



PROJECT IDENTIFICATION FORM (PIF) ¹

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

PART I: PROJECT IDENTIFICATION

Project Title:	Reducing UPOPs and Mercury Releases from the Health Sector in Africa		
Country(ies):	Ghana, Madagascar, Tanzania and Zambia	GEF Project ID: ²	4611
GEF Agency(ies):	UNDP (select) (select)	GEF Agency Project ID:	4865
Other Executing Partner(s):	WHO	Submission Date:	2012-04-11
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:	645,320

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 Outcome 1.5: Country capacity built to effectively phase out and reduce releases of POPs	UPOPs releases avoided or reduced from the health sector Legal and regulatory frameworks enhanced; national plans developed and implemented	5,612,633	22,509,655
(select) CHEM-3	Outcome 3.1: Country capacity built to effectively manage mercury in priority sectors	Countries implement mercury management and reduction activities in the health sector	517,902	2,000,345
(select) (select)				
(select) (select)				
(select) (select)				
(select) (select)				
(select) (select)				
(select) (select)				
(select) (select)				
(select) (select)	Others			
Project management cost ⁴			322,660	1,300,000
Total project costs			6,453,195	25,810,000

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.

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

B. PROJECT FRAMEWORK

Project Objective: The proposed Africa Regional Healthcare Waste Project seeks to: 1. Implement best environmental practices and non-incineration and mercury-free technologies to help African countries meet their Stockholm Convention obligations and to reduce mercury use in healthcare; 2. Ensure the availability and affordability of non-incineration waste treatment technologies in the region, building on the outcomes of the GEF supported UNDP/WHO/HCWH Global Medical Waste project.					
Project Component	Grant Type (TA/IN V)	Expected Outcomes	Expected Outputs	Indicative Financing from relevant TF (GEF/LDCF/SCCF) (\$)	Indicative Cofinancing (\$)
1. [Regional component] Disseminate technical guidelines, establish mid-term evaluation criteria and technology allocation formula, and build teams of national experts on BAT/BEP at the regional level	TA	1.1 Technical guidelines, evaluation criteria and allocation formula adopted 1.2 Country capacity to assess, plan, and implement healthcare waste management (HCWM) and the phase-out of mercury in healthcare built	1.1.1 Mid-term evaluation criteria and formula for the allocation of technologies among countries 1.2.1 Teams of national experts trained (at the regional level)	425,388	120,000
2. [National component] Health Care Waste National plans, implementation strategies, and national policies in each recipient country	TA	2.1 Institutional capacities to strengthen policies and regulatory framework, and to develop a national action plan for HCWM and mercury phase-out enhanced. 2.2. National Plan with Implementation Arrangement adopted	2.1.1 National policy and regulatory framework for HCWM and mercury phase-out 2.1.2 National action plan including the selection of up to 1 central or cluster treatment facility, 2 hospitals, and 3 small rural health posts as models	234,571	830,000
3a. [Regional component] Make available in the region affordable non-incineration HCWM systems and mercury-free devices that conform to BAT and international standards	TA	3a.1 Favorable market conditions created for the growth in the African region of affordable technologies that meet BAT guidelines and international standards	3a.1.1 HCWM systems and mercury-free devices for at least 12 health posts, 8 hospitals and 4 central or cluster facilities procured 3a.1.2 Initial set of HCWM systems and	4,238,224	13,540,000

<p>3b. [National component] Demonstrate HCWM systems, recycling, mercury waste management and mercury reduction at the model facilities, and establish national training infrastructures</p>		<p>3b.1 HCWM systems demonstrated at the model facilities</p> <p>3b.2 Reduction in greenhouse gas emissions through recycling demonstrated</p> <p>3b.3 Mercury reduction in the model facilities demonstrated</p> <p>3b.4 Institutional capacities for national training strengthened</p>	<p>mercury-free devices given to 3 health posts, up to 2 hospitals, and 1 central or cluster treatment facility per country</p> <p>3b.1.1 BAT/BEP implemented at the model facilities</p> <p>3b.2.1 Recycling programs in the model facilities</p> <p>3b.3.1. Safe storage sites for mercury and mercury-free devices used in model facilities</p> <p>3b.4.1 National training program</p>		
<p>4a. [Regional component] Evaluate the capacities of each recipient country to absorb additional non-incineration HCWM systems and mercury-free devices and distribute technologies based on the evaluation results and allocation formula</p> <p>4b. [National and regional component] Expand HCWM systems and the phase-out of mercury in the recipient countries and disseminate results in the Africa region</p>	<p>TA</p>	<p>4a.1 Capacities of recipient countries to absorb additional technologies evaluated</p> <p>4a.2 Additional technologies distributed depending on evaluated capacities for absorption</p> <p>4b.1 HCWM systems expanded to other facilities in the country</p> <p>4b.2 Country capacity to manage mercury</p>	<p>4a.1.1 Evaluation report for each recipient country including recommendations for improvement</p> <p>4a.2.1 Additional technologies distributed to countries based on the evaluation and allocation formula</p> <p>4b.1.1 BAT/BEP and related infrastructures improved and expanded in the recipient countries</p> <p>4b.2.1 More mercury devices phased out and</p>	<p>949,869</p>	<p>9,400,000</p>

		and to phase in mercury-free devices improved	stored and more mercury-free devices deployed		
		4b.3 National training expanded	4b.3.1 More people trained in HCWM and mercury		
		4b.4 Information disseminated at environment and health conferences in the region	4b.4.1 Replication tools disseminated		
5. Monitoring, learning, adaptive feedback, outreach, and evaluation.	TA	5.1 Project's results sustained and replicated	5.1.1 M&E and adaptive 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, regional and global level	282,483	620,000
	(select)				
	(select)				
	(select)				
	(select)				
	(select)				
Project management Cost ⁵				322,660	1,300,000
Total project costs				6,453,195	25,810,000

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, Ministry of Environment and local governments	Unknown at this stage	5,700,458
Bilateral Aid Agency (ies)	Centers for Disease Control	In-kind	496,993
Others	International NGO - Health Care Without Harm,	In-kind	100,000
GEF Agency	UNDP	In-kind	100,000
Other Multilateral Agency (ies)	GAVI	Unknown at this stage	9,500,634

⁵ Same as footnote #3.

Others	Participating private hospitals and waste treatment facilities, health professional and hospital associations, training institutions, CSOs and national stakeholders	Unknown at this stage	6,233,500
Others	PEPFAR, MMIS and other related projects	In-kind	3,678,415
(select)		(select)	
(select)		(select)	
(select)		(select)	
Total Cofinancing			25,810,000

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
(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
(select)	(select)	(select)				0
Total Grant Resources				0	0	0

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 as follows:

Relevant GEF-5 Strategy Indicator	Project's contribution
Objective 1: Phase out POPs and reduce POPs releases	
Outcome 1.3: POPs releases to the environment reduced	
Indicator 1.3 Amount of unintentionally 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	Significant reductions of UPOPs will be achieved in each country by replacing incineration and open burning, commonly used now for treating healthcare waste, with non-incineration technologies. Stimulating the manufacture and distribution of these technologies will ensure their affordability and accelerate widespread adoption in the African region leading to greater UPOPs reductions in coming years.
<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	Country capacity will be built through the development or enhancement of national policies, regulations, and national plans relative to the management of both healthcare waste and mercury in healthcare; the strengthening of monitoring and enforcement; the development of a national training program; the demonstration of best environmental and management practices and technologies; and the national dissemination of project results.
Objective 3: Pilot sound chemicals management and mercury reduction	
<i>Outcome 3.1: Country capacity built to effectively manage mercury in priority sectors</i>	
Indicator 3.1 Countries implement pilot mercury management and reduction activities	Country capacity will be built by developing and implementing mercury phase-out plans, storage of healthcare mercury waste, adopting standards and demonstrating use of mercury-free devices.

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

The participating countries (Ghana, Madagascar, Tanzania and Zambia) are signatories to the Stockholm Convention which calls for "priority consideration" of alternative technologies that avoid the formation of dioxins and furans, such as non-incineration technologies identified in the BAT/BEP guidelines. The countries' National Implementation Plans (NIPs) identify medical waste incineration as a significant source of dioxins/furans and Governments plan to apply BAT/BEP guidelines in keeping with Stockholm Convention obligations. For national objectives and action plans related to PCDD/Fs reduction and medical waste disposal/incineration as included in countries' NIPs, please refer to Table 1.

Table 1: Summary of national priorities pertaining to PCDD/Fs reduction and medical waste incineration as included in participating countries' NIPs

Country	NIP	Priority actions related to UPOPs reduction emissions from HCW
Ghana	Jan. 2008	Medical incineration was among the main sources of PCDDs/PCDFs in Ghana in 2002. Measures to Reduce Releases from Unintentional Production (as included in the Action Plan) include establishing appropriate policy and legislation for effective regulation and enforcement of prevention of unintentional production of PCDD/F, HCB and PCBs, and eliminating/reducing releases of PCDD/F, HCBs and PCBs from incineration of medical waste by, among others, developing a phase out strategy for all old and existing methods of incineration in hospitals and health centers, and developing institutional and human resource capacity to implement national medical waste management guidelines.

Madagascar	Aug. 2008	Among the action plans included in the NIP, Action plan 6 focusses on dioxins and furans. The main objective under this action plan is to “Reduce by 50% UPOPs emissions from Municipal and Hazardous Waste Management in the Analamanga region.” Listed activities to achieve this objective include undertaking a feasibility study to reduce UPOPs emissions from incineration of medical waste in the Analamanga region, and mobilizing financial resources and putting in place the infrastructure, materials and equipment necessary to reduce UPOPs emissions.
Tanzania	Dec. 2005	The NIP Action Plan for the Reduction of Releases from Unintentional Production of PCDD/PCDFs ranks interventions in the following order of priority: (i) Establishing a coordination mechanism for management of PCDD/PCDF releases; (ii) Instituting a mechanism for PCDD/PCDF management control; (iii) Promoting and encouraging adoption of BAT/BEP; (iv) Promoting research on alternative materials/technologies (v) Formulating and implementing training programmes on PCDD/PCDF management; (vi) Establishing monitoring programmes on emissions of PCDD/PCDF; (vii) Searching and implementing practical measures to reduce or eliminate PCDD/PCDF at source; (viii) Assessing and effecting remedial measures/clean-up campaigns of areas suspected to be contaminated with PCDD/PCDF (ix) Review of and formulation of policies /regulations on management of PCDD/PCDF in line with the Stockholm Convention; (x) Create public awareness on PCDD/PCDF sources and their effects on human health and the environment; and (xi) Carrying out further inventory in areas not covered in the previous inventory. The proposed project will directly contribute to all the above priorities and related actions.
Zambia	April 2007	Among proposed national actions to reduce releases from unintentional production of PCDDs/PCDFs as included in the Zambia 2007 NIP: Minimize PCDD/F emissions from medical waste incineration; Objective: Reduction of emissions from medical waste incineration category by 95% of the value in the 2004 base national inventory, through the following activities: i) Train medical personnel and medical waste handlers in medical waste management to update them on aspects of PCDD/F emissions; ii) Create self sustaining centralized treatment facilities and upgrade incinerator technology; and iii) Employ appropriate alternative technologies/apply BAT/BEP from the SC guidance document. In addition, the 2007 NIP list as one of the four national priorities with respect to POPs management the strengthening of the existing legal framework in order to address PCDD/F releases. In specific with respect to the sound management of UPOPs it also identifies the following issues in order of priority: 1. Set up educational, monitoring and enforcement guidelines; 2. Implement a measurement monitoring programme to enforce set minimum emission levels; 3. Measure data generation and put in place appropriate infrastructure and equipment; 4. Implement policy changes so that guidelines are transposed into legislation.

Ministries of Health and Environment in the **four** countries are among the 53 African countries that adopted the Libreville Declaration in August 2008 which recognized the problems of poor waste management and toxic substances. In the Declaration, these African Governments committed to develop regional, sub-regional, and national frameworks to address environmental impacts on health through policies and national plans; and build regional, sub-regional, and national capacities to prevent environment-related health problems. The **four** countries are also among the 140 Governments that met in Nairobi, Kenya in 2009 and agreed to work towards an international mercury treaty.

B. PROJECT OVERVIEW:

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

Generation of healthcare waste is increasing across the African region as a result of expanding healthcare systems, higher utilization of single-use items, and poor segregation practices. To reduce the spread of HIV/AIDS and other diseases from infectious waste, countries have relied heavily on incineration, a practice that will likely intensify during pandemics. The capital and operating costs of incinerators and pollution control equipment that meet the Stockholm Convention’s BAT/BEP guidelines are prohibitive in most African countries. Unfortunately, the low-cost medical waste incinerators, such as the De Montfort incinerators, commonly used throughout Africa account for about 40 g TEQ of air emissions and in ash residues per kilotonne of waste burned.

Healthcare facilities (HCFs) are also a significant source of atmospheric releases of mercury. Data from developing countries suggest that the hospitals in the **four** participating countries could release **177** kg of mercury per year from the healthcare sector. Table 2 summarizes the baseline situation relative to healthcare waste management (HCWM) and mercury in health care among the participating countries.

In order to address the challenges that sub-Saharan countries face with respect to the sound management and disposal of healthcare waste, reducing mercury emissions, as well as meeting their obligations under the Stockholm Convention, the project proposes the following major activities:

1. Disseminate technical guidelines, establish mid-term evaluation criteria and technology allocation formula, and build teams of national experts on BAT/BEP at the regional level (regional component)

At a regional conference, each Government will agree on developing a central or cluster treatment facility, up to two hospitals (up to 300 hospital beds), and three rural health posts or dispensaries that will receive the initial set of non-incineration HCWM systems and mercury-free devices under *Component 3* (output 3.1.2). Governments will also agree on evaluation criteria and a formula for the allocation of additional HCWM systems and mercury-free devices based on the capacity of countries to absorb additional technologies as determined in the mid-term evaluation. Intensive training workshops will be conducted on the regional level to prepare teams of national experts comprised of government personnel and local consultants selected by the countries. The teams will undergo comprehensive training in non-incineration HCWM systems, policies, waste assessments, UNDP GEF and WHO tools, national planning, BAT/BEP guidelines, mercury phase-out, international standards, and other technical guidelines. Master trainers will receive intensive training in content, effective teaching methods, evaluation tools, and Training of Trainers programs (number of trainers to be trained for each of the participating countries will be decided upon during the PPG phase of the project). The workshops will bring about a common understanding of project objectives and deliverables; foster regional cooperation and information exchange; reduce project costs; facilitate planning; and ensure consistency with international standards and guidelines.

2. Develop national plans, implementation strategies, and national policies in each recipient country (national component)

Upon their return to their respective countries, the national teams will assess and strengthen national policies, regulatory framework, and national plans for HCWM and mercury. National plans could include a combination of centralized, cluster, and in-premise treatment systems and their corresponding infrastructures; development or integration of recycling networks and safe disposal sites; set-up of centralized and in-premise storage for healthcare mercury waste; promulgation of standards for mercury-free devices; and the selection of up to three health posts, two model hospitals and one central or cluster treatment facility partly based on UNDP GEF and WHO rapid assessment, costing, and other tools.

3. a. Make available in the region affordable non-incineration HCWM systems and mercury-free devices that conform to BAT and international standards (regional component)

A regional approach will be employed to create market demand and stimulate the growth of non-incineration HCWM systems and mercury-free technology distributors or manufacturers in Africa. The project will adopt specifications developed by the current GEF/UNDP project for non-incineration HCWH management systems that are consistent with Stockholm Convention BAT/BEP Guidelines. In a parallel endeavor, a not-for-profit entity involving Health Care Without Harm and the University of Dar es Salaam (Tanzania) will advance the outcomes from the current GEF/UNDP project in Tanzania. Companies whose technologies meet the BAT/BEP guidelines and international standards, as certified by the regional project, will be selected through a competitive bidding process. Non-incineration HCWM systems and mercury-free thermometers and sphygmomanometers sufficient to equip **two dozen** small health posts, **14** healthcare facilities (up to **1,600** hospital beds total) or more, and **four** central facilities (each capable of treating waste up to 8,400 hospital beds or as many as 40 hospitals) will be centrally procured. The size of the purchase and likely future demand will encourage manufacturers and

distributors to make these technologies available and affordable in the region. An initial batch of HCWM systems and mercury-free devices will then be distributed to each country for use in the model facilities.

b. Demonstrate HCWM systems, recycling, mercury waste management and mercury reduction at the model facilities, and establish national training infrastructures (national component)

At the country level, the team of national experts will prepare the model facilities to receive non-incineration HCWM systems and mercury-free devices. The preparation will include baseline assessments, promulgation of facility-level policies and procedures, development of HCWM plans, training, BEP implementation, installation of treatment technologies, operation and maintenance, recycling, and monitoring. Moreover, mercury waste management practices will be implemented, safe storage sites set up, and mercury-free devices distributed. The model facilities will serve as pilot sites to gain experience and as BAT/BEP demonstration sites. The national training infrastructure and training of trainers programs for HCWM and mercury will be established. Synergy and coordination between the national training programs among the Anglophone and Francophone countries will be maximized. Trainers trained at the regional level in *Component 1* will constitute the foundation of the national training-of-trainers programs. The number of people targetted for training will de decided during the PPG phase of the project.

4. a. Evaluate the capacities of each recipient country to absorb additional non-incineration HCWM systems and mercury-free devices and distribute technologies based on the evaluation results and allocation formula (regional component)

On the regional level, a mid-term evaluation will be conducted to assess the capacity of each country to absorb additional technologies. The evaluation will examine, among others, the promulgation of HCWM and mercury reduction policies, successful implementation of BAT/BEP in the model facilities, proper operation and maintenance of the initial batch of non-incineration HCWM systems and mercury-free devices, safe storage of healthcare mercury waste, and effective national training programs. The evaluation will include recommendations for improvement. Additional HCWM systems and mercury-free devices will be allocated to countries based on the results of the evaluation and the allocation formula established in *Component 1*.

b. Expand HCWM systems and the phase-out of mercury in the recipient countries and disseminate results in the Africa region (national and regional component)

Following the recommendations from the evaluation, each country will seek to improve its existing system. The work will expand to other healthcare facilities as the country receives additional non-incineration HCWM systems and mercury-free devices as determined in *Component 4a*. The coverage of the national training program will be further expanded. Project results and replication tools will be disseminated nationally and regionally through existing conferences on environment and health, such as annual WHO and infection control conferences. As much as possible, agreements will be made with manufacturers and distributors to ensure the availability of parts and technical support for repair and maintenance of technologies. The regional project will establish a certification program under which accredited parties can certify the quality of non-incineration technologies and their conformance with BAT/BEP and international standards. The teams of national and regional experts will be encouraged to form a network for the purpose of information exchange, professional development, and assisting the countries in the region. In the final year, the national plans for HCWM and mercury phase-out will be reviewed and updated as needed.

Table 2. Summary of preliminary baseline for the participating project countries

HCWM (T/yr), UPOPs(g-TEQ/yr), Hg (g/yr) generation/emission rates	Summary of HCWM Situation	Technological aspects	HCWM Policy and Regulatory Framework
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GHANA			
<p>21 487 hospital beds (<u>Source: www.moh-ghana.org</u>)</p> <p>Medical waste incineration and power generation/heating combined generate 14.8 g-TEQ/yr (2008 NIP)</p> <p>There have been no attempts to replace mercury containing devices. Based on the assumption that on average 2.8 g of Hg per bed per year are released into the environment, Ghana's healthcare sector would be responsible for ~ 60 Kg of Mercury a year.*</p>	<p>(<u>Source Ghana MoH and EPA - 2011</u>):</p> <p>Policies/Plan:</p> <ul style="list-style-type: none"> - HCWM assessment: carried out using WHO HCWM Rapid Assessment Tool, 2002 - 2nd Assessment of HCWM and peer review of draft HCWM policy, 2005 - Facility waste plans for 1 pilot region, 2006 - HCWM Policy finalized and printed, 2006 - Implementation plan developed, steering committee constituted but not fully functional. <p>Capacity Development - Implementation activities carried out with WHO and WB support include:</p> <ul style="list-style-type: none"> - Orientation at meetings of district health directors, health administrators, regulators, etc.: 2005-09 - Training of trainers at national level, 2009 - Integration with training on Occupational health & safety: Eastern & Central regions, 2010 - Establishment of 2 pilot facilities, Central Region - Training manual and HCWM training supported by Abidjan Lagos Corridor (ALCO) Project 	<p>Incinerators used in Ghana:</p> <ul style="list-style-type: none"> - De Montfort incinerators: 110 installed in district hospitals (2001 -2003). Capacity: 30 kg/hr. Many out of use. - Modified De-Montfort stacks replaced with brick: 50 - Larger brick incinerators, capacity: 1.5 – 2 T/2-3 hrs. 15 to date, 30 to be installed in 2011. - Portable electric incinerator. Capacity: 20kg/hr – 5 - Few Diesel powered. Most have broken down - Large–electric powered: installed in 1 district hospital <p>Open burning remains common practice in facilities with no or broken-down incinerators.</p>	<ul style="list-style-type: none"> - Basel Convention: 2003 - Stockholm Conv.: 2003 - Env. sanitation policy: identifies HCW as hazardous - Cabinet memo on HCWM developed (2009 – 2010) awaiting submission by MOH to cabinet
MADAGASCAR			
<p>(<u>Source: National Inventory of Mercury Wastes – 2008</u>)</p> <p>Madagascar has a total of 8 146 hospital beds (university, district and regional hospitals).</p> <p>Total HCW generation rates are 2,418 T/yr of which 36% is buried (887 T/yr), 55% is burned in the open (1 330 T/yr) and 8% is incinerated (201 T/yr)</p> <p>Incineration and open burning of HCW combined emits approximately: 16.8 g-TEQ/yr.</p> <p>The national inventory of Mercury Wastes estimates the amount of Hg at 21.6 kg/yr (based on number of thermometers purchased).</p>	<p>HCWM in Madagascar is relatively new. Following an alarming country assessment in 2004, a National Action Plan was drafted in 2005 which includes:</p> <ul style="list-style-type: none"> - Setting up a training “cascade” - Implementation of four integrated equipment plans - A monitoring system <p>The national HCWM policy (2005) describes the norms in 6 areas: selection, packaging, transportation, storage, elimination and overall management.</p> <p>There is currently no legal framework that deals specifically with HCWM. A Decree based on the National Policy document has been drafted and is being reviewed.</p> <p>Implementation modalities will be finalized through a set of regulations.</p> <p>Securing the financial resources to ensure sustainability on the medium/long term is a critical issue not yet entirely addressed.</p>	<ul style="list-style-type: none"> - Color coding, shape and volumes for containers have been defined. - Trials are underway to locally produce safety boxes. - Technical specifications of waste treatment units have been defined (double chamber incinerators for hospitals, De Montfort incinerators for district level and secured waste disposal pits for Health care Centres). - <i>Antananarivo</i>: Equipment specifications have been drafted for each category of HCF and funding is being mobilized for each. In early 2006, 3 prototypes of the De Montfort-WDU incinerators had been built and 2 training sessions organised for local contractors and supervisors. Ten units were operational in July 2006 and 30 were expected to be ready by 2006. The plan for secured waste disposal pits for PHCs was at the prototype stage in 2006. 	<ul style="list-style-type: none"> - Basel Convention: 1999 - Stockholm Conv.: 2001 - Law: 2006 - Policy: 2005 - Strategy: 2005 - NAP: 2005 - Guidelines: 2005 - NSC: 2005 - Libreville Declaration: 2008
TANZANIA			
<p>(<u>National HCWM plan 2003, updated 2007, AGENDA 2009</u>)</p> <p>5 110 beds</p> <p>No. of health care facilities: 5904 facilities (59 major hospitals and 351 small hospitals).</p> <p>Total HCW generation rates: 14 T/day, 5110 T/yr.</p> <p>(<u>NIP: 2005</u>) Leading sources of PCDD/PCDF (517-gTEQ/a in air and 249 g-TEQ/a in residue) are uncontrolled combustion processes (68%) and hospital</p>	<p>Regulatory framework relevant to HCWM (AGENDA 2009):</p> <ul style="list-style-type: none"> - National Standards and Procedure for HCWM (2006) - HCWM National Policy Guidelines and the HCWM Monitoring Plan (2006). <p>Related legislation and guidelines:</p> <p>National Environmental Policy (1997), Environmental Management Act (2004), National Environmental Action Plan, Air emission standards, Ministry of Health Waste Management Guidelines, Local Government (District and Urban Authorities) Act of 1982, Public Health Act (2001). These address issue of waste</p>	<p>(<u>WHO 2006, healthcarewaste.org</u>)</p> <p>Poor segregation practices are due to a combination of lack of awareness and absence of appropriate containers. The treatment and final disposal of HCW is still very problematic with most HCFs burying waste or practising open burning. The HCFs equipped with waste treatment usually have De Montfort incinerators.</p> <p>Hospital wastes comprise of about 12 % of the total hazardous wastes generated in Tanzania.</p> <p>(<u>NIP: 2005</u>) In 2003, the Ministry of</p>	<ul style="list-style-type: none"> - Basel Convention: 1993 - Stockholm Conv.: 2004 - Law: none - Policy: 2006 - Strategy: 2003 - NAP: 2003 - Guidelines: 2006 - NSC: 2006

<p>waste incineration (22%).</p> <p>The NIP estimates 2821 T/a of HCW incinerated, resulting in 112.84 g-TEQ/a of UPOPs emissions to air.</p> <p>Mercury emissions based on an assumption of 2.8 g per bed/yr, total ~ 14.3 Kg Hg/yr.*</p>	<p>management in general originating from various generators. To remedy the absence of laws/regulations on HCWM, a working group was formed in 2006.</p> <p>Finding and installing environmental-friendly and affordable HCW treatment technologies is an issue given limited financial resources. (WHO 2006, healthcarewaste.org)</p>	<p>Health installed 15 medical waste incinerators in health centres in Tanzania. As of 2004 the number rose to 54 incinerators. 11 were installed in Regional hospitals and the rest in District hospitals. However, they lack facilities to control emissions including PCDD/F. 75 District Hospitals and 15 Regional Hospitals have some burning units, which cannot be called incinerators.</p>	
ZAMBIA			
<p>The 2004 inventory estimated PCDDs/PCDFs emissions at 483.1g TEQ/a. The single, largest source being uncontrolled combustion processes, followed by ferrous and nonferrous metal production and waste incineration on the third place: 29.6 g-TEQ/a (air) and 0.2 g-TEQ/a (residue) (NIP: 2007).</p> <p>Total no of HCFs: 1,196 (9 big/specialized, 1187 small or medium size). Total no. of beds: 28,490. Total amount of waste: 65,711 kg/day (8,731.4 kg/day infectious and 56,980 kg/day municipal) (Nat. HCWM Plan: 2008-2010)</p> <p>Based on an average 2.8 g of Hg per bed/yr, estimated releases are ~ 80 kg of Hg/yr.</p>	<p>Plans and Policies:</p> <ul style="list-style-type: none"> - Following a 2003 assessment, a Strategy and NAP were drafted but never implemented. There remains an urgent need to mobilise adequate financial resources to carry out necessary HCWM measures (WHO 2006). - National HCWM Plans (2004 – 2006 and 2008-2010) were developed with support of the World Bank under the “<i>Malaria Booster Project</i>”. - The 2011 MoH Action Plan lists HCWM improvement as an anticipated result (4.4.7.2), and stipulates targets for hospitals and HCFs to acquire approved HCW materials (2011: 30%, 2012: 40% and 2013: 55%). Funding for certain support activities is confirmed and aligned to the MoH 2011 budget (GRZ funding), while the remainder is to be mobilized from donors. <p>Regulatory framework: The MoH as well as the MoE have a number of legal provisions that are directly or indirectly related to the HCWM. However, the legal framework is still missing specific HCWM related regulations (WHO 2006, healthcarewaste.org). Legislation on the management of hazardous should be enacted, and clear, national guidelines for the management of medical wastes should be formulated. Such guidelines should complement standards on clinical policies and procedures (World Bank, 2010).</p> <p>General HCWM situation:</p> <p>Most audited HCFs (85) did not maintain HCW records contrary to Ministry policy, legislation and regulations. - The majority of HCFs has not implemented colour coding / labelling systems. Some HCFs do not have puncture proof sharps boxes and are not using bin liners. - In most HCFs waste is transported by hand due to absence of suitable transport equipment. - Most HCFs did not have HCWM plans or team in place. - Most HCFs do not provide HCWM training and have insufficient staff available to properly handle waste. “<i>Report of the Auditor General on Medical Waste Management</i></p>	<p>Technologies:</p> <ul style="list-style-type: none"> - “<i>Report of the Auditor General on Medical Waste Management (2010)</i>”: Out of 85 HCFs audited, 49 (58%) did not dispose of any waste treatment technology and use refuse pits or ordinary drums to burn HCW and MSW. Of the HCFs that do have incinerators, the majority of technologies doesn’t meet ECZ standards. - “<i>ECZ – Minimum Specifications for HCW Incineration</i>”: Countrywide surveys of incinerator use, maintenance and management have revealed widespread deficiencies in the construction, siting, operation and management of these units. These deficiencies can result in poor performance of the incinerator, e.g. low temperatures, incomplete waste destruction, inappropriate ash disposal, high smoke emissions, fugitive emissions, etc. 	<ul style="list-style-type: none"> - Basel Convention: 1994 - Stockholm Convention: 2001 - Law: None - Strategy: 2006 - NAP: 2006 - Guidelines: 2006

**For the majority of the candidate countries no information on Mercury releases was readily available, in those cases an average of 2.8 g/bed/a is applied for calculations.*

For the purpose of this PIF a desk review of available NIPs as well as National HCWM plans and policies was undertaken to obtain baseline information, however in some cases different information sources proved contradictory and/or HCW generation rates and related UPOPs emissions rates were insufficiently detailed or lumped with other sources of PCDD/Fs. Therefore, an accurate baseline will be established during the PPG phase of the proposed project to determine more precisely the UPOPs and mercury emission reductions which the proposed project will be able to achieve directly and indirectly through replication across participating countries as well as Sub-Saharan Africa.

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:

- Why the incremental /additional activities are appropriate/necessary to address the identified causes, issues;

Sub-Saharan countries face particular challenges because waste treatment technologies that meet BAT/BEP and fit local circumstances are simply not available at market prices that facilities or their Governments can afford. As a consequence, countries opt for low-cost medical waste incinerators, such as the “De Montfort incinerator”, responsible for approximately 40 g-TEQ in air emissions and in ash residues per kilotonne of waste burned. Similarly, the use of mercury-containing devices in healthcare is widespread and due to limited availability of low cost mercury-free devices as well as unfamiliarity with their use, the breakage and improper disposal of mercury-containing devices results in significant mercury emissions. Without funding from the Global Environment Facility (GEF) which will be applied towards a regional approach to create market demand and stimulate the growth of affordable non-incineration HCWM systems and mercury-free technology distributors and/or manufacturers in Africa, these conditions are very unlikely to change. Without this project, Sub-Saharan countries will be unable to comply with the Stockholm Convention with respect to the implementation of BEP/BAT healthcare waste treatment technologies and will be unable to transition away from mercury-containing healthcare devices. Those currently being exposed to UPOPs and mercury emissions resulting from health care, as well as the global environment, will continue to remain at risk.

- Why the activities are complementary (incremental /additional reasoning)

For the purpose of this PIF, in addition to extensive discussions with prospective project countries, a desk review of available NIPs, National HCWM plans and related policies and internet sources was undertaken to establish a preliminary baseline. As can be observed from *Table 2: Summary of preliminary baseline of participating project countries*, each of the **four** participating countries (Ghana, Madagascar, Tanzania and Zambia) has undertaken efforts to undertake to some extent HCWM assessments; development of national HCWM policies, strategies and actions plans; improvement of regulatory HCWM frameworks; facilitation of training and training materials; as well as procurement and installation of incineration technologies. These efforts clearly show countries’ continuous commitment to address the challenges faced with respect to HCWM.

However, Table 2 also lists the challenges that countries continue to face in implementing national HCWM plans, policies, strategies, regulations, guidelines and training. Most HCFs struggle with improving their HCWM practices and finding environmentally friendly and affordable waste treatment technologies given limited financial resources. Almost none of the participating countries (with the

exemption of Madagascar) have undertaken efforts to phase-out the use of mercury-containing devices. The proposed project is therefore entirely complementary. It will build upon the efforts undertaken by countries so far while enable participating countries to address the challenges more effectively.

- How the activities of the GEF/LDCF/SCCF projects will be replicated and catalized in the future; how the positive effects of the project will be maximized;

A regional procurement approach (to equip **two dozen health posts, 14 hospitals** and **four** central facilities, corresponding to healthcare waste from a total of about **35,200** hospital beds) will be employed to create favorable market conditions, market demand and stimulate the growth of non-incineration HCWM systems and mercury-free technology distributors or manufacturers in Africa. In parallel effort, a regional not-for-profit entity established jointly by Health Care Without Harm and the University of Dar es Salaam will create business plans to support the production of low cost non-incineration technologies and related equipment developed under the ongoing GEF/UNDP Tanzania project component. Companies, whose technologies meet the BAT/BEP guidelines and international standards, as certified by the regional project, will be selected through a competitive bidding process.

Project results and replication tools will be disseminated nationally and regionally through existing conferences on environment and health, such as annual WHO and infection control conferences. As much as possible, agreements will be made with manufacturers and distributors to ensure the availability of parts and technical support for repair and maintenance of technologies. The teams of national and regional experts will be encouraged to form a network for the purpose of information exchange, professional development, and assisting the countries in the region.

The size of the initial equipment purchase and the future demand established through awareness creation and information dissemination at national and regional level among HCFs and central treatment facilities will encourage manufacturers and distributors to make these technologies available and affordable in the region. Healthcare facilities and central treatment facilities throughout the Sub-Saharan Africa will then have access to manufacturers, distributors and maintenance service providers of low cost non-incineration technologies and mercury-free devices (meeting specific requirements) as well as technical assistance from a network of national and regional experts.

In addition to the **two dozen** health posts, **14** hospitals and **four** central treatment facilities targeted, project efforts will ensure that HCFs and central treatment facilities throughout Africa will benefit from the availability of affordable non-incineration HCWM systems and mercury-free technologies.

- Why the funding level of each activity is considered to be appropriate.

The proposed Africa regional project builds upon and takes full advantage of the outcomes of the ongoing UNDP GEF global healthcare waste project. The approach of the proposed project incorporates lessons learned from the current project, including the setting up of more cost-effective central or cluster treatment facilities, regional procurement to ensure quality and reduce costs through bulk purchasing, and providing incentives to improve HCWM practices through additional technology allocation. As part of the ongoing UNDP GEF project, cost data related to HCWM and treatment scenarios have been documented. The funding levels of each of the activities proposed as part of the regional Africa project have been based on actual costs of the ongoing project. The funding level of the proposed project is comparable and proportional to the level of activities planned while considering local conditions. Finally, project results will be of interest to all Sub-Sharan African countries, as they face similar issues related to the environmentally sound management of healthcare waste as well as the phase-out of mercury containing devices. Therefore GEF funding is expected to contribute to strengthen HCWM management and disposal practices beyond the participating **four** countries.

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

For the purpose of this PIF, a desk review of available NIPs as well as National HCWM plans and policies was undertaken to obtain baseline information, however in some cases different information sources proved contradictory and/or HCW generation rates and related UPOPs emissions rates were insufficiently detailed or lumped with other sources of PCDD/Fs. Therefore, an accurate baseline will be established during the PPG phase of the proposed project to determine more precisely the UPOPs and mercury emission reductions which the proposed project will be able to achieve directly and indirectly through replication across participating countries as well as Sub-Saharan Africa.

However, for the purposes of the PIF a rough estimate can be made. Combined (all **four** participating countries) mercury releases from healthcare amount to approximately ~ **176** kg Hg/yr. Combined UPOPs emissions from healthcare from these **four** countries amount to approximately ~ **174** g-TEQ/a. Assuming that the proposed project would be able to reduce UPOPs and mercury emissions by **56** and **20** percent, this would result in direct reductions of UPOPs emissions by **97.4** g-TEQ/a and mercury emissions by **35.4** kg Hg/yr.

We do have to keep in mind that the replication effect (indirect effect) of the proposed project can prove to be very large, not only because of dissemination of project results and regional awareness building, but most importantly because project activities will lead to the availability of low-cost non-incineration HCWM systems and mercury-free technologies in Sub-Saharan Africa, entirely changing the current market situation, which at present remains one of the most important barriers to the adoption of BAT.

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.](#)":

Human and Environmental Health Benefits: The project will benefit healthcare workers (such as doctors, nurses and hospital cleaning staff) as well as waste handlers, collectors and scavengers who face hazardous working conditions when in contact with infectious healthcare waste. Because of their low status, many women, waste handlers, and scavengers have little control over their work environment and the risks they are exposed to. The health sector is also a major source of UPOPs emissions and other toxic substances such as mercury. Poor communities living close to disposal facilities or healthcare facilities that are operating polluting incinerators on their premises on a daily basis will also benefit.

Note: The critically high prevalence of HIV/AIDS and Hepatitis B in African countries highlights the importance of occupational and public health issues regarding needle-stick injuries, exposure of hospital cleaners and waste pickers at landfills to infectious waste, etc. The multi-cultural coverage of the regional project will require sensitivity regarding the handling of placenta and pathological/anatomical waste.

Gender considerations: The PPG phase of the project will assess the gender aspects of healthcare waste management, ensure the participation, representation and buy-in of vulnerable worker and community populations in the project's formulation and mainstream gender into all activities to be undertaken as part of the full-size project as per the "UNDP Technical Guide on mainstreaming SMC" and the UNDP guidance note on "The why and how of mainstreaming gender in chemicals management".

Economic benefits: A key regional aspect of the project is the regional dissemination of appropriate treatment technologies developed under the current global project. In order to be available and affordable, these technologies would be provided by African enterprises linked to distribution channels, end-users, and a network of technical personnel in Africa that can maintain and repair the technologies. The project will work for the protection of livelihoods and employment through the waste management sector.

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. Unclear of the roles and responsibilities of the two key ministries (Ministry of Environment and Ministry of Health) in aspects of healthcare waste management resulting in no leadership, conflicting decisions, duplication, or slow implementation of project components.	M	One criterion for the selection of project countries is a Government in which both the Ministry of Environment and the Ministry of Health are willing to work closely together towards achieving the project objectives. All stakeholders will be involved in the project's proposal planning phase during which their roles and responsibilities will be clarified and agreed upon.
2. Slow or no development/enhancement, adoption and implementation of national policies and plans on healthcare waste which are key in creating an enabling environment for replication of BAT/BEP across the country.	L	One criterion for the selection of project countries is a Government committed to update and sustain policies and plans related to HCWM. The project will support ministries in strengthening the national policy and regulatory framework. The evaluation and technology allocation formula will encourage countries to accelerate adoption of policies and plans.
3. Slow or poor implementation of BAT/BEP practices in healthcare facilities, related infrastructures, technologies, mercury phase-out, and/or training programs.	M	MoUs with healthcare and treatment facilities will outline responsibilities and timelines. The <i>Component 5</i> evaluation will identify problems and recommend improvements. The evaluation and technology allocation formula will incentivize countries to implement project activities successfully and efficiently.
4. Technology procurement beset by delays, inadequate equipment, wrong specifications, lack of transparency, or non-compliance with UN bidding requirements and procedures.	L	The competitive bidding process will be centralized at the regional level and will be transparent and adhere strictly to UN requirements and procedures. The regional project will ensure that candidate technologies meet BAT/BEP and other standards.
5. Insufficient number of technology suppliers involved in the bidding and/or high purchase costs.	M	The outreach under <i>Component 3</i> and the parallel work by Health Care Without Harm will ensure sufficient vendors. Centralized high-volume procurement and greater supply will lower prices.
6. Little confidence of healthcare facilities and providers in non-incineration and mercury-free technologies, resulting in continued use of inadequate incinerators and mercury devices.	L	The project will share technical specifications, standards, test results, and experiences from the current UNDP GEF project. Model facilities and areas will provide decision-makers with information on non-incineration and mercury-free technologies.
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:

The project will have two principal cooperating agencies at the international level:

1. **World Health Organization (WHO)**, principally the Department for Public Health and Environment (Water, Sanitation, Hygiene and Health) with support from other divisions (e.g., Occupational and Environmental Health); as well as the WHO African Regional Office in Brazzaville (Republic of Congo); WHO country offices, and WHO Collaborating Centers;
2. **International NGO Health Care Without Harm (HCWH)**, principally the HCWH Global Projects and International Outreach, HCWH's major African affiliates (e.g., AGENDA in Tanzania and GroundWorks in South Africa), and other partners.

A full assessment of all relevant stakeholders will be done during the PPG phase. The key stakeholders include (partial list):

- **Health and Environment Ministries** and other Ministries and Government entities (e.g. Ministries of Local Government) involved with HCWM and mercury;
- **Healthcare facilities and centralized treatment facilities:** The project will partner with facilities identified by the country as demonstration sites;
- **Private sector**, for example: service providers involved in hospital cleaning, waste collection, central waste treatment, mercury storage, and disposal; entrepreneurs/enterprises involved in the

- manufacture, sale, distribution, installation, servicing, etc. of non-incineration and mercury-free technologies and related equipment; and laboratories for the testing and certification;
- **Professional associations and health alliances** including professional societies of doctors, nurses, dentists, laboratory technicians, infection control professionals, and hospital administrators; associations of hospitals and clinics; public health institutions;
- **Workers unions** representing employees in the health sector, waste handlers, waste transporters, recyclers, and operators of centralized storage and treatment;
- **Training institutions** offering education and training in HCWM at national and facility levels;
- **NGOs and CSOs** including environmental organizations, recycling networks, and groups representing the rights of waste pickers and poor communities affected by waste disposal.

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

The following 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 description of relevant ongoing and planned activities at national level will be elaborated:

- UNDP/WHO/GEF: *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\$)
- AGENDA/HCWH/UNDP/GEF: *Non-Incineration Medical Waste Treatment Pilot Project at Bagamoyo District Hospital, Tanzania.*
- WHO-HCWH: *Global Initiative to Substitute Mercury-Based Medical Devices in Health Care*
- UNEP: *Global Mercury Partnership*
- UNIDO: *Environmentally Sustainable Management of Medical Waste in China* (GEF Grant: 11,650,000 US\$)
- UNIDO: *Environmentally Sound Management of Medical Wastes in India* (GEF Grant: 10,000,000 US\$)
- IBRD: *Demonstrating and Promoting Best Techniques and Practices for Managing Healthcare Waste and PCBs in Tunisia* (GEF Grant: 5,500,000 US\$)

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

As noted in Annex L of the document “*Comparative advantages of the GEF agencies*”, UNDP has a comparative advantage in the area of Persistent Organic Pollutants, specifically 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.

Moreover, UNDP has a comparative advantage in all work related to the Millenium Development Goals (MDGs) and in poverty reduction. A benefit of this work will be the improvement of health-delivery systems through the fostering of good healthcare waste management thereby supporting several targets under the MDGs.

In its capacity as GEF implementing agency for the UNDP/WHO/HCWH 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/BEP which have been applied, tested and improved under this global project in seven countries (Argentina, India, Latvia, Lebanon, Philippines, Senegal, and Viet Nam), some of which are facing similar challenges as the countries that will be participating in the proposed project.

The proposed Africa regional project will build upon and take full advantage of the outcomes of the UNDP GEF global healthcare waste project, including tools for rapid and baseline assessments of healthcare and waste treatment facilities; costing tools related to healthcare waste management and treatment scenarios; templates for facility-level HCWM policies; guidances on dioxin estimation, mercury sequestration, healthcare waste management plans, monitoring and evaluation, etc.; selection criteria and technical specifications for non-incineration treatment technologies and mercury-free devices; core competencies, curricula, training modules, and training techniques related to HCWM and mercury; informational materials on HCWM and mercury; and engineering designs, blueprints, and fabricated units of autoclaves and related equipment developed by the special project in Tanzania.

As part of the UNDP GEF global healthcare waste project, successful and strategic partnerships have been established with WHO, Health Care Without Harm, experts at the University of Illinois-Chicago's School of Public Health and Great Lakes Center for Occupational and Environmental Safety and Health (WHO Collaborating Center), University of Dar Es Salaam's College of Engineering and Technology, AGENDA-Tanzania, Skoll Centre for Social Entrepreneurship of the University of Oxford, US Centers for Disease Control, and other organizations instrumental in the implementation of the proposed project.

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

The United Nations Development Programme (UNDP) has contributed with 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. That contribution is estimated to US\$ 50,000 from the various participating UNDP Country Offices and UNDP-HQ. 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 involved in health programs, particularly The Global Fund to Fight AIDS, Tuberculosis and Malaria at country, regional and headquarters level will be mobilized to contribute towards project implementation. UNDP's Capacity Development Group is providing advisory services on waste management in several African countries and will be harnessed to support the regional medical waste project during implementation. The level of involvement and corresponding monetary contribution can be assessed during PPG stage and mid-term/final evaluation of the project.

UNDP's experience in integrated policy development, human resources development, institutional strengthening and non-governmental and community participation will also benefit this project. The environmental management experts in the Country Office have extensive experience in the implementation of GEF funded projects, such as those related to International Waters, Climate Change, Biodiversity, Persistent Organic Pollutants as well as multi-focal areas projects.

In addition to this, the Resident Representative functions and Country Office human resources and facilities will be available beyond strict cost recovery basis for successful project implementation.

The value of all of the above can be expected to exceed US\$ 100,000 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 fits well into the UNDP and WHO programmes in the **four** participating countries (please refer to relevant UNDAF extracts in Table 3 below).

Table 3. Summary of envisaged UNDAF outcomes and result pertaining to environmental management and healthcare waste management in the **four** participating countries

<i>GHANA (2006 – 2010)</i>
<p>UNDAF Outcome 3: Increased productive capacity for sustainable livelihoods, especially in the most deprived districts by 2010 Country Programme Outcome 4: Sustainable use of natural resources and good environmental management promoted. Output 4.1: Establishment of regulatory framework for promoting sustainable use of natural resources (UNDP, FAO)</p>
<i>MADAGASCAR (2008 – 2011)</i>
<p>UNDAF Outcome 4: Living conditions and the productivity of populations in priority zones are improved. 4.2 The environment will be protected within and around priority conservation zones (FAO, UNIDO, UNDP) 4.2.2 The implementation and consideration by centralized and decentralized structures of national policies and sectoral plans in which environmental dimensions have been integrated is improved (FAO, UNDP)</p>
<i>TANZANIA (2011 – 2015)</i>
<p>Outcome 2: Relevant MDAs, LGAs and Non-State Actors improve enforcement of environment laws and regulations for the protection of ecosystems, biodiversity and the sustainable management of natural resources 2.1.1 UNDP: Undertake awareness campaigns on the contents of the new Environment Management Act (EMA); Facilitate formulation of environmental plans and strategies at the LGAs, based on the roles and mandates given to different actors by the EMA 2.1.2 UNIDO: TA and tools to key national institutions and stakeholders for implementing effective waste management strategies Outcome 3: Relevant MDAs, LGAs, and NSAs are prepared, have adequate sectoral capacity and provide an effective intra coordinated response in WASH, Health, Education, Protection, Agriculture, Food Security and Nutrition in emergencies 3.2.1 UNICEF: Provide Health supplies and appropriate TA to respond to emergencies in line with the Core Commitments to Children in Emergencies. Ensure special attention to children, women and vulnerable groups (including PLHIV, disabled, elderly, ethnic minorities) in IEC preparation; Ensure systems for environmentally friendly disposal of supplies and consumables 3.2.2 UNFPA: Procure and preposition equipment and supplies to address SRH and GBV in line with the Minimal Initial Services Package for Reproductive Health Services in Emergencies (MISP). Utilize national procurement systems as much as possible; Ensure environment friendly prepositioning of supplies and their disposal Outcome 4: Selected MDAs, LGAs and NSAs implement evidence-based HIV prevention programmes 4.2.5 WHO: TA to MoHSW to scale up quality health sector HIV prevention interventions; Prevention in health care settings (blood safety, PEP, IPC, hospital waste management, and standard precautions); HTC, Male Circumcision, STI Control, and Positive Health Dignity and Prevention</p>
<i>ZAMBIA (2011 – 2015)</i>
<p>The five UNDAF Outcomes cover the following broad themes: (1) HIV and AIDS; (2) Sustainable Livelihoods and Food Security; (3) Human Development; (4); Climate Change, Environment and Disaster Risk Reduction and Response; and, (5) Good Governance and Gender Equality. UNDAF Outcome 1: New HIV infections are reduced by 50 percent by 2015, while scaling up treatment, care and support 1.1 Government and partners scale up prevention services to enable the reduction of new infections by 50% by 2015 Country Programme Outcomes: 1.1.1 Government and partner institutions have technical skills upgraded to revise and implement policies according to the latest guidelines. UNDAF Outcome 4 (People’s vulnerability reduced from the risk of climate change, natural and man-made disasters and environmental degradation by 2015): 4.3 Government implements policies and legal frameworks for sustainable community based natural resources management. Country Programme Outputs: 4.3.1 Mechanisms upgraded and functional to ratify/domesticate conventions on biodiversity conservation, combating desertification, climate change, ozone depletion substances, water and CITES. 4.3.3 Plans and mechanisms established by MTENR to promote environmental awareness at national and local levels. 4.3.4 Technical and operational capabilities developed in targeted Government institutions to introduce cleaner production practices and renewable energy alternatives.</p>

In each of the participating countries, there exists a strong relationship between the national government (including Ministries of Health and Environment) and the local Offices of both UNDP and WHO. At both the UNDP and WHO offices, technical expertise in the field of POPs and/or HCWM is readily available. As is typical for “in-country” UNDP presence, each of its Country Offices contains an environment unit that consists of experienced environmental management experts, with extensive experience in the implementation of GEF funded projects, such as those related to IW, CC, Biodiversity, POPs and multi-


focal areas projects. As such UNDP COs involved in this project are 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)
Ghana - Dr Raymond Babanawo	OFP, Technical Director	MINISTRY OF ENVIRONMENT, SCIENCE AND TECHNOLOGY	12/29/2011
Madagascar - Christine Edmée Ralamarisoa	OFP, Directeur Général de l'Environnement	MINISTERE DE L'ENVIRONNEMENT ET DES FORETS	02/23/2011
Tanzania - Dr. Julius Ningu	OFP, for Permanent Secretary	VICE-PRESIDENT'S OFFICE	05/04/2011
Zambia - Dr. Kenneth Nkowan	OFP, Director of the Environment and Natural Resources Management Department	MINISTRY OF LOCAL GOVERNMENT, HOUSING, EARLY EDUCATION, AND ENVIRONMENTAL PROTECTION (29/12/2011)	

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/yy)	Project Contact Person	Telephone	Email Address
Adriana Dinu Deputy Executive Coordinator		4/11/2012	Dr. Suely Carvalho GEF Principal Technical Advisor for POPs/Ozone UNDP/MPU/Chemical	212-906-6687	suely.carvalho@undp.org