks of mercury releases and exposures at the work stations and, therefore, the lack of due attention to this sector from policy-makers' side.

It is assumed that per bed (total of 6,509) 2.8 grams of Mercury per year from both thermometers and sphygmomanometers enter the global environment (based on estimates from the PPG phase for the UNDP/WHO/GEF Global Medical Waste Project), which would amount to 18.2 kg of Mercury a year for Al-Dakhlya Governorate alone. In order to obtain more accurate data, it is expected that the project's PPG phase will be able to provide realistic estimates on the current use and disposal of Mercury-containing devices such as thermometers and sphygmomanometers.

The proposed project anticipates to implement the following activities to achieve better control over the releases of Mercury from HCW sector in Egypt which will be implemented in the integrated manner with Component 1 above:

1. Initiate and carry out an assessment of a priority Governorate (to be identified during the PPG phase) to verify the quantity of mercury-based medical instruments, import sources, current handling practices of broken mercury-containing devices and subsequent mercury releases from the Healthcare sector;
2. Develop a Governorate action plan for registry (logbooks and central database) and tracking of operational mercury devices, the handling and storage of broken mercury containing devices as well as the procurement of mercury-free medical instruments to replace old mercury-based models;
3. Introduce BEP and conduct training related to the safe management, storage, phase-out and disposal of Mercury containing devices at all facilities within the priority Governorate (hospitals, HCFs and the CTF);
4. Promulgate standards for non-mercury devices, including procurement of calibration devices for the national standards institute;
5. Determine the technology specification of Mercury-free instruments for the project's priority healthcare facilities and prepare them on the use and maintenance of non-mercury devices;
6. Competitively procure Mercury-free instruments and introduce these at all priority facilities;

7. At national level, enhance the legal framework, develop national policies and regulations related to the use and phase-out of mercury-containing instruments in health-care;
8. Develop guidelines on the sequestration and storage of Mercury waste from hospitals/HCFs, tailor these to facility types and implement them at all priority facilities;
9. Develop and disseminate training resources for national training programs to reach out to other (non-project) hospitals and healthcare facilities in other Governorates.

With respect to the sound management and phase-out of Mercury containing devices the on-going GEF/UNDP/WHO project has developed guidance on the “*Clean-up, Storage and Transport of Mercury from Health-Care*”, awareness-raising materials on “*Mercury, its Properties, Sources and Health Effects*” and a guidance note on “*Selecting Mercury Reduction Activities*”. These guidelines and awareness raising materials will be applied as an integral part of the sequestration and phase-out of mercury envisaged as part of the proposed project to reduce mercury in health-care.

Regarding the selection and procurement of calibration devices for the national standards institute as well as the selection and procurement of mercury-free instruments for the project’s priority healthcare facilities, the project will support facilities in the preparation of criteria and technical specifications for mercury-free instruments and their calibration and subsequently undertake competitive procurement (through national and international bidding), followed by the selection and introduction of these devices at the project’s priority HCFs (UNDP has extensive experience with supporting the selection of Mercury-free devices and their procurement, e.g. as a part of GEF/UNDP/WHO HCWM project).

An accurate baseline estimate will be developed as part of the PPG phase of the proposed project to determine Mercury emission reductions which the proposed project will be able to achieve directly and indirectly (through replication across the country). At the formulation stage of the current PIF, it was estimated that through the implementation of BEP and BAT the proposed project is expected to reduce Mercury emissions by 18.2 kg/yr throughout the duration of the project. And, at national level, in future perspective, the national phase-out of Mercury containing devices could ultimately reduce yearly mercury emissions by 433 kg (assumption based on 154,945 beds).

3. E-Waste: Reduction of emissions of UPOPs, and POPs through capacity building, introduction and demonstration of BEP and BAT (refurbishment and end-of-life) and strengthening of the legislative and policy framework:

The 2005 NIP does not include specific priorities with respect to e-waste, most likely due to the fact that directions and tools used throughout NIP development did not yet include guidance on how to determine UPOPs and PCB releases from this waste sector, while PBDEs were at the time of NIP development not yet included under the Stockholm Convention.

Nevertheless, the situation with respect to e-waste has changed dramatically over the past few years and will even pose greater challenges in the years to come. Egypt’s e-waste volumes as well generation rates are growing very fast and are expected to triple in the next five years as a result of the increasing affordability of electronic products, sharp increases in mobile phone and internet subscribers and a rapidly growing IT sector. Egypt, like nations such as China, India, Nigeria and Ivory Coast, has become a recipient of significant quantities of used electronics from Europe, sprawled by its repair capability and raw material demand. The majority of the processing of this e-waste is taking place in the informal sector, where inadequate methods during recovering procedures are responsible for much of the harmful releases including those listed under the Stockholm Convention on POPs, threatening the health of e-waste collectors/processors, local communities and the global environment.

POPs of concern originating from inadequate e-waste processing are: i) Polychlorinated dibenzo-p-dioxins (PCDD) and dibenzofurans (PCDF) originating from smouldering of cables or plastic metal mixes to obtain copper and precious metals as well as from burning of printed circuit boards and plastics in

order to reduce the volume of unrecyclable waste; ii) Polybrominated diphenyl ethers (PBDEs) contained as flame retardants in plastics of TV and computer casings, circuit boards. Even though restrictions are in place for new equipment, PBDEs are still contained in current e-waste streams, and are being released from unsafe e-waste processing; and, iii) PCBs released from uncontrolled combustion of e-waste and during the dismantling of older electronic and household appliances.

No accurate figures on current e-waste volumes, generation rates and imports/exports are readily available for Egypt. Detailed information will be collected during the project's PPG phase to estimate UOPs emissions rates from e-waste processing. For the purposes of this proposal, preliminary domestic e-waste generation rates were calculated for 2010 to be around 145,000 tonnes/year which are expected to triple in the next 5 years reaching 435,000 tonnes/year. These generation rates are calculated using the WEEE/E-waste Inventory Assessment as applied in the UNEP Inventory Assessment Manual (E-waste volume 1). Generation rates are based on percentage of households with computers (15), with tv sets (95) (Egypt ICT), % of mobile phone subscribers (74.5) and fixed phone subscribers (13.5) (NTRA). It has to be noted that these generation rates do not include white electronics, therefore calculated generation rates can assumed to be underestimated. The volumes of used electronics being imported are not available or included in the above calculations, making it a very conservative estimate of the e-waste volumes.

As expressed by the MoCIT and EEAA, there is great scope for a GEF/UNDP supported project that would undertake the following activities (Component 3):

- Conduct a national inventory on PCDD/PCDF/PBDE/PCB (POPs from the original Stockholm Convention list and the “new” POPs) from improper e-waste processing and its open burning.
- Introduce and implement BAT and BEP showcasing sound e-waste processing to reduce releases of UOPs, PBDEs, toxic substances and in certain cases even PCBs, focussing both on the informal and formal e-waste recycling and processing sector.

The proposed project therefore anticipates to implement the following activities to reduce releases of POPs resulting from unsound e-waste recycling and disposal practices in Egypt, (Component 3 will be implemented through an integrated approach with Component 4). Building upon lessons-learned and experiences from international and regional activities related to e-waste management (see also Section B.6):

1. Complete a mapping of e-waste processors and refurbishers (formal and informal “conglomerates”), locations, e-waste volumes processed and applied practices (building upon previous e-waste initiatives) in order to decide on priority municipalities (including priority formal e-waste processing entities and informal e-waste processing “conglomerates”) and determine/calculate a baseline on POPs/UOPs/heavy metal releases from e-waste processing.
2. Create capacity and awareness among key stakeholders at national and municipal level (see also section B5) on the sound management of e-waste and the economic, social, health and environmental benefits of proper recycling practices (targeting customs offices, environmental inspectorates, waste transit authorities, formal e-waste recyclers/refurbishers, etc).
3. Develop, revise and improve the policy and regulatory framework for e-waste management applying a life-cycle approach and integrate/mainstream e-waste components into the existing national policy and regulatory framework on waste management to ensure a holistic and consistent approach at national and municipal level towards waste management (options for the introduction of economic instruments/take back provisions/ producer responsibility, etc. will be assessed and introduced as found appropriate).
4. At municipality level (the no. of municipalities that will receive project support will be determined during the PPG phase and priority municipalities will be decided upon in Act. 1), the project will introduce BEP/BAT at three levels:

Municipalities:

- a. *Designation of storage, treatment and disposal zones:* Supporting municipalities in identifying and designating specific areas and zones for e-waste processing (formal and in-formal), and putting in place mitigation measures to avoid/reduce harmful releases to water, soil and air in these zones.
- b. *Collection:* In close consultation with the formal and in-formal e-waste processors (see below) and refurbishers decide and implement upon appropriate collection schemes, including proper waste acceptance and outbound material criteria and structures, and solutions for final waste fractions.

Formal Sector (the no. of private sector entities that will receive project support will be determined during the PPG phase and priority formal e-waste processing entities will be decided upon in Act. 1):

- a. Develop guidance on collection and sorting of e-waste (focussing on fractions prone to POPs releases), including the development of image-based manuals to help identify types of e-waste and the most hazardous e-waste fractions.
- b. Train enterprises and their workers in identifying the most hazardous and POPs containing parts in e-waste, personal protection measures, safe working conditions and basic approaches to reducing harmful releases.
- c. Introduce practical steps (mostly manual) for high-value components and raw material fractions (e.g. metals) in order to increase value of recycled fractions and reduce releases of UOPs, POPs and heavy metals.
- d. Develop guidance on the selection of BEP/BAT technologies for the formal e-waste sector in Egypt, including criteria, specifications, costs, among else, to facilitate the selection of e-waste processing technologies under the project but also to facilitate replication by formal recyclers not selected as technology recipients under this project.
- e. Introduce BEP/BAT adhering technologies for bulk waste sorting, processing and recycling (emphasis would be placed on separating plastic fractions containing PBDEs), following a cost-assessment of different processing scenarios (for each priority entity), development of technology specifications and competitive int. procurement.

Informal Sector (the no. of informal e-waste processing “conglomerates” that will receive project support will be determined during the PPG phase and priority informal e-waste processing “conglomerates” will be decided upon in Act. 1). Informal e-waste recyclers in priority municipalities will be involved in the project though the formation of cooperatives. The project will support cooperatives in moving away from hazardous processing practices, instead focussing on safer disassembly through the introduction of best practices. Best practices tailored to the informal sector will help to separate high-value components and raw materials increasing the value of extracted fractions for further sale –ensuring same revenue and livelihoods – while reducing UOPs, POPs and heavy metal releases and protecting worker health.

- a. Steps a to c (formal sector) will also be implemented for the informal sector however adapted in such a way that approaches fit informal sector requirements.
 - b. Introduction and provision of equipment for non-POPs emitting work practices (e.g. mechanical cable stripping).
 - c. Setting-up regular recollection systems (possibly through advance payment schemes) for high POPs releasing components (integrated circuit boards, plastics) as well as hazardous waste (PCBs capacitors, CRTs etc) for adequate disposal at municipality/regional level.
5. *Replication of project results:* The selection process of Best Available Practices and Best Available Technologies for both the informal and formal sector will be well documented throughout the project’s implementation and disseminated at international, national and municipality level, showcasing results, lesson-learned and cost- and health- benefits. Separate dissemination activities will be designed and organized for three distinct groups in Egypt: decision makers, private sector entities as well as the informal sector ensuring that the message and use of media is tailored to the recipient and project results can be replicated throughout the country (the PPG phase will determine how many dissemination events will be organized). At international and regional level, project results will be disseminated through the PACE working

group, the Basel Convention Regional Centre in Egypt, e-waste related UN organized events, UNDP websites, reporting to the Stockholm Convention and the Basel Convention as well as any other relevant events that might benefit from the project's results.

An accurate estimate for the baseline will be developed during the PPG phase of the proposed project to determine the POPs, UPOPs and heavy metal emission reductions which the proposed project will be able to achieve directly and indirectly (through replication across the country). However for the purpose of this PIF, we consider that the most significant emissions of POPs and toxic substances result from the following operations:

- Open burning of e-waste for material recovery (e.g. cables)
- Open burning of e-waste for waste minimization (typically plastic casings and circuit boards).
- Shredding, melting and extrusion of e-waste
- Uncontrolled burning of circuit boards
- Dumping of residual materials

The average composition of materials found in e-waste, according to the Swiss Federal Laboratories for Materials Testing and Research for industry⁶ is the following: metals (60.2%), plastics (15.2%), metal/plastic mixtures (5.0%), cables (2.0%), screens (CRT/LCD: 11.9%), printed circuit boards (1.7%), other pollutants (2.7%) and others (1.4%). For the purpose of calculating POPs/UPOPs releases, the burning of cables and metal-plastic mixtures (for metal recuperation), circuit boards (recuperation of precious metals) and plastic waste fractions (for waste reduction) would preferably be considered.

Egypt generates and disposes of ~145,000 tonnes of e-waste a year, and assuming that cables are burned in an uncontrolled manner for thermal wire recamation, that would lead to: $145,000 \text{ t} \times 0.02 \text{ (2\% weight fraction cables)} \times 5,000 \text{ } \mu\text{g TEQ/t} = \sim 14 \text{ g-TEQ/yr}$ in UPOPs emissions (emission factor for open burning of cables: $5,000 \text{ } \mu\text{g TEQ/t}$, UPOPs Toolkit Cat. 2, Class m), while the uncontrolled burning of circuit boards could be responsible for: $145,000 \text{ t} \times 0.017 \text{ (1.7\% weight fraction circuit boards)} \times 930 \text{ } \mu\text{g TEQ/t} = \sim 2.4 \text{ g-TEQ/yr}$ in UPOPs (emission factor for open burning of mixed e-waste: $930 \text{ } \mu\text{g TEQ/t}$, Hedlund et al. 2005).

Unfortunately, no emission factors are readily available for the burning of e-waste metal-plastic mixtures or plastic waste fractions, even though these make up a considerable percentage of e-waste fractions (5 and 15.2 % respectively) and are responsible for significant releases of POPs). An attempt will be made to calculate emissions from these two waste fractions during the PPG phase.

As such total uncontrolled POPs emissions from e-waste processing of cables and circuit boards alone would total $\sim 16.4 \text{ g I-TEQ/yr}$. It has to be noted that in these calculations the numbers on the quantities of used-electronics being imported are not yet taken into account, but will be looked at in detail during the PPG phase.

In addition, it is assumed that in total ~ 30 percent of e-waste weight is made up of plastics containing PBDEs in a concentration of $\sim 1600 \text{ mg/kg}$, therefore the massflow of PBDEs contained in E-waste in Egypt is $\sim 70 \text{ kg/year}$. PBDEs can be released during various stages of recycling processes. During collection, transportation and storage outdoors, emissions of PBDEs from WEEE plastics are likely especially if subjected to contact with liquids (rain, etc.), while PBDE-containing dust particles are released at recycling plants when WEEE plastics are shredded (e.g air sample measurements from an

⁶ Widmer R., Oswald-Krapf H., Sinha-Khetriwal D., Schnellmann M., Böni H. (2005) Global Perspectives on e-waste. Environmental Impact Assessment Review 25: 436-458.

electronic waste recycling site in China showed that the PBDE concentration in air was about 20 ng/m⁷), whereas investigations on recycling of PBDE containing plastics indicated PBDE releases between 5 and 140 mg/kg⁸ (CIT Recycling Development AB & VASCAIA, April 2010)

Taking the high mass flow baseline, considerable releases of PBDEs can be expected from Egypt's current e-waste processing . While environmental sampling at e-waste processing sites confirms releases of PBDEs, there is at this stage not sufficient data available to make a detailed release estimate for the Stockholm Convention restricted PBDEs, but will be looked at in detail during the PPG phase.

It is expected that the proposed project will be able to reduce the amounts of UOPs emitted from the improper treatment of E-waste by ~10 g-TEQ/yr through replication and adoption of BEP and BAT across Egypt at municipality levels and by the informal and formal sector. The introduction of BEP and BAT at this point in time will also avoid the generation of much higher UOPs emissions in five years time when e-waste volumes will have trippled. As such it can be argued that this project expects to reduce UOPs emissions by ~30 g-TEQ/yr.

4. E-Waste: Reduction of emissions of other hazardous substances (mercury, lead, cadmium, etc) through capacity building, introduction and demonstration of BEP and BAT (in combination with Component 3's investments for end-of-life management) and strengthening of the legislative and policy framework:

While UPOP and POPs emissions from e-waste processing and recycling have been discussed and addressed in Component 3, Component 4 (which is complementary to Component 3) addresses the control measures for heavy metals such as lead, cadmium and mercury contained in electronic products and wastes. This range of heavy metals brings in a set of harmful impacts on the environment and human health such as sensory impairment, fertility loss, memory disorders, liver, kidney and heart damage and impaired development of the nervous system.

These heavy metals are contained in various components of electronic products and their wastes. For example, Lead is contained in circuit boards, cathode ray tubes (CRTs) and batteries; Cadmium is found in light-sensitive chip resistors, nickel-cadmium rechargeable batteries and semiconductors; and, Mercury can be contained in circuit boards, switches, flat screen monitors and batteries (as well as cell phones).

Regulatory control over the release of such metals due to irresponsible and unsound e-waste handling is essential in combination with appropriate BEP and BAT techniques.

Component 4, in strong cooperation with Component 3, will aim at:

- a. Determination of the baseline on associated hazardous releases (mercury, lead, cadmium) from e-waste processing (as part and parcel of Component 3, Act. 1);
- b. Introduction of BEP/BAT to formal and informal e-waste processors (BEP/BAT adhering technologies, which will comprehensively cover the associated heavy metal issues, will be selected, procured and introduced as part and parcel of Component 3, Act. 4;

⁷ W.J. Deng, J.S. Zheng, X.H. Bi, J.M. Fu, and M.H. Wong, Distribution of PBDEs in air particles from an electronic waste recycling site compared with Guangzhou and Hong Kong, South China, Environment International, 33, 1063-1069, 2007.

⁸ M. Schlummer, L. Gruber, A. Mäurer, G. Wolz, and R. van Eldik, Characterisation of polymer fractions from waste electrical and electronic equipment (WEEE) and implications for waste management, Chemosphere, 67, 1866-1876, 2007.

- c. Building and strengthening knowledge and technical skills (capacity) as well as awareness among key stakeholders (as part and parcel of Component 3, Act 1; Act. 4; Act. 5)
- d. Review and strengthening of the regulatory framework on e-waste management and recycling with respect to associated hazardous releases (mercury, lead, cadmium, etc) (as part and parcel of Component 3, Act. 3)

Even a rough estimate for the baseline on associated hazardous releases (e.g. mercury, lead, cadmium) from e-waste processing in Egypt is currently not available. Heavy metal content varies by e-waste type, manufacturing year, country of origin, among else – information which at the time of PIF preparation is not yet available. During the PPG phase of the proposed project an attempt will be made (based on findings published in international literature and customs information on import quantities of e-waste) to approximately calculate heavy metal releases from e-waste management, processing, etc. in Egypt. Subsequently the amount of heavy metals that this project expects to reduce directly and indirectly (through replication) will be calculated.

5. Monitoring, learning, adaptive feedback, outreach, and evaluation:

This component is intended to provide means for monitoring and evaluation of the results of the project to backstop adaptive management of the programme. It will also enable consolidation of lessons learned during the course of project implementation as well as dissemination of key experiences and best practices at national regional and international level.

NOTE: This proposal has been structured according to GEF-CHEM funding allocations – resulting in a division between UPOPs and Mercury/heavy metals related activities under the main project interventions (HCWM and e-waste). However, during project implementation an integrated approach will be applied to ensure that waste and policy/regulatory related activities will be undertaken in a coordinated and mutually reinforcing way, while relevant e-waste and HCWM components will be integrated into the national waste management policy.

B. 2. INCREMENTAL ADDITIONAL COST REASONING: DESCRIBE THE INCREMENTAL (GEF TRUST FUND) OR ADDITIONAL (LDCF/SCCF) ACTIVITIES REQUESTED FOR GEF/LDCF/SCCF FINANCING AND THE ASSOCIATED GLOBAL ENVIRONMENTAL BENEFITS (GEF TRUST FUND) OR ASSOCIATED ADAPTATION BENEFITS (LDCF/SCCF) TO BE DELIVERED BY THE PROJECT:

In Egypt, as described in section B.1., Health Care Waste and E-Waste are currently not properly managed, processed or disposed of in an environmentally sound manner. The NIP highlighted that the health-care sector is an important source of UPOPs and lists HCW incineration among the three most important emitters of UPOPs. The PPG phase of the proposed project will provide more detail on the extent of the use of mercury containing devices in this sector, however based on global averages it can safely be assumed that Egypt's health-care sector is a significant source of mercury emissions to the global environment.

With respect to the E-waste sector, the processing and open burning of e-waste, particularly within the informal sector, are important sources of PCDD/PCDF/PBDE/PCB emissions as well as other hazardous releases, such as mercury, cadmium and lead. At the time of the NIP's development, global concerns were not such that the NIP process already included guidance on calculation of POPs/UPOPs emissions originating from e-waste processing. However, considering Egypt's e-waste volumes as well generation rates are growing very fast and Egypt has become a recipient of significant quantities of used electronics from Europe, it can safely be assumed that e-waste processing in Egypt significantly contributes to emissions of PCDD/PCDF/PBDE/PCB, mercury, lead as well as other hazardous elements.

Reasoning on why incremental /additional activities are appropriate/necessary to address the identified causes and issues:

In a *Business-As-Usual* scenario, without funding provided by the GEF and in absence of the proposed project, it is very likely that Egypt will not be able move away from the use of inadequate operating incineration technologies for HCW, tackle the challenges it currently faces with respect to large amounts of “untreated” HCW, introduce BEP and BAT into both the health-care sector as well as the formal and informal e-waste processing sector and create an enabling environment to ensure that suitable and affordable methods and BEP/BAT approaches can be widely replicated throughout Egypt.

With respect to HCW, it is expected that MoHP funds (50 million EGP = ~ 8.8 million US\$) will be used for the construction, installation and operation of centralized hazardous waste treatment disposal sites in five locations in Greater Cairo. However, Greater Cairo is only one of the seven priority governorates with respect to health-care waste generation rates, and only one of Egypt’s 29 governorates. In a *Business-As-Usual* scenario, without GEF funding, it is unlikely that the HCW situation in the other priority governorates can be addressed in the near future. Circumstances and the challenges with respect to HCWM that Greater Cairo faces differ greatly from those in other governorates. Therefore an approach taken in Greater Cairo will not necessarily be fully applicable in other provinces/smaller cities/hospitals, etc. In addition, other Governorates will not have the funding allocations available to them that Greater Cairo has and suitable and affordable methods BEP and BAT methodologies and technologies will have to be introduced to meet their particular requirements and operating budgets. Finally, the reduction and phase-out of Mercury in health-care is not yet taken up in the 2010 HCWM Strategy, therefore in a *Business-As-Usual* scenario, the use of Mercury containing devices will continue as before.

With respect to e-waste processing and recycling, the MoCIT is very eager to build necessary capacity and create awareness on E-waste issues and introduce BAT and BEP demonstrating sound e-waste processing to reduce releases of UPOPs and POPs from improper e-waste processing. However, waste issues are an entirely new area for MoCIT and getting involved in such a new field will require resources that are currently unavailable. New and small-scale E-waste initiatives that have recently been launched focus on the economic opportunities this sector has to offer, however these initiatives do not at all take into consideration the threats posed by unsafe e-waste processing and the harmful emissions resulting from it. In a *Business-As-Usual* scenario this approach will not change but even worsen considering e-waste generation rates are growing very fast and import of used electronics continue to increase. Consequently the proposed project activities are fully incremental from a POPs point of view. Without GEF funding, *it is unlikely that BAT and BEP for e-waste processing will be introduced in the near future.*

The incremental activities proposed by the project will address previously identified barriers and establish an integrated systematic approach to the environmentally sound management and disposal of health-care waste, the sound disposal and processing of E-waste as well as the sound management of chemicals in general. This approach will be supported by an enhanced legislative and regulatory framework for environmentally sound management of POPs, in particular pertaining to HCWM and E-waste, and for the sound management of chemicals (heavy metals in electronic products at the end-of-life) in general and further strengthen local technical and institutional capacity. All of these measures will lead to significantly lower releases of PCDD/PCDF/PBDE/PCB, mercury, lead as well as other hazardous substances in a sustainable manner. The proposed project will ensure compliance with the Stockholm Convention commitments, and the Basel Convention, in a way that environmental and health risks are properly managed.

Demonstration on the cost-effectiveness, including through an assessment of the cost-effectiveness of the project design approach as compared to alternative approaches to achieve similar benefits.

The amount of PCDD/PCDF/PBDE/PCB, mercury, lead as well as other hazardous substances which will be avoided from being released will be estimated a part of the project's PPG phase, during consecutive implementation, while a final cost-effectiveness will be reported on upon completion of the project.

EEAA, MoHP and MoCIT have been successful in attracting a considerable proportion of funding for the proposed project from its own domestic resources, a bi-lateral donor as well as from private sector partners. Cash co-financing from this source will therefore meet the GEF's funding requirements.

Explanations on why such activities are complementary (incremental/additional reasoning).

The proposed project will build upon the efforts the country has undertaken to date to improve its capacity to effectively and soundly manage HCW and the initial steps it has taken to start managing E-Waste.

The GoE has taken important initial steps to improve the medical waste management situation through the development of the 2010 HCWM Strategy and has indicated its commitment by allocating 50 million EGP (~ 8.8 million US\$) to fund the construction, installation and commissioning of centralized hazardous waste treatment disposal sites in 5 Greater Cairo locations. The GoE is also actively engaging with the Swiss Government to explore possibilities of receiving bi-lateral support to implement the 2010 HCWM strategy and construct, install and commission a centralized hazardous waste treatment disposal site in Al-Dakhlya Governorate. GEF/UNDP support as part of the proposed project will be complementary to activities supported by the GoE and the Swiss Government, using as building blocks activities supported to date while creating an enabling environment to allow and ensure that BEP and BAT will be applied throughout the implementation of the 2010 HCWM strategy across the country.

The Ministry of Communications and Information Technology (MoCIT) has taken important steps to start addressing the management of e-waste. It has recently signed a Memorandum of Understanding (MoU) with MSEA and initiated a multi-stakeholder approach towards the formulation of a Green ICT strategy including management of e-waste (see section A.2.). In addition, the MoCIT coordinates closely with private sector initiatives, such as the one initiated by CompMe, which aims to refurbish 30,000 computers and notebooks a year. Nevertheless, the scope of on-going initiatives is limited in the sense that health and environmental challenges originating from inadequate e-waste management practices resulting in harmful releases such as POPs and UPOPs are not being addressed. Therefore, the scope of the proposed e-waste component will particularly focus on the introduction of BAT and BEP to ensure safeguarding of human and environment health, while building upon the initiatives that are already being supported by the GoE and other actors.

Explanations of how the activities of the GEF/LDCF/SCCF projects will be replicated and catalyzed in the future; how will the positive effects of the project be maximized.

With respect to HCWM, the scope for replication of BAT and BEP introduced through a GEF supported project would be optimal considering other facilities would soon be requested by law to abide by new regulations and would be able to follow in the footsteps of the project's model governorate.

In particular, project components that will catalyze the replication of project activities and maximize the positive effects of the project, will be achieved through the creation of an enabling environment and removal of barriers to the adoption of BAT/BEP for HCWM by:

- e. Enhancing the national action plan for the development of national training programs and policy enhancements, followed by the development of regulatory requirements and training resources for national training programs to reach out to other (non-project) hospitals and healthcare facilities;
- f. Enhancing the legal framework and national regulations related to healthcare waste management;

- g. Create an enabling environment to allow MoHP and EEAA to monitor hospitals and healthcare facilities, provide incentives for improvement, and enforce compliance with regulations that mandate a basic level of healthcare waste management practices;
- h. Development of policies and guidelines on sequestration and storage of mercury waste from healthcare facilities;
- i. Promulgation of standards for non-mercury devices, including procurement of calibration devices and awareness building for the national standards institute.

With respect to E-waste processing and recycling, project components that will catalyze the replication of project activities and maximize the positive effects of the project, will be achieved through the creation of an enabling environment and removal of barriers to the adoption of BAT/BEP by:

- j. Creating capacity and awareness among key stakeholders on the sound management of e-waste;
- k. Revising and improving the regulatory and policy framework for import, e-waste management and recycling (including assessment and introduction of economic instruments/take back provisions);
- l. Showcasing sound e-waste processing (by introducing and implementing BAT and BEP) focussing on the informal sector but also extend technical assistance to the formal sector.

Finally, Egypt would be an excellent country for an e-waste demonstration and HCWM project, considering its location (North-Africa, Mediterranean region & South-West Asia) creating the opportunity to serve as an example of best practices to neighbouring countries, and with respect to the management of e-waste not the least because within its region Egypt is currently the largest recipient of used-electronics.

Elaboration on why the funding level of each activity is considered to be appropriate.

HCWM: Components 1 and 2 build upon experiences, tools, guidance, lessons-learned, among else from the global GEF/UNDP/WHO project “*Demonstrating and Promoting Best Techniques and Practices for Reducing Health-Care Waste to Avoid Environmental Releases of Dioxins and Mercury*”.

E-Waste: Components 3 and 4 build upon experiences from the Computing Equipment (PACE) working group, which is supporting e-waste surveys in Burkina Faso, El Salvador, Jordan and Serbia with the ultimate aim to put in place sustainable e-waste management schemes. It will also take into consideration ongoing initiatives operational in other countries of the region such as in Ethiopia.

Based on cost-estimates as well as actual expenditures observed as part of the above projects, and taking into consideration Egypt’s HCW and e-waste generation and import rates, the proposed project component is comparative and its funding level proportional to the level of operation considering local conditions.

Estimation of the global environmental/adaptation benefits of the project, including applied assumptions and methodologies.

The proposed project’s environmental benefits are concrete and measureable. Through implementation of BEP and BAT the project would ensure that:

Health-Care Waste Management: UOPs emissions will be reduced by at least 9 g-TEQ/yr, and Mercury emissions by 18.2 kg/yr. Through replication and adoption of BEP and BAT across the country it is expected that an additional 40 g-TEQ/yr UOPs (PCDD/PCDF/PBDE/PCB) reduction could be achieved, while national phase-out of Mercury containing devices could ultimately reduce yearly Mercury emissions by 433 kg.

E-Waste Management: It is expected that the proposed project will be able to reduce the amounts of UPOPs emitted from the improper treatment of E-waste by ~10 g-TEQ/yr through replication and adoption of BEP and BAT across Egypt's informal sector. The introduction of BEP and BAT at this point in time will also avoid the generation of much higher UPOPs emissions in five years time when e-waste volumes will have trippled. As such it can be argued that this project expects to reduce UPOPs emissions by ~30 g-TEQ/yr. It will also enable the reduction in releases of associated heavy metals from the improper handling of e-waste. The accurate estimates for this part of the project will be assessed during the PPG stage.

B.3. DESCRIBE THE SOCIOECONOMIC BENEFITS TO BE DELIVERED BY THE PROJECT AT THE NATIONAL AND LOCAL LEVELS, INCLUDING CONSIDERATION OF GENDER DIMENSIONS, AND HOW THESE WILL SUPPORT THE ACHIEVEMENT OF GLOBAL ENVIRONMENT BENEFITS(GEF TRUST FUND) OR ADAPTATION BENEFITS (LDCF/SCCF). AS A BACKGROUND INFORMATION, READ [MAINSTREAMING GENDER AT THE GEF.](#)":

Gender Dimensions: Efforts to ensure the Sound Management of Chemicals, including Persistent Organic Pollutants (POPs), have important gender dimensions. In daily life, men, women, and children are exposed to different kinds of chemicals in varying concentrations. Biological factors — notably size and physiological differences between women and men and between adults and children — influence susceptibility to health damage from exposure to toxic chemicals. Social factors, primarily gender-determined occupational roles, also have an impact on the level and frequency of exposure to toxic chemicals, the kinds of chemicals encountered, and the resulting impacts on human health.

Often, gender dimensions are considered to be '*women affairs*', however UNDP considers "gender" to refers to the socially constructed rather than biologically determined roles of men and women (and children) as well as the relationships between them in a given society at a specific time and place.

HCWM: With respect to the management and disposal of Health-Care Waste, it can safely be assumed that many health care workers (such as nurses) as well as waste handlers, collectors and scavengers receive low remuneration and face hazardous working conditions particularly when in contact with hazardous health care waste, containing infectious components, heavy metals (e.g. Mercury), chemical agents and pharmaceuticals. Because of their low status, particularly women and waste handlers/scavengers have less or no control over their work environment and the risks they are exposed to. Poor communities living close to health-care facilities, most of which are operating polluting incinerators on their premises, are being exposed to POPs emissions on a daily basis. While communities living close to waste disposal sites, might be at greatest risk from close proximity to infectiuos waste, heavy metals, chemical agents, etc. Considering women and children spent most time within the surroundings of their homes that are at greatest risk.

As Egypt continues to strengthen and expand the coverage of its health care systems, associated releases of toxic chemicals could rise substantially, magnifying the risks experienced by health care workers and the public.

E-waste management: When soundly practiced e-waste recycling (reuse, refurbishment, recycling, extraction of precious metals) can provide an extensive range of income generating activities for the formal and informal collection and recycling sector. However, e-waste contains toxic components and substances which pose significant risks to human health and the environment, particularly when inadequante methods are used during recovering procedures. Currently, the health of workers is not protected since there are no precautionary measures adopted, particularly in the informal sector. It is estimated that approximately 20 % of e-waste processors face high health risks (mostly in disassembly,

recovery), while e-waste collectors face low health risks. There is increasing evidence that emissions and contamination resulting from informal sector e-waste activities are a serious cause of concern, on a local, regional and global level, while the dumping of e-waste after processing in fields, canals, rivers is spreading harmful substances further into the environment. Within the Arab region, Egypt is one of the few countries where larger private enterprises (even though the majority of activities is taking place in the informal sector) are starting to emerge in the e-waste field. The project will work both with the formal as well as the informal sector, providing technical assistance and technology transfer for e-waste processing, ensuring environmentally sound and worker safe e-waste processing practices and technologies. The ultimate aim of the project is to ensure safe worker conditions, reduce releases of POPs to protect the local and global environment and maintain/increase income generating activities from waste management.

Gender dimensions will need to be reflected at both project and policy-level interventions pertaining to the sound management of POPs and heavy metals in HCW and e-waste sectors. Therefore, the PPG phase of the project anticipates to assess fully the gender aspects of the management of chemicals and hazardous wastes and their disposal, including the gender determined roles as they are being observed with the HCWM and E-Waste sectors. The participation, representation and buy-in of vulnerable worker populations and local communities in the project's formulation and the incorporation of gender dimensions into all project activities will be undertaken as per the UNDP guidance note on *"The why and how of mainstreaming gender in chemicals management"*.

Socioeconomic benefits: Throughout the introduction of BEP and BAT, the project will ensure to safeguard income generating activities and ensure the protection of livelihoods and employment provided by the waste management sector. Opportunities that would allow for the development of additional income generating activities through responsible recycling and processing practices will be promoted, and economic incentives/take back provisions as additional tools to achieve financially sustainable e-waste and health-care waste management will be explored and introduced as appropriate.

To ensure wide dissemination and replication of BEP and BAT applied in the proposed project across Egypt and beyond, suitable and affordable BEP and BAT methodologies and technologies will be introduced that meet local requirements and local operating budgets.

B.4 INDICATE RISKS, INCLUDING CLIMATE CHANGE RISKS THAT MIGHT PREVENT THE PROJECT OBJECTIVES FROM BEING ACHIEVED, AND IF POSSIBLE, PROPOSE MEASURES THAT ADDRESS THESE RISKS TO BE FURTHER DEVELOPED DURING THE PROJECT DESIGN:

Risk		Risk Mitigation Measure
1. Unclearity with respect to the roles and responsibilities of the three ministries involved in the health-care waste and e-waste components, resulting in no leadership or slow implementation of project components.	L	All possible stakeholders will be fully involved and engaged during the project's proposal planning phase, their buy-in with respect to project objectives, outcomes and activities as well as responsibilities of different stakeholders will be incorporated in the project document/proposal.
2. Slow implementation of the 2010 HCWM Strategy. The proposed project relies on the implementation of the 2010 strategy and the support of the MoHP, MSEA and EEAA in the adoption and implementation of revised guidelines and policies creating an enabling environment for replication of BEP and BAT practices across the governorate/country.	L	HCWM is among one of the prime minister's top priorities, as such this risk is deemed very low. In addition, the proposed project supports MSEA (EEAA) and MOHP and MoCIT in the strengthening of the nat. policy and regulatory framework, thus the project itself can influence the timing of these project component to allow for the creation of an enabling environment and overcome barriers to the introduction of BEP and BAT and facilitate their replication.
3. Little focus of the MoHP, MSEA and the 2010 HCWM Strategy on cost-effective centralized non-incineration treatment technologies.	L	To expose the MoHP, MSEA and CTFs to the advantages of centralized non-incineration technologies, the project will share success stories and experiences from the UNDP Global Medical Waste project and apply costing tools related to treatment scenarios, develop selection criteria and technical specifications for treatment technologies and testing protocols for planned

		technologies, to provide decision making entities with trust and confidence in non-incineration technologies.
4. No or little willingness of HCW generators and e-waste recyclers to practice the sound management of wastes.	L	The project envisages developing and signing MoUs with waste generators and treatment/recycling entities clarifying roles and responsibilities during the project's implementation and beyond, based on a best practice from the UNDP/WHO Global Medical Waste project. In addition, training and awareness building among staff working in facilities generating HCW will help generate their interest from a health perspective. Finally, the capacity building of state and enforcement entities will help improve compliance ratios of HCW generators and e-waste recyclers.
Overall Risk Rating	L	

B.5. IDENTIFY KEY STAKEHOLDERS INVOLVED IN THE PROJECT INCLUDING THE PRIVATE SECTOR, CIVIL SOCIETY ORGANIZATIONS, LOCAL AND INDIGENOUS COMMUNITIES, AND THEIR RESPECTIVE ROLES, AS APPLICABLE:

A full assessment of all relevant stakeholders that are to be involved in the project's development and implementation will be undertaken as part of the PPG phase. However at this stage the project proposal considers key stakeholders to be (list not exhaustive):

- m. Government ministries such as MSEA, EEAA, MoHP, MoCIT as well as other ministries involved with key-aspects of policy making on hazardous waste management.
- n. Private sector (formal and informal): Entities involved in HCWM, e-waste management (e.g. CompuMe, Mobinil, Egyptian Electronic Recycling Co, among else) and the production, management and disposal of chemicals.
- o. NGOs and CSOs: Representing the rights and voices of poor communities affected by inadequate HCW, e-waste and chemicals management. While co-finance for this
- p. Scientific institutes involved in aspects of cleaner production, hazardous waste management, such as (but not limited to): National Universities, the Basel Convention Regional Centre (Egypt), Egyptian Association for Science & Technology Experts, the Centre for Environment and Development for the Arab Region and Europe (CEDARE).
- q. Workers unions/representative groups: Representing workers operating in health-care facilities (nurses, doctors, administrative personal, waste handlers), waste management and disposal (transporters, traders, scavengers, collectors, sellers) including representative groups that are able to voice concerns and challenges faced on behalf of workers in the informal waste management sector.

B.6. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

The following list of initiatives are expected to provide useful information, lessons-learned or a good policy/regulatory foundation for the components to be carried out under the proposed project. Coordination with the executing agencies/entities will be ensured. As part of the PPG phase, a full description of past, on-going and planned activities that are beneficial/complementary to this project will be elaborated:

- r. IBRD - Integrated and Sustainable POPs Management Project - Egypt (GEF Grant: 8,200,000 US\$)
- s. UNDP/WHO - Demonstrating and Promoting Best Techniques and Practices for Reducing Health-Care Waste to Avoid Environmental Releases of Dioxins and Mercury in Argentina, India, Latvia, Lebanon, Philippines, Senegal, Tanzania and Viet Nam (GEF Grant: 10,326,455 US\$)

- t. World Bank - Formulation of a framework for the Egyptian Green Information Communications Technology Strategy and the initiation of a pilot project on E-Waste Management (Egypt) (175,000 US\$ - reimbursable technical assistance contract)
- u. CIDA - Funding from the Canadian government to complete preliminary inventories and assessments carried out under the NIP (funding amount unknown)
- v. UNIDO - Promotion of Strategies to Reduce Unintentional Production of POPs in the Red Sea and Gulf of Aden (PERSGA) Coastal Zone (Egypt, Jordan, Sudan, Yemen) – (GEF Grant: 950,000 US\$)
- w. UNIDO - Assessment and Capacity Building in Chemicals and Chemicals Waste Management in Egypt (SAICM QSP TF Grant: 250,000 US\$).
- x. Private Sector Initiatives: Mobinil in partnership with HP, Cannon, Xerox: “Collection and recycling of toners, drums and cartridges from copiers and printers” (May 2002 – Apr 08), Mobinil/TakeBack: “End of life mobile handset battery collection” (1st Phase 2005-07), Mobinil: “Safe collection and storage of waste cellular, batteries, feeders and cables” (2006), Mobinil: “Refurbishing old PC and IT equipment” (April 2008)
- y. BCRC Egypt: “Pilot projects for instituting national hazardous wastes inventory unit” (2006 – 08)

The project will also link with international and regional initiatives such as the Basel Convention’s Partnership on Computing Equipment (PACE) group joint work with UNDP work on e-waste surveys and policy responses in El Salvador, Serbia, Jordan and Burkina Faso, and a second stage Basel PACE-UNDP project on e-waste in Jordan as well as bilateral USAID initiatives in Ethiopia.

C. DESCRIBE THE GEF AGENCY’S COMPARATIVE ADVANTAGE TO IMPLEMENT THIS PROJECT:

As confirmed in Annex L of the GEF document “Comparative advantages of the GEF agencies”, UNDP has a comparative advantage in the area of Persistent Organic Pollutants, in specific with respect to Capacity Building and provision of Technical Assistance. The proposed project will benefit from UNDP’s experience in integrated policy development, human resources development, institutional strengthening, and non-governmental and community participation.

In its capacity as GEF implementing agency for the UNDP/WHO/HCWM project “Demonstrating and Promoting Best Techniques and Practices for Reducing Health-Care Waste to Avoid Environmental Releases of Dioxins and Mercury” UNDP is particularly well placed to demonstrate BAT and BEP which have been applied, tested and improved under this global project in eight countries, some of which are facing very similar challenges as Egypt.

Finally, e-waste management components will benefit from the pilot activities which UNDP is supporting within the framework of the Basel Convention and its Partnership on Computing Equipment (PACE) working group. In this regard, UNDP is conducting e-waste surveys in Burkina Faso, El Salvador, Jordan and Serbia as a first step in establishing sustainable e-waste management schemes. The surveys include recommended action plans to be implemented by UNDP and partners. UNDP is overall cooperating closely with the Basel Convention Secretariat on e-waste. Also UNDP staff is currently serving as co-chair for a subgroup in the PACE partnership initiative.

C.1 INDICATE THE CO-FINANCING AMOUNT THE GEF AGENCY IS BRINGING TO THE PROJECT:

The United Nations Development Programme (UNDP) has contributed with cash and in-kind technical support and assistance for initial scoping meetings with Government counterparts and project stakeholders which took place in the preparation for the formulation of this PIF. Identification of further in-house cash contribution towards the initiative will be undertaken during the PPG stage of the project.

Considering the scope of the project, UNDP's in-house expert resources at country, regional and headquarters level will be mobilized contribute towards project implementation. In addition to this, the Resident Representative functions and Country Office human resources and facilities will be available beyond strict cost recovery basis for the successful project implementation. The value of this can be expected to exceed US\$ 100,000 (both as in kind and cash) during the life of the project.

C.2 HOW DOES THE PROJECT FIT INTO THE GEF AGENCY'S PROGRAM (REFLECTED IN DOCUMENTS SUCH AS UNDAF, CAS, ETC.) AND STAFF CAPACITY IN THE COUNTRY TO FOLLOW UP PROJECT IMPLEMENTATION:

The proposed project is fully aligned with Egypt's (2007 - 2011) UNDAF Results and Resources Framework Outcome 3: "By 2011, regional human development disparities are reduced, including reducing the gender gap, and environmental sustainability improved".

Egypt's Country Programme lists the following outputs in support of Outcome 4 (Institutional capacity building for environmental sustainability improved) and Outcome 5 (Pollution levels reduced):

- z. Government- and public awareness on global and national environmental issues increased
- aa. National capacity to comply with international environmental conventions strengthened.
- bb. National capacity to enforce environmental laws improved.
- cc. NGOs and local communities' engagement in small scale environmental projects supported.
- dd. Appropriate and innovative pollution abatement techniques and approaches introduced, including cleaner production systems.
- ee. International agreements complied with in relation to pollution reduction and climate change.

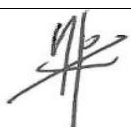
UNDP's Country Office in Egypt, in particular its environment unit consisting of four experienced environmental management experts, has extensive experience in the implementation of GEF funded projects, such as those related to IW, CC, Biodiversity, POPs (SGP) and multi-focal areas projects (e.g. 'mainstreaming global environment in national plans and policies'). As such the UNDP Egypt environment unit is very well placed to follow-up on project implementation

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 [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Dr.Mawheb Abou El Azm	Chief Executive Office, EEAA	EGYPTIAN ENVIRONMENTAL AFFAIRS AGENCY - MINISTRY OF STATE FOR ENVIRONMENTAL AFFAIRS (MSEA)	09/17/2010

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF policies and procedures and meets the GEF/LDCF/SCCF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Mr. Yannick Glemarec Executive Coordinator UNDP-GEF		08/15/2012	Dr. Suely Carvalho GEF Principal Technical Advisor for POPs/Ozone UNDP/MPU/Chemical	212-906-6687	suely.carvalho@undp.org