



2017

Project Implementation Review (PIR)



*Empowered lives.
Resilient nations.*

UPOPs/Mercury from Health Sector in Africa

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A. Basic Data

Project Information	
UNDP PIMS ID	4865
GEF ID	4611
Title	Reducing UPOPs and Mercury Releases from the Health Sector in Africa
Country(ies)	Regional - Africa, Ghana, Madagascar, United Republic of Tanzania, Zambia, Regional Centre - Istanbul, Regional - Africa
UNDP-GEF Technical Team	Chemicals
Project Implementing Partner	SVK10
Joint Agencies	
Project Type	Full Size

Project Description
<p>The overall objective of this full size GEF funded project, implemented by UNDP in partnership with WHO and the NGO Health Care Without Harm, is to implement best environmental practices and introduce non-incineration healthcare waste treatment technologies and mercury-free medical devices in four Sub-Saharan African countries (Ghana, Madagascar, Tanzania and Zambia) to reduce harmful releases from the health sector.</p> <p>In each of these four countries, the generation of healthcare waste (HCW) is rapidly increasing. Sub-Saharan countries face particular challenges in dealing with increasing HCW quantities, because HCW treatment technologies that meet international guidelines and fit local circumstances, are simply not available at market prices that facilities and governments can afford. As a result, countries most often opt for low technology incinerators, which result in significant releases of unintentional persistent organic pollutants (UPOPs). Such pollutants are considered to be among the most harmful, persistent, and bio-accumulative global pollutants in the world and therefore controlled under the Stockholm Convention on POPs.</p> <p>Similarly, Sub-Saharan countries face challenges in handling products and wastes containing mercury. Mercury, one of the world's most ubiquitous heavy metal neurotoxicants, has been an integral part of many medical devices such as thermometers and sphygmomanometers. When these devices break or leak with regularity, they add to the global burden of mercury in the environment and expose health care workers to the acute effects of the metal itself. Considering the harmful effect of mercury, the phase-out of such devices by 2020 is anticipated under the recently adopted Minamata Convention.</p>

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B. Overall Ratings

Overall DO Rating	Satisfactory
Overall IP Rating	Satisfactory
Overall Risk Rating	Moderate

RTA DO Rating Comment	The project is definitely on track to meet its development objectives. It is a very promising project in terms of demonstration of technologies and joint health and environment benefits, demonstrating a comprehensive approach which corresponds to the spirit of the SDGs. The South-South cooperation developed through the regional nature of the project is also to be commended.
RTA IP Rating Comment	The project implementation structure is delivering convincing results, and has found a complementary balance between involvement on the ground with partners and beneficiaries through the national teams (NIM implementation) and the regional coordination and support through the regional component (DIM implementation). The work initiated on training, particularly the building of the national teams' capacity, the effective functioning of the Regional Expert team (monthly regular calls and complementary exchanges), the partnerships between UN agencies and International NGOs seem to build on the best qualities of each type of partners. It is particularly encouraging to see the progress already achieved on the procurement to be undertaken - though those are rather complex - with the efficient support of the procurement team of UNDP's Regional Hub. The rigorous organisation, follow-ups and communication channels set up by the project manager is also to be commended. In that sense, the project is on track with its long-term planning and has the potential to be highly satisfactory in future years, when the bulk of the work will have to be delivered. It will be time then to further step up its communication and dissemination efforts, especially as this project has a sizable potential for replication in developing countries.

C. Development Progress

Objective or Outcome	Description				
Objective:	<p>Non-incineration and Mercury-free technologies introduced in African countries.</p> <p>Affordable non-incineration technologies available in the African region.</p>				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	<p>Non-incineration and Mercury-free technologies introduced in 4 participating African countries.</p>	<p>In 2012, there were approximately 115 non-incineration HCW technologies installed throughout Africa.</p> <p>In the project countries, 1 non-working technology was present in Tanzania, 1 working hydroclave in Ghana and none in Madagascar - the status could not be</p>	<p>Non-incineration technologies and Mercury-free medical devices introduced at 4 central treatment facilities, 22 hospitals and 24 health posts.</p>		<p>A key activity of the first step of this project has been establishing the project teams both at regional and national levels. Recruitment of all project teams was completed by the second half of 2016. Then, all countries successfully initiated project activities upon organization of inception workshops (Ghana, Feb-16; Zambia, June-16; Tanzania, Sep-16, Regional, Sep-16; and Madagascar, Nov-16) at both national and regional levels. Through the inception workshops, stakeholders in participating countries including respective ministries, healthcare facilities, NGOs, private sector and</p>

		<p>assessed in Zambia (April 2014).</p>		<p>other stakeholders are now well aware about the project, its goals, its working methods and the specific responsibilities of the participating countries.</p> <p>Initially, 26 pilot healthcare facilities (5 cluster hospitals, 8 hospitals and 13 health posts with 8,795 beds in total) in 4 project countries were identified, assessed and they are now willing to act as project partner for the demonstration of advanced healthcare waste management (HWCM) and treatment methods. The project has already initiated two separate procurement cases; the mercury-free devices and non-incineration HCWM equipment. Currently, both procurement cases are progressively ongoing and details on the procurement cases will be reported in below sections to avoid repetitions.</p> <p>Two key issues for the introduction of non-incineration and mercury-free technologies are noted as follows: (1) The disposal of mercury waste in the project countries is challenging due to a lack of central storage places or treatment plants for the disposal/treatment of collected mercury-containing devices. This challenge was discussed in the project's inception workshop and the</p>
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					project will continue to consider its options (including Public Private Partnerships) to overcome this issue as part of the project's sustainability and exit strategies. (2) Insufficient infrastructure in health care facilities is also challenging to accommodate non-incineration technologies. As a risk management measure, the project decided to make MoUs with pilot facilities (1) to inform/agree on the responsibilities; (2) to sensitize respective MoHs to support the pilot facilities with additional public funding; (3) to provide technical support to pilot facilities; and if needed, (4) to support pilot facilities with procurement to meet infrastructural needs.
	UPOPs releases from the health sector reduced or avoided.	UPOPs baseline: Ghana: 19.8 g-TEQ/yr (pre-selected hospitals) Madagascar: 4.0 g-TEQ/yr (pre-selected hospitals) Tanzania: 1.7 g-TEQ/yr (pre-selected hospitals) Zambia: 6.3 g-TEQ/yr (pre-selected hospitals)	Amount of UPOPs releases from HCW incinerators reduced by 31.8 (g-TEQ/yr).		Nothing to report at this stage as non-incineration HCWM equipment is currently being procured. Only after non-incineration equipment has been installed and is operational, UPOPs releases reductions can be determined.
	Mercury releases from the health sector reduced.	Mercury baseline: Ghana: 8.2 kg/yr	Amount of Mercury releases from the health sector		Nothing to report at this stage as mercury-free devices are currently being procured. Only after mercury-

		(pre-selected hospitals) Madagascar: 2.8 kg/yr (pre-selected hospitals) Tanzania: 6.3 kg/yr (pre-selected hospitals) Zambia: 8.0 kg/yr (pre-selected hospitals)	reduced by 25.3 (Kg/yr).		free devices have been introduced, mercury releases reductions can be determined.
	Country capacity built to effectively phase out and reduce releases of POPs and mercury.	The regulatory and policy framework in the four project countries do not cover all medical waste management challenges, which the project countries are facing.	Completed draft, revision or adoption of a national policy, plan, strategy, standard and/or guidelines in each country.		Inception workshops and project's initial activities made national stakeholders well-aware of the project objectives on the reduction of uPOPs and mercury releases from the health sector as well as national targets set through the Minamata Convention on Mercury and Stockholm Convention on POPs. Main highlights on capacity building activities are as follows: <ul style="list-style-type: none"> Project teams' training, in the form of a regional Training of Trainers (ToT) on Advanced Healthcare Waste Management, was organized in Nakuru, Kenya (two-week training in December 2016), with 28 national experts (50% men; 50% women) including experts from 4 project countries and other 4 African countries (Kenya, Uganda, Mauritius and South Africa) implementing related Healthcare Waste (HCW) programmes. Training was given by 4 senior experts (25% men; 75%

					<p>women) from UNDP, Health Care Without Harm (HCWH) and WHO. In this initial period, the project developed a good network with other HCW programmes in the region, including GEF-funded HCWM projects in Kenya and Egypt.</p> <ul style="list-style-type: none">• In the view of project's objective for non-incineration and mercury-free technologies, all countries started to review and update the national legal framework on healthcare waste management and the national HCWM development plans. The Ghana component finalized the revision of National Healthcare Waste Management Policy (2017) and it will be disseminated with a workshop in September 2017. In addition, Ghana component drafted revisions for National Guideline and Standard of Operating Procedures (SOPs) on HCWM and provided a review for Hazardous Waste Regulation. Madagascar component successfully included the non-incineration treatment options into the National Policy on HCWM. Tanzania component extensively revised the National Policy Guideline for HCWM and submitted it to the MoH's management for endorsement. Zambia component reviewed national HCWM policy and now works on the inclusion of HCWM provisions into the Public Health Act. In Zambia, non-incineration technologies are included
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				<p>into the National Health Strategic Plan.</p> <ul style="list-style-type: none"> • Project partnerships are satisfactorily progressing with Health Care Without Harm (HCWH) and WHO, which support project implementation at both national and regional levels. WHO helps to coordinate country project activities and facilitates national dialogue on strengthening health care waste management through focal points appointed in each of the WHO Country Offices. Through the support of HCWH, national experts and pilot facilities are being connected through the Global Green & Health Hospitals (GGHH) network which enabled exchanges and cooperation among participating countries and other countries from 6 continents in the network. • Several technical documents (details provided in Outcome 1.1) were developed by the project with the support of technical experts from HCWH and WHO and provided to the countries. • National action plans are being approved including key implementation issues such as: preliminary preparations for the installation of non-incineration technologies and the implementation of mercury elimination plans at facility level; Environmental impact
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					assessments (EIAs); allocation of financial resources for HCWM at both national and facility levels; mapping activities for recycling and more broadly for co-financing opportunities; identification of national experts to expand trainings at national level and developing curriculums for HCWM courses; liaising with private sector partners to support PPPs for HCWM; gender inclusiveness in HCWM; assessment of Hepatitis B virus (HBV) and Hepatitis C Virus (HCV) at pilot facilities in Ghana; Water Sanitation and Hygiene (WASH) activities in Madagascar; bio-digestion in Tanzania; recycling of non-infectious waste in Zambia; and awareness and outreach activities. Progress of all these key issues are closely followed up through a monitoring tool and details on their status have been summarized in relevant sections of the PIR below.
The progress of the objective can be described as:		On track			
Outcome 1:	Technical guidelines, evaluation criteria and allocation formula adopted.				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	Mid-term evaluation criteria and formula for the allocation of technologies among countries available.	Evaluation criteria and allocation of technologies among project countries not agreed upon.	First Regional Conference organized. Evaluation criteria		The project organized the first regional project meeting, the regional inception workshop, on 22-24 September 2016 in Johannesburg, South Africa and the countries agreed on mid-term evaluation criteria and a formula for the allocation of

			<p>and allocation of technologies among project countries agreed upon.</p>	<p>technologies which will be detailed below with other key decisions.</p> <p>As per the Project Document, the project will implement two procurement rounds for HCWM equipment; one in mid-2017 (with an approx. value of USD 1.25mln) and the second between late 2018 and early 2019 (with an approx. value of USD 1mln). The technology allocation formula (“how many technologies will each country/facility receive”) is already pre-defined for the first phase of the project (component 3a) noting that because the HCWM situation in the four project countries is very different, the size and type of facilities to be supported by the project may vary from country to country and so do their locations and the circumstances under which they operate. As such the project currently supports different set-ups in each of the countries. But very briefly, in the 1st procurement round, there is an equal budgetary distribution at regional level among 4 project countries, which means about USD 313,611 will be available per country. This amount will include costs associated with non-incineration systems at health posts, hospitals, central/cluster treatment facilities; recycling systems; mercury-free devices; and logistics and installation.</p>
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					<p>The project document indicates that after the Mid-Term Review (MTR) and based on criteria agreed upon by all the project countries at the first regional project meeting, additional facilities will be supported in the second half of the project's implementation (i.e. 14 additional hospitals averaging 150 beds each and 12 additional rural health posts). In which country(ies) these facilities will be located, will depend upon the results of the MTR. Therefore, based on the countries' and facilities' progress during the project's mid-term review, a decision will be made on which countries would be able to accept additional non-incineration and mercury-free medical devices and which ones would not. The criteria for the decision on which countries would be able to accept more technologies and devices, and if so how many, was needed to be taken at the start of the project, during the first regional project meeting (also referred to as a "formula for the allocation of additional HCWM systems and Mercury-free devices").</p> <p>Thus, the regional inception workshop also included the first Project Board (whose members are representatives of participating governments, UNDP, WHO and HCWH) which approved following key decisions for the</p>
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					<p>implementation at regional level:</p> <ul style="list-style-type: none">• Procurement will be centrally carried out by UNDP Istanbul Regional Hub (two procurement rounds, early 2017 and late 2018) noting that in the project preparation stage, the procurement was planned to be organized by UNDP Copenhagen Procurement Support Office (PSO) due to their procurement experiences in such health technology equipment and the low procurement capacity of UNDP Istanbul Regional Hub (IRH) at the time of its office move from Bratislava to Istanbul. In the view of enhanced capacity of IRH and cost reduction opportunity (considering high costing proposal from UNDP Copenhagen PSO), the project board approved the consideration of project's technology procurement to be centrally organized by UNDP Istanbul Regional Hub, as a modification to the solution initially proposed in the Project Document.• Selection criteria for pilot healthcare facilities (HCFs), technology allocation formula and MTR criteria recommendations were also approved, in line with the description in the Project Document.• The technology allocation formula for the first set of equipment/devices has already been defined and agreed upon. The technology allocation formula to be
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					<p>used for the 2nd procurement round (expected in late 2018) was also discussed during the first project board meeting. Second set of technology allocation formula (“how many technologies will each country/facility receive”) for component 4(a) will be used following the mid-term review, whose objective is to evaluate the progress of the project countries and facilities in adopting BEP and BAT. The Project board agreed on indicators of MTR as follows: (1) The promulgation of HCWM and Mercury reduction policies (issued policies); (2) Successful implementation of BAT/BEP in the model facilities (sites which manage waste in accordance with BEP); (3) Proper operation and maintenance of the initial batch of non-incineration HCWM systems and mercury-free devices (sites which treat waste in accordance with BEP and use mercury free devices); (4) Safe storage of healthcare mercury waste (quality of storage facilities); (5) Effective national training programs.</p> <p>Available budget of second phase of technology procurement is about 1mln USD. Distribution target was approved as following: (1) Equipping 14 hospitals – estimated cost (50,000 USD per hospital) = 700,000 USD; (2) Equipping 12 rural health posts – estimated cost (10,000 USD per</p>
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				<p>health post) = 120,000 USD; (3) Support for mercury management = 80,000 USD; (4) Cost for transportation and Installation = 100,000 USD; (5) It should be noted that future allocation may vary depending on the context of project countries.</p> <p>The general idea for the technology allocation formula was approved as follows: (1) Point based evaluation, based on the fulfillment of indicators; (2) Total achieved points for all countries combined will be 100%; (3) Number of sites to be equipped per country will be based on the reached % as per the pre-agreed formula.</p> <p>Additionally, as per the Project Document, Outcome 1 targets to develop technical guidelines at regional level (although it is not thoroughly covered by this indicator, progress on the development will be reported here, under Outcome 1)</p> <p>In this initial phase of the project, several guidelines, working instructions, SOPs, and other supporting documents were already developed and shared with project countries during the project teams' training. These documents were</p>
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					<p>shared with countries and made available through the project's online training folder and will also be available in the future through the project's website. Documents that were prepared during this reporting period include:</p> <ul style="list-style-type: none"> • Tools for healthcare waste management: The documents are a set of useful materials for the set up and operation of advanced healthcare waste management systems at facility level. The documents include standards and forms for the collection of waste, preventive maintenance schedules, instructions for emergency response, a collection of materials for IEC (Information, Education, Communication) and a guideline for the operation and monitoring of central treatment plants. • Outline National Healthcare Waste Management Plan: To support the countries in the development and setup of a National Healthcare Waste Management Plan (N-HCWM-P) a draft outline was developed. The objectives of the National Healthcare Waste Management Plans (N-HCWM-P) are to reflect the present state and to propose solutions for improving the Healthcare Waste Management (HCWM) situation in the countries, taking local circumstances into consideration. The document also includes a national action plan for the years 2017 to 2021 and the needed
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					<p>budget to implement these recommendations.</p> <ul style="list-style-type: none"> • Human Resource Planning and Capacity Building: The management and operation of the new healthcare waste management system will require the selected healthcare facilities to provide sufficient human resources to undertake their allocated tasks. The staff required for these tasks might be provided by the relocation of existing staff or by adding tasks to current job positions. The developed document provides recommendations to assist HCFs in ensuring the correct operation of the provided equipment & the operation of the proposed healthcare waste management system. It is expected that staff will be made available in Autumn 2017, after the installation of the new treatment equipment. Each HCF will be required to confirm the re-allocation of Human Resources in writing to the Project Team. If existing staff are relocated or take over new tasks, it is expected that the job descriptions of the staff will need to be adjusted to this new situation. Samples of job descriptions are provided in the annex of the document. • Standard Operation Procedures (SOPs): SOPs are to be used during healthcare waste management activities to ensure a high quality of work. A set of SOPs
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					<p>was developed as starting point for the countries. The developed SOPs included:</p> <p>HCW-0 General applicable SOP for HCW management</p> <p>HCW-0-0 Definitions</p> <p>HCW-0-1 Segregation of waste</p> <p>HCW-0-2 Segregation of sharp items</p> <p>HCW-0-2 Collection of waste</p> <p>HCW-0-4 Internal transportation of waste</p> <p>HCW-0-5 Storage of HCW</p> <p>HCW-0-6 Spillage of infectious materials</p> <p>HCW-0-7 Spillage of mercury</p> <p>HCW-0-8 Maintenance of HCW equipment</p> <p>HCW-0-9 Needle Stick accident</p> <p>HCW-1 SOP to be used for pharmaceutical waste management</p> <p>HCW-1-0 Segregation of pharmaceutical waste</p> <p>HCW-1-1 Spillage of formaldehyde</p> <p>HCW-3 SOP to be used for HCW treatment</p> <p>HCW-3-1 Treatment of hazardous waste</p>
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The progress of the objective can be described as:		Achieved			
Outcome 2:	Country capacity to assess, plan, and implement HCWM and the phase-out of Mercury in healthcare built.				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	4 teams of national experts (16 in total) trained at regional level	Some knowledge on Mercury and UPOPs releases from the health sector built during the PPG phase.	16 national experts trained 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 trained in content, effective teaching methods, evaluation tools, and Training of Trainers programs.		Upon establishment of the national project teams, project teams were trained at the regional level in Nakuru-Kenya from 28 November to 10 December 2016 (following the project's Inception Workshop). An intensive 12-day Training of the Trainer (ToT) workshop was conducted with 28 participants (50% men; 50% women). Trainees were from all 4 project countries (18 national experts) and included participants from 4 other African countries (Kenya, Uganda, Mauritius and South Africa) which are implementing related Healthcare Waste (HCW) programmes, including GEF-funded projects. <ul style="list-style-type: none"> The overall objective of this training was to bring about a common understanding of project objectives and deliverables, to foster regional cooperation and information exchange among the countries, to reduce project costs by centralized activities, to facilitate project planning and to ensure consistency with international standards and guidelines. The intensive 12-day Training of the Trainer workshop was

					<p>conducted at regional level to prepare teams of national experts comprised of government personnel (e.g. National Project Director) and local consultants (e.g. National Technical Coordinator and Technical Advisors/Experts) selected by the countries. The teams underwent 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 and well as project implementation related activities (Gantt charts, critical path analysis, budgeting, monitoring, etc.)</p> <ul style="list-style-type: none"> The second goal of the training was to train same 28 national experts as Master Trainers on Healthcare Waste Management (MT-HCWM). As part of Outcome 3b of the project, it is planned to establish national training infrastructures. The MT-HCWM will play a crucial role in the development of the training framework, the development of required curriculums, the provision of trainings (mainly Training of Trainers) and the development of concepts to ensure the sustainability of the training program. The MT-HCWM will report to the national project director of the project and will closely cooperate with the Regional Expert Team (RET) and the Chief Technical
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					<p>Expert (CTE) who will have overall responsibility for project's technical outputs. The MT-HCWM received an intensive training in content, effective teaching methods, evaluation tools, and Training of Trainers programs.</p> <ul style="list-style-type: none"> • At the end of the second week of the training, the final evaluation was carried out. In average, the participants rated the training with a score of 4,62 of a maximum of 5. • During this regional ToT, Tabitha Mutemi, representative of the Independent Electoral and Boundaries Commission (IEBC) of Kenya, voluntarily provided an interactive session on Gender and mainly introduced key conventions which ensure women rights in Africa. Her session also opened a discussion on gender and healthcare waste area among national experts from the 8 African countries. • A member of WHO travelled to Kenya for the project teams' training in Nakuru to train national experts on broader issues related to WASH in health care facilities, including an introduction to WHO/UNICEF's Water and Sanitation for Health Facility Improvement Tool (WASH FIT). WASH FIT is a risk-based, continuous improvement framework for monitoring WASH (including HCWM) services and making improvements to WASH
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					<p>services and behaviors to improve quality of care.</p> <p>Additional training activities were co-organized/supported by regional component of the project at national levels:</p> <ul style="list-style-type: none"> • In August 2016, 8 participants (50% men, 50% women) (including the Ghana project team) were supported to participate in a HCWM training organized by GIZ for another project implemented by GIZ at KATH, Kumasi-Ghana. • In December 2016, WHO led a four-day national training in Madagascar on WASH FIT. The training included a module on HCWM (as well as other WASH technical areas) and a visit to a facility during which participants inspected HCWM infrastructure, conducted a risk assessment and identified possible areas for improvement. 16 participants (33% men; 67% women) took part in the training, from the national and local level, including participants from the Ministry of Health and local implementing NGOs. • In early July 2017, 3 national experts (100% women) from project countries will be supported to attend a Regional Training Course of Infection Prevention and Control (IPC) – Water, Sanitation and Hygiene (WaSH),
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					jointly organized by Infection Control Africa Network (ICAN), WHO and UNICEF, held in Cape Town-South Africa. With these training activities, the project completed activities under Outcome 1 at the regional level.
The progress of the objective can be described as:		Achieved			
Outcome 3:	Institutional capacities to strengthen policies and regulatory framework, and to develop a national action plan for HCWM and Mercury phase-out enhanced.				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	Ghana: ANNEX I Madagascar: ANNEX II Tanzania: ANNEX III Zambia: ANNEX IV	In each of the project countries the baseline pertaining to the HCWM policy and regulatory framework is different and is summarized in detail in Annex I, II, III, and IV respectively.	Ghana: ANNEX I Madagascar: ANNEX II Tanzania: ANNEX III Zambia: ANNEX IV		As an implementing partner, WHO is taking the lead in the development of national HCWM policies and guidelines. These policies and guidelines provide an outline of how each country will meet national targets set through the Stockholm Conventions on POPs and the Minamata Convention on Mercury (in accordance with existing national commitments related to these Conventions). WHO attended national working group meetings in Tanzania (March 2017), Ghana (March 2017) and Zambia (May 2017) to support the development of their respective National Policies and Guidelines on HCWM. Key developments with respect to the review of the policy framework in the project countries has

					<p>been summarized below.</p> <p>In Ghana, the revision of National Healthcare Waste Management Policy (2017) is finalized and a draft National Guideline has been developed. In coordination with WHO, the revised National HCWM Policy (2017) and the National Guideline will be printed and a dissemination meeting for the revised policy and the developed guideline will be organized in September 2017. The Ghana component also revised the Standard of Operating Procedures (SOPs) on healthcare waste management but it was agreed that the SOPs should be pre-tested at facility level before finalization and printing. The hazardous waste regulation was also reviewed and technical recommendations were provided to the Ministry of Health.</p> <p>In the meantime, the Ghana project team has been in close communication with responsible parties at the Ministry of Health and the Ghana Health Service to follow due process in approving the National HCWM Policy. Discussions are also ongoing to have the National Guideline signed off by the Executive Director of the Environmental Protection Agency (EPA) and the</p>
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					<p>Minister of Health to consolidate the need for their collaboration in implementing these guidelines.</p> <p>In Madagascar, the current national policy on HCWM was validated in 2015 and the project is currently supporting the MoH to update the national decree for the implementation at the national level, of the current national policy and the national HCWM guidelines. The national technical working group (NTWG) of the project, composed of key divisions of the Ministry of Health (MoH) and the Ministry of Environment (MoE) had two meetings in February 2017 and in June 2017; and reviewed the national technical guideline to integrate non-incineration treatment technologies as well as a HCWM booklet for basic health centers. These documents are both in their finalization stage and upon completion, the project and the WHO Madagascar office will support nationwide dissemination of these documents, including primary care level facilities.</p> <p>In Tanzania, a draft policy guideline for healthcare waste management was extensively revised and submitted to the MoH's management for endorsement. Review of national</p>
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					<p>standards and procedures for healthcare waste managed is also near completion.</p> <p>The Zambia component convened two national technical working group (NTWG) meetings to review the policy and legal framework on health care waste management. The legal framework regarding HCWM was mapped and the three key areas for review were identified; the Public Health Act, the Environmental Act (EMA No 12 2011) and the HCWM guidelines. Gaps in the HCWM framework have been identified, for example, a lack of specific legislation/regulations governing HCWM and other hazardous discharges, resulting in a reluctance to adhere to HCWM procedures; environmental impact assessments (EIAs) are not taken as a priority. For the Public Health Act, new definitions have been proposed and a new section on HCWM has been drafted. For the Environmental Management Act, a revision of definitions has been proposed as well as the insertion of updated information to ensure best environmental practice. Finally, with the revision of the HCWM Guidelines, a revision of definitions has also been proposed as well as the inclusion of alternative treatment technologies. The project is waiting to receive the report of the last meeting from the</p>
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					MoH, which will then be shared with the main technical working group which is reviewing the Public Health Act. Therefore, the activity is still ongoing and results will be shared in the next reporting period.
The progress of the objective can be described as:		On track			
Outcome 4:	National plan with implementation arrangements adopted.				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	Number of National Action Plans for project implementation available.	No National Action Plans for project implementation available. Pre-selection of HCFs has already taken place (see Annex I, II, III, and IV respectively).	1 National Action Plans for each project country developed (including the selection of up to 1 central or cluster treatment facility, 2 hospitals and 3 small rural health posts as models)		For each project country, a national plan (including I-RAT assessments for each pilot facilities) was developed with pilot healthcare facilities (HCFs) selected as per the selection criteria agreed. As noted during the regional inception workshop, because the HCWM situation in the four project countries is very different, the size and type of facilities to be supported by the project varies from country to country and so do their locations and the circumstances under which they operate. As such the project currently supports different set-ups in each of the countries than what was initially projected. Briefly, 26 pilot HCFs (Ghana:7; Madagascar:6; Tanzania:5; Zambia:8)

				<p>as 13 health posts, 8 hospitals and 5 cluster hospitals were selected in 4 project countries. All HCFs will pilot mercury-free devices and 21 HCFs (Ghana:5; Madagascar:6; Tanzania:5; Zambia:5) will pilot non-incineration treatment either through on-site treatment or cluster treatment facility.</p> <p>It is noted that the total number of beds of these 21 HCFs is 7,405 beds and this is in line with the number of beds to receive non-incineration treatment equipment in the first phase of the project – up to 8,400 beds – as indicated in the Project Document.</p> <p>During the first procurement round, it is agreed with project countries that 14 HCFs (Ghana:3; Madagascar:3; Tanzania:5; Zambia:3) will receive non-incineration technology equipment. Among 14 HCFs, there will be 5 hospitals with cluster treatment facility (serving to additional 7 HCFs), 5 hospitals with on-site treatment facility and 4 rural health posts with on-site treatment facility.</p> <p>To ensure the readiness of the facilities to receive the equipment and to ensure an on-time delivery of all planned outputs, several key activities were agreed on to be carried out and</p>
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					<p>which were monitored on a monthly basis. Action plans, including their status of implementation are summarized below:</p> <p>Ghana:</p> <p>In the first phase of the project, Ghana will pilot mercury-free devices in 7 HCFs and among these 7 HCFs, three hospitals; Eastern Regional Hospital (ERH), Cape Coast Teaching Hospital (CCRH) and Tegbi Health Centre will pilot non-incineration treatment technology. Two other hospitals, Seventh Day Adventist Hospital and Metropolitan Hospital will use the cluster facilities and be part of ERH and CCRH clusters, respectively.</p> <p>These three HCFs are preparing for the installation of an autoclave; currently locations for installation have been identified; and infrastructure improvements to ensure site readiness are progressing.</p> <p>An MoU was signed by five model facilities, which will benefit non-incineration treatment technology, and the Director General of the Ghana Health Service. The HR requirements for waste management were included</p>
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					<p>in the MOU and approved by both the Director General (DG) of the Ghana Health Service and the management of the model facilities. As the Environmental Protection Agency (EPA) is a co-financier to this project, the Ghana project team has initiated discussions on providing environmental permits to facilities concerned.</p> <p>Initial waste generation assessments for all model facilities, including mercury containing devices, assessment of chemical waste generations and current HCWM practices in the pilot facilities, have been completed. The Ghana project team has finalized the baseline assessment report for the model facilities including results from all the assessments which have taken place since the project's inception up until now.</p> <p>With respect to the mercury elimination strategy/plan, the Ghana project team has started an advocacy drive in all pilot facilities. The National Technical Advisor has developed a presentation on the health effects of exposure to mercury which has been disseminated to all facilities. It is expected that the advocacy drive will affect the behavior of health workers</p>
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					<p>and persuade them to shift to the use of mercury free devices when providing health services.</p> <p>The Ghana project team undertook a mercury inventory and verification exercise in all model facilities. A strategy to eliminate mercury in health service delivery in pilot facilities is under development. Ghana project team are also in close communication with UNITAR and UNIDO, which implement the Mercury Initial Assessment (MIA) and the National Action Plan (NAP) for ASGM in Ghana, to find synergy with capacity building and advocacy activities on mercury phase-down.</p> <p>In preparation for the receipt of mercury-free medical devices and the preparatory staff preferences assessment, focal points of pilot facilities and the clinical engineering unit of the Ghana Health Service were involved in discussions related to the technical specifications of proposed mercury-free devices to be supplied by the regional component. With support from the focal points, a list of proposed mercury-free BP apparatus and thermometers were compiled and shared with the regional team for consideration during procurement of the equipment.</p>
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					<p>Regarding the identification and preparation of storage facilities for mercury-containing devices, the project team has initiated discussions with a GIZ e-waste project and the Komfo Anokye Teaching Hospital (KATH) to support the provision of storage for the mercury-containing devices. The project team is also in communication with Ghana EPA to provide related support in this regard.</p> <p>Assessment of HBV and HCV at pilot facilities was conducted with a survey to ascertain the Hepatitis B and C status of health workers in the model facilities. The findings showed that generally about 76.6% of health workers sampled from all model facilities have undergone screening for the hepatitis B virus. In addition, 21.3% have been screened for Hepatitis C. Averagely 2.1% tested positive and 72.3% tested negative. Of those who tested negative, about 51.1% have fully completed their vaccination. Those who tested positive have been treated.</p> <p>At the Komfo Anokye Teaching Hospital (KATH), the team learnt that information on the hepatitis B status of a health worker is included in the requirements for employment - an</p>
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				<p>initiative that has ensured that all their staff are vaccinated against the Hepatitis B virus. In the Cape Coast Teaching Hospital, most of the health workers received the first hepatitis B vaccination dose. As the project sensitized the issue, the hospital's occupational health and safety focal point is currently putting together logistics to screen and immunize about a total of about 500 staff (40% men; 60% women) who have been identified as new staff since the last exercise.</p> <p>Regarding the mapping of the plastics recycling industry, the Ghana project team liaised with the Ministry of Local Government and Rural Development and Zoomlion Limited, a private waste management company to compile a list of recycling companies in Ghana to initiate discussions on possible collaborations. The list also indicated locations of these companies to enable the Ghana project team to consider which facilities could be linked to recycling companies in their area of operation or close to them, in case any exists.</p> <p>Madagascar:</p> <p>The national action plan (for 2017) was approved and signed by UNDP and the Ministry of Environment</p>
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					<p>(MoE) in January 2017. The action plan includes the introduction of mercury-free devices in six pilot HCFs and, among 6 pilot HCFs, introduction of non-incineration treatment for health care waste in three hospitals (CHU-HJRA, CHU-HJRB and CHRD Manjakandriana). Three other model HCFs, i.e. CHMET Tsaralalana, CSB Manjakandriana and CSB Sambaina will use</p> <p>the cluster facilities and be part of CHU-HJRA and CHRD Manjakandriana clusters.</p> <p>Three hospitals, CHU HJRB, CHU HJRA and CHRD Manjakandriana are currently preparing for the installation of an autoclave; locations for installation have been identified and infrastructure improvements to ensure site readiness are progressing. The national environment office (ONE) will determine whether an environmental permit is needed or not, to authorize the installation of an autoclave within public hospitals.</p> <p>The initial waste generation assessment was completed in 2016 for the pilot facilities which will receive non-incineration treatment equipment. In these hospitals, chemical waste</p>
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					<p>originates mostly from the laboratory and the radiology units but no specific treatment has been adopted for this type of waste. The project is considering to provide key materials and training for healthcare providers to strengthen the management of chemical wastes in pilot health facilities. Also, possibilities for public-private partnerships (PPPs) will be considered for the management of chemical waste management.</p> <p>The national mercury elimination plan for the six model facilities has been drafted and will be finalized/validated in July 2017 by the national technical working group. The final list of the mercury-free devices for Madagascar responds to the needs of each of the six pilot health facilities. Preparation for the elimination of mercury-containing devices, the provision of the mercury-free medical devices and the training of the healthcare providers on their use, are included in the national mercury elimination plan.</p> <p>With respect to recycling, a first draft of a list of recycling companies in Madagascar is now available, but this list needs to be updated after a proper verification process has taken place.</p>
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					<p>The WASH FIT initiative (WHO/UNICEF Water and Sanitation for Health Facility Improvement Tool) was introduced to project countries during the regional inception workshop in Johannesburg, in September 2016, and detailed training on it was provided during the regional project teams training in Nakuru in December 2016. Madagascar has been selected as the first project country to implement the tool, therefore WASH FIT will be implemented in the project's six pilot healthcare facilities in 2018. A follow-up training-of-trainers on WASH FIT took place in Madagascar in December 2016, which trained 16 local experts (33% men; 67% women). The training will be expanded to healthcare providers of the six pilot healthcare facilities during July-August 2017.</p> <p>Tanzania:</p> <p>Five model HCFs, Muhimbili Hospital, Mwananyamala Hospital, Mbagala Rangi Tatu Hospital, Sinza Hospital and Anglican Health Centre were identified and will pilot mercury-free devices and non-incineration treatment technology (no cluster facility will be piloted in Tanzania during the first phase).</p>
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					<p>These model HCFs have officially communicated to UNDP and the Ministry of Health (MoHCEDC) their commitment in providing necessary infrastructure to successfully implement the project.</p> <p>In preparing these sites to accommodate new HCWM technologies and concepts, the Tanzania project team organized a two-day orientation meeting on 30-31 March 2017 for the five participating health facilities. The meeting included participants from the Ministry of Health, the Local Government Authorities, HCWM coordinators and project's pilot facilities. The meeting provided a vital opportunity to share an overview of the HCWM project, HCWM experiences from different sites, introduce the concept of recycling and re-use of Healthcare waste (HCW), share the I-RAT findings, review the mercury inventory, provide an overview of the mercury elimination strategy, introduce Health Care Without Harm's initiative, Global Green and Healthy Hospitals (GGHH) network, provide an overview of technologies and infrastructure requirements.</p> <p>The civil engineers of the Ministry of Health, the project team and project</p>
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					<p>facilities have already identified sites for the installation of treatment technologies to be provided by the project. Blueprints of the sites have been shared. The Tanzania project team closely monitors the preparation of the sites and their readiness before receiving the non-incineration equipment in early 2018.</p> <p>The initial waste generation assessment was completed for all pilot facilities through I-RAT assessments. During the I-RAT exercises, some discrepancies regarding the physical counting of waste were identified and the Tanzania project team will redo the physical counting of waste at each project facility for 14 days. This re-assessment will also provide guidance to project facilities for their future waste generation assessments.</p> <p>With respect to the mercury elimination strategy plan, the Tanzania project team has already submitted the mercury devices' inventory for all project sites. Also, the project team has briefed project facilities on the exchange of mercury containing devices with mercury-free ones. The project's national technical expert designed a methodology to assist in assessing the situation</p>
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					<p>regarding the number of mercury containing devices in the country. As a next step, the project team will provide a detailed list of mercury-containing devices in Dar es Salaam and other regions in the country, and 8 representative zonal hospitals namely: Bugando referral hospital, Mbeya referral hospital, Sekouture Regional referral hospital, Dodoma Regional referral hospital, Mawenzi Regional referral hospital, Mt. Meru Regional referral hospital, Morogoro Regional referral hospital, Bombo Regional referral hospital.</p> <p>Regarding recycling, the Tanzania component engaged a national consultant to carry out a mapping of plastic recycling industries and the potential for them to buy recyclable plastics from healthcare facilities. A list of plastic industries operating in the country will be obtained from the Ministry of Trade and Industry. Also, the Small Industries Development Organization (SIDO) will be consulted for a list of small scale plastic industries and recyclers in the country.</p> <p>With technical support provided by HCWH, the project aims to pilot a bio-digester in Mwananyamala Hospital in Dar es Salaam, for the safe disposal</p>
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					<p>of placenta waste and other organic waste streams such as kitchen scraps, waste food, and paper with the additional benefit that it will produce biogas which can be used for cooking. The contractor to carry out this activity has been identified and preliminary work on this has been conducted by carrying out an initial assessment to understand the quantity of waste to be used as well as the availability of supportive infrastructure to undertake the work. The activity will aim to produce results in the next reporting period.</p> <p>Zambia:</p> <p>Zambia will pilot mercury-free devices in 8 HCFs representing different levels of health care facilities and among these 8 HCFs, three hospitals; University Teaching Hospital (UTH), Ndola Teaching Hospital (NTH) and Kabwe General Hospital (KGH) will pilot non-incineration treatment technology.</p> <p>At the regional training held in Kenya in December 2016 on the selection of health care facilities, it was suggested that two facilities within Lusaka would be added so that they can act as satellite facilities, and transport their waste to the cluster treatment facility that will be installed at UTH. Matero</p>
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					<p>and Chilenje level 1 hospitals, both located in Lusaka, were added to the project and this was approved by the project steering committee in May 2017. As such, UTH will act as a cluster facility and receive health care waste for treatment from Matero and Chilenje level one hospitals. Both Kabwe General Hospital and Ndola Teaching hospital will receive their own non-incineration treatment technologies for treating waste generated on site. The remainder of the health care facilities will not have their medical waste treated by non-incineration treatment technologies, instead they will engage in the mercury phase-out and other relevant health care waste management components of the project.</p> <p>During the reporting period, the project finalized the list of the required non-incineration equipment capacities for the treatment of HCW for the three cluster treatment facilities (namely University Teaching Hospital, Kabwe General Hospital and Ndola Teaching Hospital) and included the purchase of a vehicle for transporting infectious waste from two proposed satellite pilot sites to the central cluster treatment facility. Additional funds for the purchase of the utility vehicle and additional non-incineration equipment were sourced from the UNDP Zambia</p>
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					<p>Country Office as co-financing.</p> <p>I-RAT assessments were carried out in all eight HCFs, and the report is due to be validated in August 2017. The I-RATs highlighted issues with respect to HCWM at several points in each of the assessed HCFs. For example, with respect to HCWM administration; gaps were identified in the areas of policy and planning, and, training and budgeting. Under ward-level handling; classification and segregation of health care waste was patchy and posters and signage were almost non-existent. Under transport and treatment of health care waste; the performance was generally poor on both internal and external transportation of waste. Regarding storage, it was noticed that most times there was a delay in collecting general (non-infectious waste), and almost no facility had any action on hazardous chemical waste, except for Matero Level 1 hospital, which has an in-house treatment facility.</p> <p>Overall the I-RAT assessment has been a useful tool to the project by providing valuable insights into the strengths and weaknesses of the HCFs which in turn has identified further areas of intervention for the project, for example poor waste</p>
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					<p>segregation practices.</p> <p>A chemical waste assessment was also undertaken at each of the eight HCFs.</p> <p>Regarding the mercury elimination plan, the project finalized the inventories for mercury containing devices in pilot facilities. A concept note and a mercury elimination strategy have been prepared and a consultation with the Chief Medical Equipment Officer in the Ministry of Health on the receipt and distribution strategy for mercury-free medical devices was held. The assessment found that most HCFs have already started to phase out mercury-containing devices, and in fact, that there is minimum use of mercury in dental amalgam in Zambia. A challenge identified is the reluctance of some health care providers, and training schools to move away from mercury-containing devices, as they do not perceive the mercury-free devices to be as reliable clinically.</p> <p>The next step is to engage with the Minamata Convention's Zambia focal point, to start discussion on storage of mercury containing devices (MCDs)</p>
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				<p>and eventual disposal.</p> <p>Initial training on mercury-free devices in pilot facilities will be conducted in August, 2017, prior to the items being delivered to pilot facilities.</p> <p>Concerning recycling, mapping of the recycling industry in Zambia is ongoing but it should be noted that recycling in Zambia is quite limited. A list of recycling companies was shared by ZEMA, but was found to be heavily focused on Lusaka province and on companies which recycle oil. Upon further exploration, a number of additional companies have been identified and contact has been made and discussions are underway. However, progress in this area is very slow. The project continues to collaborate with Waste Master Company which recently invited the project to observe the recycling of expired syringes within their contract with Medical Stores Limited to dispose of a national stock of expired syringes.</p> <p>National experts (from the project, MoH and ZEMA) who were trained in the regional training in Nakuru, Kenya, reviewed the training resource materials developed by regional expert team and adjusted them to</p>
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					<p>train national trainers.</p> <p>The resource materials will be used at ToT workshops to train managers, clinical staff and waste handlers of the eight HCFs. The material has been broken down into three workshops; the first of which will take place in Kabwe on 24-28 July 2017 with 30 participants from pilot hospitals' laboratory and nursing units. Topics will include general waste and environmental aspects; basic microbiology; segregation of health care waste, storage facilities, monitoring and assessment tools (I-RAT) and the GGHH network. This will also include a site visit to Kabwe General Hospital to ensure that the participants fully absorb the various training elements for example by observing segregation and color coding. The participation of an expert from Health Care Without Harm will be very useful in bringing a further level of expertise and insight to the training. The second ToT is planned for August 2017 and the final one in September 2017.</p> <p>Regarding the inclusion of HCWM into the curriculum of health sciences, to date, only preliminary meetings have been held with stakeholders from the University of Zambia to review the</p>
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					curricula of health sciences.
The progress of the objective can be described as:		On track			
Outcome 5:	Favourable market conditions created for the growth in the African region of affordable technologies that meet BAT guidelines and international standards.				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	Number of HCWM systems and Hg free devices procured.	In the project countries, 1 non-working technology was present in Tanzania, 1 hydroclave was operational in Ghana and none in Madagascar - the status could not be assessed in Zambia (April 2014).	CWM systems and Mercury-free devices for at least 12 health posts, 8 hospitals and 4 central or cluster facilities procured.		<p>During this reporting period, 26 pilot HCFs</p> <p>in 4 project countries (13 health posts, 8 hospitals and 5 cluster hospitals with 8,795 beds in total) were identified and assessed and they are willing to act as project's pilot sites for this project.</p> <p>All 26 HCFs will pilot mercury-free devices and HCWM systems. In the first phase of the project, 21 HCFs (7,405 beds in total) will receive non-incineration treatment of healthcare waste either through on-site treatment or cluster treatment facility.</p> <p>In the first procurement round, among 21 pilot HCFs identified for piloting non-incineration treatment, 14 HCFs (Ghana:3; Madagascar:3; Tanzania:5; Zambia:3) will receive non-incineration technology equipment and there will be 5 hospitals with cluster treatment facility (serving to</p>

				<p>additional 7 HCFs), 5 hospitals with on-site treatment facility and 4 rural health posts with on-site treatment facility.</p> <p>The project has already initiated two separate procurement bids for (1) mercury- free devices and (2) non-incineration HCWM equipment.</p> <p>As the project document centralized the procurement activity at the regional level, during the first regional project board meeting a procurement strategy was discussed and agreed on with all national stakeholders and partners. This strategy included a decision related to the arrangement for the procurement of HCWM technologies to be centrally organized by UNDP IRH (instead of UNDP Copenhagen PSO), and to allocate up to 5% of the value of the 1st procurement round (~ USD 1.25mln) to be administered by national components upon their request, to allow for the procurement of some equipment locally.</p> <p>In the first board meeting, it was also agreed to develop a catalogue with all typical items used for the set-up and operation of healthcare waste management systems in order to</p>
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					<p>facilitate the central procurement of required equipment for the project. Therefore, the technical specifications and cost estimates for more than 70 HCWM items were developed. The recommended items and the specifications were discussed with the countries and project partners. In the beginning of 2017, the finalized catalogue was sent to the countries to allow the development of the BoQ (bill of quantity) for the procurement. Based on the BoQ prepared by the four national components, the procurement bids for both mercury-free devices and non-incineration HCWM equipment were announced on 3rd May 2017 and 16th June 2017, respectively.</p> <p>The BoQ for mercury-free devices included mercury-free aneroid sphygmomanometers, automatic sphygmomanometers, digital blood pressure monitors and digital thermometers. The tender was finalized as per UNDP rules and regulations and the Purchase Order (PO) was awarded with a latest delivery date of 21st September 2017. Technical specifications and user manuals for each device (both in English and French) have already been provided to all national counterparts. Upon delivery of the items in the project countries, project teams at both national and regional levels will</p>
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					<p>make sure that one-to-one exchanges with mercury-containing devices is ensured.</p> <p>The procurement process for non-incineration HCWM equipment has been initiated with the international tender publication (on 16th of June 2017) as per UNDP rules and regulations. In line with the budget for the first procurement, the BoQ included all necessary sets of HCWM equipment, including safety and personal protective equipment (PPE); consumables including sharp containers, waste bags; internal equipment including waste bins, needle cutters; logistic equipment including collection and transport bins; chemical storage equipment; non-incineration treatment equipment (in total 18 non-incineration technologies for 4 project countries) with maintenance toolboxes, voltage stabilizers and testing tools. The delivery of the equipment to the countries is expected to take place in the beginning of 2018 and the procured equipment will be delivered to project sites only after sites are deemed ready for receipt and installation. Infrastructure preparations to ensure site readiness for the pilot facilities have been summarized in detail in the above section related to national action/implementation plans.</p>
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	Number of HCWM systems installed and Hg-free devices distributed.	In the project countries, 1 non-working technology was present in Tanzania, 1 hydroclave was operational in Ghana and none in Madagascar - the status could not be assessed in Zambia (April 2014).	Initial set of HCWM systems and Mercury-free devices given to 3 health posts, up to 2 hospitals and 1 central or cluster treatment facility per country.		Results will be reported on in subsequent reporting periods, when the non-incineration technologies and mercury-free devices have been received and facilities have been prepared for and trained in their use.
The progress of the objective can be described as:		On track			
Outcome 6:	HCWM systems, recycling, Mercury waste management and Mercury reduction at the model facilities demonstrated and national training infrastructures established [National component]				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	Number of project HCFs that have introduced BEP.	No BAT/BEP in place at most of the model HCFs.	BAT/BEP implemented at all (24) the model facilities.		Results will be reported on in subsequent reporting periods, when the non-incineration technologies and mercury-free devices have been received and facilities have been prepared for and trained in their use.
	Number of project HCFs that have operational BAT.	No BAT/BEP in place at most of the model HCFs.	BAT/BEP implemented at all (24) the model facilities.		Results will be reported on in subsequent reporting periods, when the non-incineration technologies and mercury-free devices have been received and facilities have been prepared for and trained in their use.

	Number of project HCFs that have recycling programmes in place.	No recycling programmes in place at any of the HCFs.	Recycling programs started in each of the model facilities.		Results will be reported on in subsequent reporting periods, when the non-incineration technologies and mercury-free devices have been received and facilities have been prepared for and trained in their use.
	No. of project countries that have storage sites for phase-out Hg-containing devices.	No storage sites for Mercury or Medical devices containing Mercury available in any of the project countries.	Safe storage sites for Mercury containing medical devices established for each of the project countries.		The disposal of mercury waste in the project countries is challenging due to a lack of central storage places or treatment plants for the disposal/treatment of collected mercury-containing devices. This challenge was discussed with the project board and national stakeholders and the project will continue to explore options (including Public Private Partnerships) to overcome this issue as part of the project's sustainability and exit strategies.
	Number of Mercury-free project HCFs.	Some project HCFs already use some Mercury-free medical devices, but none of the HCFs is Mercury-free.	Mercury-free devices used in each of the model facilities.		Results will be reported on in subsequent reporting periods, when the mercury-free devices have been received and facilities have been prepared for and trained in their use, and mercury containing devices have been swapped with mercury-free ones.
	Number of institutions that offer HCWM training/certificate courses.	In most project countries, training programme for waste management exist, but training programmes for HCWM need to be	At least one national HCWM training programme established in each of the project countries.		Results will be reported on in subsequent reporting period. To date, only preliminary meetings have been held with stakeholders from main universities in project countries to review the curricula of health

		established/improved (see Annex I, II, III, and IV respectively).			sciences.
The progress of the objective can be described as:		On track			
Outcome 7:	Capacities of project countries to absorb additional technologies evaluated.				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	Evaluation report (including recommendations for each project country and HCF) available.	Not applicable	Evaluation conducted of all the 4 project countries and all the HCFs, which have received project support.		Results will be reported on after the Mid-Term Review has taken place.
The progress of the objective can be described as:		On track			
Outcome 8:	Additional technologies distributed depending on evaluated capacities for absorption.				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	Number of HCWM systems and Hg free devices procured.	Not applicable	Additional HCWM systems and Mercury-free devices procured and distributed, based on the evaluation results and allocation formula.		Results can only be reported on after the second phase of the project has started implementation (which will be informed by the outcomes of the Mid-Term Review).
The progress of the objective can be described as:		On track			
Outcome 9:	CWM systems expanded to other facilities in the country				
	Description of Indicator	Baseline Level	Target level at end	Level at 30 June 2016	Cumulative progress since project

			of project		start
	Number of HCFs supported in addition to the initial set of HCFs.	Not applicable	14 additional HCFs with an average of 150 beds or a total of about 2,100 beds supported as well as an additional 12 rural health posts.		Results can only be reported on after the second phase of the project has started implementation (which will be informed by the outcomes of the Mid-Term Review).
The progress of the objective can be described as:		On track			
Outcome 10:	Country Capacity to Manage Mercury and to phase-in Mercury-free devices improved.				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	Number of Mercury-free project HCFs in addition to the initial set.	Not applicable	14 additional HCFs with an average of 150 beds or a total of about 2,100 beds supported as well as an additional 12 rural health posts.		Results can only be reported on after the second phase of the project has started implementation (which will be informed by the outcomes of the Mid-Term Review).
The progress of the objective can be described as:		On track			
Outcome 11:	National Training Expanded.				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	Number of people trained in addition to the initial set of trained HCF personnel.	Not applicable	HCF staff of the additional HCFs trained in BEP/BAT.		Results can only be reported on after the second phase of the project has started implementation (which will be informed by the outcomes of the Mid-Term Review).
The progress of the objective can be described as:		On track			

Outcome 12:	Information disseminated at environment and health conferences in the region.				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	Number of national project representatives to disseminate project results at conferences in the region.	Not applicable	8 national project representatives disseminated project results at conferences in the region.		Results will be reported on in subsequent reporting period.
The progress of the objective can be described as:		On track			
Outcome 13:	Project's results sustained and replicated				
	Description of Indicator	Baseline Level	Target level at end of project	Level at 30 June 2016	Cumulative progress since project start
	Number of high quality monitoring and evaluation documents prepared during project implementation.	Not applicable	1 annual APR/PIR submitted to UNDP each year. 1 Mid-term project review. M&E results and insights are applied to provide feedback to the project coordination process, and have informed/redirected the design and implementation of the second phase of the project.		In each of the regional and national components, project monitoring is conducted in accordance with the M&E Plan. Annual reports, detailed workplans and project budgets on the project implementation are prepared, reviewed/revised and updated in due time in response to the identified changes in current needs and requirements. During the regional inception workshop (Sep-2016), a clear and transparent monitoring tool was agreed and developed to track the progress specifically at national level. This tool was then updated in each of regional meetings to cover additional key project activities, respectively in

			<p>The MTE will inform on how many additional technologies would have to be purchased and how much additional capacity building would have to be carried out in the second half of the project.</p> <p>1 Final evaluation.</p> <p>MTE and FE must include a lessons learned section and a strategy for dissemination of project results.</p> <p>Lessons learned and best practices are accumulated, summarized and replicated at the country level.</p>	<p>the project team's training (Dec-2016) and the 2017 regional project meeting (Jun-2017). Based on this monitoring tool each national project team sends monthly reports to the regional component (IRH) to identify the progress in the different sectors. The received reports are evaluated and a regional overview visualizing the progress in each country is provided to all national and regional stakeholders along with all the submitted reports. This has been practiced creating visibility and to allow each country to understand the status and progress of the other participating countries. The tool proved to be effective and helped to ensure that the progress of the project is in line with its planning. This monitoring system will be updated as the project progresses with different activities as per its workplan. Starting from October 2016, in total 10 monthly regional progress reports have been prepared and shared with project countries, partners and all other stakeholders.</p> <p>In terms of continuous monitoring and evaluation, in addition to the national project teams, the project has a Regional Expert Team (RET) which provides technical and policy expertise and has joint responsibility to assure that project activities are successfully implemented. The team</p>
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					<p>is composed of a Chief Technical Expert, a Regional Technical Advisor, a Regional Project Coordinator, WHO focal points, HCWH focal points, UNDP IRH HIV Health and Development (HHD) focal points and other technical experts if needed. Monthly conference call meetings are organized to exchange on the progress and discuss on the next steps of technical implementation of the project. Since August 2016, the regional expert team has had 8 conference call meetings to monitor and evaluate the implementation progress at both regional and national levels. RET meeting minutes are shared with all stakeholders through the annual progress report.</p> <p>The national project teams conduct periodic monitoring through frequent visits to the project sites to assess first hand project progress. Additionally, in this reporting period, as part of the regional monitoring, the Chief Technical Expert, Regional Technical Advisor and Regional Project Coordinator have conducted missions to all 4 project countries and to monitor initial progress on the ground in all 4 project countries.</p> <p>The project conducted UNDP mandatory Quality Assurance. The</p>
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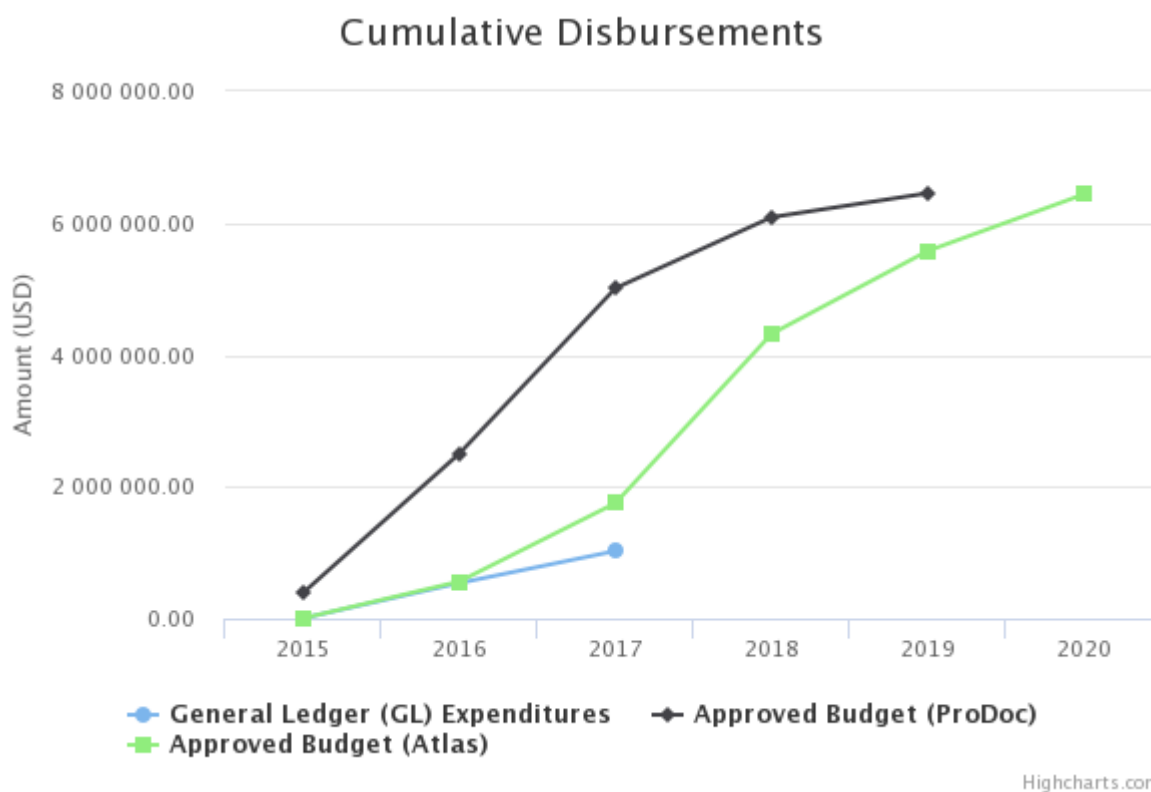
					<p>regional component produced a Quality Assessment report for the project's implementation and monitoring. The assessment rated the project's M&E as Highly Satisfactory, which is a sufficient quality to continue project implementation and monitoring as planned.</p> <p>A joint Mid-Term Review (MTR), covering all components, is planned to start in mid-2018. The MTR is a key element for the second phase of the project to decide on the allocation of additional technologies to the project countries. The project will make sure that the non-incineration equipment will have been installed in the healthcare facilities 3-4 months prior to the MTR missions. Therefore, the last quarter of 2018 will be considered as the project's mid-point and the MTR process will then be carried out.</p> <p>One of the first lessons learned from the project, as noted in the last regional project board meeting (June 2017), co-financing is considered a vital element for the project, in particular for its exit strategy which is essential to develop plans for scaling up project results. Accordingly, the importance of engaging and confirming existing co-financing commitments was re-emphasized.</p>
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					Therefore, the project already initiated a mapping activity through which the project can link with related works in each of the project countries. The project also recently included a co-financing section to its monitoring tool to estimate the co-financing contribution mobilized by the project. In the next reporting period, the project will aim to report back on the status of co-financing with the value estimation of the contribution to project objectives.
	Number of knowledge product on project results disseminated at national, regional and global level.	Not applicable	20 knowledge products on project results disseminated in workshops, conferences, social media or other relevant channels.		<p>The project's results were shared and disseminated by the national project teams and partners through a number of international conferences and learning events.</p> <p>In this reporting period, the project was (re)presented in 9 (nine) international conferences/events:</p> <ul style="list-style-type: none"> • Annual meeting of the HCW Working group of the International Solid Waste Association (ISWA), London, UK (April 2016) • ISWA World Congress 2016, Novi Sad, Serbia (September 2016) • CleanMed Europe 2016, Copenhagen, Denmark (October 2016) • International Hospital Federation 40th World Hospital

					<p>Congress, Durban, South Africa (November 2016)</p> <ul style="list-style-type: none"> • WHO South East Asian Regional Workshop on HCWM, Kathmandu, Nepal (November 2016) • 6th International Infection Control Africa Network (ICAN) Conference, Johannesburg, South Africa (December 2016). Please note that 4 national project directors (25% men, 75% women) representing the governments of participating countries were supported by the project to attend 6th ICAN Conference. • WHO/MoH Workshop on the concept development for the implementation of the Minamata Convention, Kuala Lumpur, Malaysia (March 2017) • WHO/UNICEF global learning event on WASH in Health Care Facilities, Nepal (March 2017) • GGHH Webinar Series, Reducing UPOPs and Mercury Releases from the Health Sector in Africa: A report back from Ghana and Zambia, Online (May 2017). <p>Additionally, the project was covered by two newsletters (one by HCWH, another one by WHO Madagascar), details of which have been shared in the section of Project Links and Social</p>
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					Media.
The progress of the objective can be described as:		On track			

D. Implementation Progress



Cumulative GL delivery against total approved amount (in prodoc):	15.89%
Cumulative GL delivery against expected delivery as of this year:	20.45%
Cumulative disbursement as of 30 June (note: amount to be updated in late August):	1,025,223.91

Key Financing Amounts	
PPG Amount	200,000
GEF Grant Amount	6453195
Co-financing	0

Key Project Dates	
PIF Approval Date	Jun 5, 2012
CEO Endorsement Date	Sep 25, 2014
Project Document Signature Date (project start date):	Dec 9, 2015
Date of Inception Workshop	(not set or not applicable)
Expected Date of Mid-term Review	Aug 31, 2018

Actual Date of Mid-term Review	(not set or not applicable)
Expected Date of Terminal Evaluation	Jan 31, 2020
Original Planned Closing Date	Apr 12, 2020
Revised Planned Closing Date	(not set or not applicable)

Dates of Project Steering Committee/Board Meetings during reporting period (30 June 2016 to 1 July 2017)
2016-07-19
2017-06-02
2016-09-23
2016-07-19
2017-01-19
2016-11-19
2017-05-05

E. Critical Risk Management

Current Types of Critical Risks	Critical risk management measures undertaken this reporting period
Operational	<p>Current Types of Critical Risks:</p> <p>Insufficient/inadequate infrastructure in health care facilities could delay procurement action.</p> <p>Critical risk management measures undertaken this reporting period:</p> <p>This issue has been considered a critical risk for the procurement action as well as the overall implementation of the project because most of the pilot facilities in the project countries face infrastructural challenges as well as financial challenges. The project expects each facility to prepare/re-furbish/construct the infrastructure that will house the technology, which requires certain cash investments from the facilities themselves depending on the arrangement.</p> <p>As a critical risk management measure, the project board decided to enter into MoUs with pilot facilities to inform/agree on the responsibilities from each side, the facility and the project. Signing of the MoUs also aims to sensitize respective MoHs in project countries to support the pilot facilities with additional public funding, as MoUs have been approved by these Ministries to function as pilot facilities in the project countries.</p> <p>The national project teams closely monitor the preparatory activities of the pilot hospitals and issue a monthly report on the progress. For the pilot facilities, the project continues to provide technical support on the blue prints for construction works, guidance on human resource needs and to obtain necessary environmental permits.</p> <p>Additionally, the first regional project board approved the allocation of up to 5% of the budget of the 1st procurement round to the project's national components to undertake some procurement actions locally. This measure will also provide flexibility to support pilot facilities in terms of their infrastructural needs. For instance, in Madagascar, the project will support the procurement of electric cables (to accommodate 380 volt) at the 2 university hospitals, CHU-HJRB and CHU-HJRA in Antananarivo, following their request confirming lack of public funding for this purpose.</p>

F. Adjustments

Comments on delays in key project milestones

<p>Project Manager: please provide comments on delays this reporting period in achieving any of the following key project milestones: inception workshop, mid-term review, terminal evaluation and/or project closure.</p>
<p>Inception workshops are supposed to be held within the first 2 months of the project start (date of project document signature) but the project encountered delays in organizing national inception workshop for all its national components due to delays in the recruitment (through UNDP COs) of project staff. In most countries, national inception workshops were organized in the same month the recruitment of the national project coordinator was finalized:</p> <p>Ghana (ProDoc signature: Oct-15; Inception workshop: Feb-16), Madagascar (ProDoc signature: Apr-16; Inception workshop: Nov-16), Tanzania (ProDoc signature: Feb-16; Inception workshop: Sep-16), Zambia (ProDoc signature: Jan-16; Inception workshop: Jun-16), Regional Component (ProDoc signature: Dec-15; Inception workshop: Sep-16)</p> <p>The project's official start date is April 2016, which is based on the signature of the 5th Project Document (Madagascar). Therefore, the project estimates that an overall delay of 6 months has occurred (from April to November 2016) in fully initiating project activities. To compensate for this delay, the project aims to put in place an accelerated schedule for the implementation of key activities, especially at national level. This accelerated schedule is being closely monitored on a monthly basis, through the monitoring tool agreed with national stakeholders during the regional inception workshop.</p>
<p>Country Office: please provide comments on delays this reporting period in achieving any of the following key project milestones: inception workshop, mid-term review, terminal evaluation and/or project closure.</p>
<p>In this reporting period, the project faced challenges to organize inception workshops at both national and regional levels due to delays in recruitment of project staff (especially for the posts of national project coordinator) with slightly different reasons for each project country; failure to find qualified candidate, the refusal of job offer by one candidate and long recruitment processes in general.</p> <p>Upon recruitment of national project coordinators, participating countries organized national inception workshops soonest possible in each context and then successfully initiated project activities at national level. Once national teams were established, the regional inception workshop was organized in September 2016 to engage project teams with each other and project partners (WHO and HCWH) and to agree on key decisions for the project implementation at regional level.</p>
<p>UNDP-GEF Technical Adviser: please provide comments on delays this reporting period in achieving any of the following key project milestones: inception workshop, mid-term review, terminal evaluation and/or project closure.</p>
<p>The initial delays and root causes have been appropriately described by the Project Manager and Country Offices. While these delays (specifically regarding recruitment) are regrettable, their impact</p>

on the project implementation and project end date have been limited: the time taken to form project teams has allowed the recruitment of strong professionals, and this is now felt in the rapid implementation progress. In that sense, this initial drawback has been well mitigated. Also, the organisation of the Inception workshops was dedicated to ensure a common format, in line with the UNDP GEF guidelines (2 days of workshop and one day of field visits) and presented both the content of the project and the specificity of UNDP GEF rules, particularly adaptive management approach. As Regional Technical Adviser, I participated in all 5 inception workshops and can confirm that both this standard, essential information was presented, and that specific national consultations were appropriately conducted. The project team and the Regional Expert Team are well aware of the strict deadlines regarding the mid-term review and are all focused on meeting them in 2018 - particular attention will be given to recruitment processes for a smooth completion of the exercise.

G. Ratings and Overall Assessments

Role	2017 Development Objective Progress Rating	2017 Implementation Progress Rating
Project Manager/Coordinator	Satisfactory	<i>- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -</i>
Overall Assessment	<p>As per its work plan, the project has satisfactorily initiated project activities at both the regional and national levels. The first key milestone was the recruitment of all the project teams and the organization of the inception workshops, occurred with some delays due to long duration for the recruitment of national project coordinators. The second key milestone was the organization of the project team's training at the regional level. The two-week training was successfully completed and helped the project build team spirit among national project teams, participating governments and the regional expert team, which includes experts from Health Care Without Harm (HCWH) and WHO. For the regional training, invitations were extended to national experts from other countries in the region, which are also implementing HCWM programmes, this was regarded as a best practice. Their participation made the event a true regional one fostering South-South cooperation with participation from 8 African countries (4 project countries as well as Kenya, Mauritius, South Africa and Uganda), including Kenya which is currently implementing a GEF-funded HCWM project with support of UNDP. With the momentum from the regional training, pilot hospitals were identified in each project country, and these were assessed and selected as pilot partner for the demonstration of advanced healthcare waste management and treatment methods. Concurrently, all countries started to review and update the national legal framework on HCWM and national action plans. All these activities are progressing very well despite the initial delay in the launch of the project. The project successfully established a good monitoring system to monitor country level progress each month and use monthly overview reports as a communication tool to update all the project's stakeholders, including UNDP HIV Health and Development (HHD), HCWH and WHO, which are already very well engaged in project activities, being part of the Regional Expert Team (RET).</p> <p>Project countries are now starting to produce results as part of their national activities, such as the selection of pilot healthcare facilities; conducting IRAT assessments and inventories for mercury-containing devices in each of pilot facilities; finalization of national policy reviews in Ghana and Tanzania. At regional level, positive project results included the organization of the project team's training, development of several technical documents and the development of technical specifications for the first round of procurement of equipment. Additionally, the regional component has almost completed the tender process of mercury-free devices. The tender for the non-incineration HCWM equipment has been published and is expected to be completed in late September 2017.</p> <p>During the regional inception workshop and the recent regional project meeting, as well as national steering committee meetings, project risks were assessed based on inputs from the project countries. As indicated, two critical issues that might impact the introduction of non-incineration and mercury-free technologies were identified. These include a lack of central storage for the mercury and</p>	

	<p>mercury-containing devices collected from the healthcare facilities and secondly insufficient/inadequate infrastructure for the installation of non-incineration technologies in the pilot facilities. In response, the regional project board took some measures to partly overcome these challenges. The project teams at all levels continue to provide close follow-up and support to facilities to address and overcome these challenges. Please note that at this stage of the project, the issue of mercury storage is not considered a critical risk, but rather a long-term element that needs to be taken into account and addressed by the project team.</p> <p>The annual work-plans were developed focusing on capacity building activities first, and subsequently focusing project efforts on national HCWM policy reviews, the procurement of mercury-free devices and non-incineration HCWM equipment as well as site readiness of pilot facilities for technology installation. In addition to the above activities, many other project activities related to piloting, recycling, WASH, bio-digestion, co-financing, gender, exit strategy and regional networking etc. are included in the work-plan and managed with satisfactory programmatic delivery rates for each of the project components and project countries. Therefore, the DO progress has been rated as satisfactory as the project is on track with its annual workplans and expected to fully achieve its end-of-project targets by project closure in April 2020.</p>	
Role	2017 Development Objective Progress Rating	2017 Implementation Progress Rating
UNDP Country Office Programme Officer	Satisfactory	Satisfactory
Overall Assessment	<p>Ghana (DO: Satisfactory; IP: Satisfactory)</p> <p>The overall objective of this project has been the need to introduce best environmental practices and best available technologies in Ghana's health sector to support mercury reduction and the reduction in the emission of POPs, to support Ghana's compliance with the Minamata and Stockholm Conventions. So far, this project has laid good foundations by supporting the development of necessary policies and guidelines needed to steer national initiatives towards the achievement of this goal. Furthermore, opportunities have been created for the capacity of national personnel to be built to promote this idea and to ensure the sustainability of the project's initiatives and results. To ensure that these results are tangible and transferrable, pilot facilities are being strategically engaged to ensure that initiatives are more targeted and results are visible, substantial and quantifiable. Overall, the project is on course to achieve its stated objectives and has the potential of achieving results that will become good examples of standard and acceptable practices for healthcare waste management in Ghana. This also contributes to the Sustainable Development Cluster's programmatic objective of supporting Ghana to manage its environment sustainably.</p> <p>It is worthy to note, that the achievements chalked by the project so far have been a result of good stakeholder engagement brokered by the Implementing Partner. The Implementing Partner has successfully managed the expectations of stakeholders and has been successful in getting high-level involvement in all project initiatives. This has ensured national ownership of the project and its initiatives. Having fully implemented the previous year's workplan, the Implementing Partner, through the Project Management Unit, has ensured that resources planned for this year are delivered as planned and has given priority</p>	

to key milestones in project implementation.

Going forward, the Implementing Partner is being encouraged to create platforms to effectively communicate the results being expected from the interventions made so far.

Madagascar (DO: Satisfactory; IP: Satisfactory):

The project is on track to reach its objectives. However, some approaches are required to ensure that the focal points of the Stockholm and Minamata Conventions are more actively involved in the project to ensure improved project ownership.

Tanzania (DO: Satisfactory; IP: Satisfactory):

The Country Office rates the project as satisfactory and on track. The project managed to implement almost all the planned activities, in line with the Annual Work Plan. Generally, the support provided by the project has enhanced UNDP's collaboration with the Ministry of Health, Tanzania. As a result of capacity support provided by the project's management, the project is currently well owned by the Ministry of Health. In addition, the project has created strong links with other CO portfolios related to environment, climate change and governance. Other partner agencies/entities include; project pilot hospitals, WHO, UNOPS and Civil Society Organizations. The project expects to engage additional partners, as the project's implementation progresses to ensure the project's sustainability.

Zambia (DO: Satisfactory; IP: Moderately Satisfactory):

In terms of DO progress in Zambia, the project is on track to reach its objectives. The project is implemented at eight health care facilities. As a pilot project, it was decided that it would be important to have a representation of different levels of health care facilities to demonstrate that high standards of management of HCW can be implemented at all healthcare levels.

IRAT assessments were carried out in all eight HCFs and the IRATs identified challenges in the management of health care waste at several points in the HCW administration in each of the assessed HCFs. Overall the IRAT assessment has been a useful tool to the project in providing valuable insights into the strengths and weaknesses of the HCFs which in turn has identified further areas of intervention for the project (e.g. poor waste segregation practices). A chemical waste assessment was also undertaken at each of the eight HCFs.

A review of the resource materials obtained during the regional master ToT in Nakuru, Kenya was undertaken to tailor the training materials to the Zambian context and to reduce the number of modules. This review was undertaken by project staff, MoH and ZEMA. The resource materials will be used at national ToT workshops to train managers, clinical staff and waste handlers of the eight HCFs. The material has been broken down into three workshops, the first of which will take place in July 2017, the second is planned for August 2017 and

the final one in September 2017.

The project has convened two working group meetings to review the policy and legal framework in Zambia to include health care waste management. The legal framework regarding HCWM was mapped and the three key areas for review were identified; the Public Health Act, the Environmental Act and the HCWM guidelines. Gaps in the HCWM framework have been identified, for example, a lack of specific legislation/regulations governing HCWM and other hazardous discharges, resulting in a reluctance to adhere to HCWM procedures; environmental impact assessments (EIAs) are not taken as a priority before engaging in any health-related project/activity.

An inventory of mercury containing devices was undertaken in all eight HCFs. The assessment found that most HCFs have already started to phase out mercury-containing devices, and in fact, that there is minimum use of mercury in dental amalgam in Zambia. A challenge identified is the reluctance of some health care providers, and training schools to move away from mercury containing devices (MCDs), as they do not perceive the mercury-free devices to be as clinically reliable. The next step is to engage with the Zambia Minamata focal point, to start discussion on storage of MCDs and eventual disposal.

Preparations for non-incineration equipment installation is ongoing. Calculation of the required capacity of autoclaves to be installed was concluded for three health care facilities. One challenge under this activity had been the requirement for HCFs to cover the cost of site preparation for the autoclaves. In two of the three sites, Kabwe and Ndola, new buildings need to be constructed, while at UTH an existing building will be rehabilitated. This was addressed through joint visits by MoH and project staff in June who explained to the medical superintendent, and other staff (environmental health officer and head of facilities) that these costs will have to be borne by the HCF and should be included in budget planning processes to ensure associated costs are covered in the 2018 budget. This also meant that there has been a delay in site preparation activities. For example, to date none of the three HCFs have submitted the building drawings and only one (Kabwe) has submitted a BoQ. Slow progress on this is a significant risk to the project as delivery of equipment is expected at the end of Q1, 2018. That said progress is being monitored closely by the project and the project is supporting these facilities in any way it can to ensure timely delivery.

To date, only preliminary meetings have been held with stakeholders from the University of Zambia to review the curriculum of health sciences training institutions to include HCWM. Additional work on the improvement of the curriculum for health sciences is foreseen to take place in future reporting period.

In terms of implementation progress (IP), implementation is generally proceeding as planned but with some delays, therefore it has been rated as moderately satisfactory (MS). There is slow progress in a number of activities. In Q1 this was due to the late signing of the annual work plan, however since then, the pace of project implementation has not been able to make up all of the delays. For example, little progress has been made on both recycling

	<p>(scheduled for Q1, Q2 and Q3 in AWP) and curriculum review (scheduled for Q2, Q3 and Q4). Further to this, planned activities have had to be rescheduled due to poor planning. For example, the 1st ToT, initially scheduled for the week commencing 24 April 2017, was cancelled on Saturday 22 April 2017 as the MoH did not sign the invitation letter for participants. The 1st ToT was then rescheduled to the week commencing 24 July 2017.</p> <p>Failure to timely share documents in advance has had a negative impact on the project. For example, presentations for the steering committee were not shared in advance. This meant that there was no input from the technical advisor and administrator and documents were not cleared by UNDP CO. The presentations were criticized by the steering committee for not following the desired format therefore not presenting the expected information, something that would have been easily recognized and corrected by the UNDP CO had it been shared in advance. The chemical waste baseline was not shared in advance, meaning that their input could be provided by the technical advisor or UNDP to the methodology and tool to be used. Furthermore, the IRAT report was scheduled to be validated at the 1st ToT, however the report was not shared with UNDP CO and MoH to allow for review and providing feedback, as such it could not be finalized and presented for validation. These issues can easily be corrected by better planning and communication, which will improve the implementation of the project.</p>	
Role	2017 Development Objective Progress Rating	2017 Implementation Progress Rating
GEF Operational Focal point		- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -
Overall Assessment		
Role	2017 Development Objective Progress Rating	2017 Implementation Progress Rating
Project Implementing Partner		- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -
Overall Assessment		
Role	2017 Development Objective Progress Rating	2017 Implementation Progress Rating
Other Partners		- IP Rating provided by UNDP-GEF Technical Adviser and UNDP Country Office only -
Overall Assessment		
Role	2017 Development Objective Progress Rating	2017 Implementation Progress Rating
UNDP-GEF Technical Adviser	Satisfactory	Satisfactory

Overall Assessment	<p>The project is definitely on track to meet its development objectives and has thus been rated Satisfactory. It is a very promising regional project in terms of demonstration of technologies and joint health and environment benefits, demonstrating a comprehensive approach which corresponds to the spirit of the SDGs. The South-South cooperation developed through the regional nature of the project is also to be commended.</p> <p>In terms of objectives, the project is on-track to modify positively the perception towards non-incineration technology. Though this is still a work-in-progress, this can potentially be the most remarkable achievement by project end. One has to note that in many cases, as was noted during the preparatory missions of the PPG phase, non-incineration options were still perceived as a non-feasible option by many stakeholders in the health sector, which considered it as a process and technology that was not fitted to Africa's current state of development. Already, through awareness raising, technical and policy working groups and trainings in each of the 4 countries and at the regional level, the transformation of the perception is felt, though it remains to be seen whether complete transformational change will be achieved by project end.</p> <p>The variety of approaches at different levels of development policy has been initiated:</p> <ul style="list-style-type: none"> - At the policy level, and with the crucial support of the WHO, which is a key reference actor for health policies, the project has been supporting national processes to make sure that the option on non-incineration is recognized and included in guidance documents. It is recognized that this is a long-term process but the project is already tilting the evolution of national health laws, regulations, guidance and SOPs in a manner which is supporting the implementation of the Stockholm Convention – i.e. minimizing dioxins and furans emission for management of health care waste; by addressing mercury in health equipment at a national level, the project supports early action in participating countries towards implementation of the newborn Minamata Convention on Mercury, which entered into force just after the conclusion of this reporting period (16 August 2017). - It is remarkable that all pilot facilities have been identified and engaged already, which paves the way for changing waste management approaches in each of them – towards appropriate measures for mercury equipment as well as implementing appropriate sorting of the infectious and non-infectious waste, and testing alternatives to burning and incineration through the supply of non-incineration equipment. It is noticeable that the project avoids a one-size fits all approach but rather adapts to each of the country's and HCF's specific situation, so that the appropriate solution is specifically devised. The stakes are high: too often, by providing a new technology without bringing the appropriate, adapted support to its launch, use and maintenance, this technology will fail and the long-term impact in terms of legitimacy and perception of this technology by stakeholders will be considerable. The project is setting the right environment to ensure success and flexibility in responding to the necessary logistical challenges which will be faced. A crucial element is the fact that international expertise of very high-level has been gathered through the cooperation of UNDP (through an international consultancy), the WHO and the most recognized international NGO in this field of work, Health Care Without Harm. These partners, through the Regional Expert Team, provide both theoretical support through excellent knowledge of all the related health and environment issues, and also make the project benefit from experience gathered in many countries by working on the ground, in other
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HCFs, on non-incineration technologies.

- Though efforts have been noted towards gender mainstreaming and engagement of the private sector, further work in those fields can be expected in future reporting period to fully achieve the specific project development objectives and exemplify a sustainable development model less emissive health care waste management. Additionally, contacts have been well established with the UNDP-coordinated international initiative "United Nations Informal Interagency Task Team on Sustainable Procurement in the Health Sector" (SPHS - <http://savinglivesustainably.org/>) and it is expected that further work towards long-term improvement of procurement practices in health administrations in the 4 project countries and beyond can be achieved through this cooperation.

The project implementation structure is delivering convincing results, and has found a complementary balance between involvement on the ground with partners and beneficiaries through the national teams (NIM implementation) and the regional coordination and support through the regional component (DIM implementation). The work initiated on training, particularly the building of the national teams' capacity, the effective functioning of the Regional Expert team (monthly regular calls and complementary exchanges), the partnerships between UN agencies and International NGOs seem to build on the best qualities of each type of partners. It is particularly encouraging to see the progress already achieved on the procurement to be undertaken - though those two sets of procurement are rather complex - with the efficient support of the procurement team of UNDP's Istanbul Regional Hub.

While most of the country teams noted smooth progress in implementation of annual work plans, it has been noted in one of the countries (Zambia) that there is room for improvement. However, the very fact that this has been recognized and indicated in this report by the Country Office signals that appropriate monitoring is already in place. The monthly monitoring reports provided by each of the national teams is an extremely useful tool, both for tracking progress and taking adaptive measures in a flexible way, but also as a way of disseminating information between project teams and providing a healthy stimulation between countries.

This is another positive dimension that has been noted in this implementation period. After a difficult initial period after signature of project documents, marked by the challenges of building competent national teams (the set of expertise in terms of health, environment and project management experience was one of the most demanding factors in this recruitment phase), national teams have now not only built strong partnerships at the national level, but also at a regional level, both with other project country teams and with other country teams in Africa (Kenya, Uganda for example) and elsewhere (Kyrgyzstan, who was present during the June 2017 project meeting). The regional project team puts a very high emphasis on facilitating the exchanges of good experiences across project teams, so that the complexity of this regional project actually becomes a strength for both implementation but also achieving larger-scale transformation. Data gathering in each of the project facilities will be both a challenge but as well an opportunity in terms of gathering convincing arguments to support the project's policy message.

Finally, it is a very interesting to note that each of the countries have adopted a 'flagship initiative' in which each is developing specific expertise and going beyond what was expected in the project document - being it through piloting a biodigester, testing of hepatitis, or developing partnerships for effective recycling. It is encouraging to see that the project does not limit itself to its strict planned activities but takes any opportunity to reach beyond its original scope, while obviously keeping its mandate into account and in the limits of available resources. Continued efforts towards identification of co-financing is noted, in that regard, as an important element.

The rigorous organisation, follow-ups and communication channels set up by the project manager is also to be commended. It has to be noted that language issues, related to Madagascar being the only French-speaking country among the 4 participating ones, have not hampered implementation - this is due to the effective use of translators, interpreters, and the support of a dedicated experienced French-speaking Mauritius-based international consultant for support to Madagascar during the initial phase of the project implementation.

In that sense, the project is on track with its long-term planning and has the potential to be highly satisfactory in future years, when the bulk of the work will have to be delivered. It will be time then to further step up its communication and dissemination efforts, especially as this project has a sizable potential for replication in developing countries. It is expected that the project team continues documenting progress and lessons learnt, but also convey these results in several fora at the regional level - both at the policy and the technical levels, and both in environment and health fields – so that promotion of safer waste management methods gain further momentum in Africa.

H. Gender

Progress in Advancing Gender Equality and Women's Empowerment

This information is used in the UNDP-GEF Annual Performance Report, UNDP-GEF Annual Gender Report, reporting to the UNDP Gender Steering and Implementation Committee and for other internal and external communications and learning.

<p>Has a gender analysis been carried out this reporting period? Please note that all projects approved in GEF-6 (1 July 2014 through 30 June 2018) are required to carry out a gender analysis.</p>
<p>No</p>
<p>If a gender analysis was carried out what were the findings?</p>
<p>n/a</p>
<p>Does this project specifically target woman or girls as direct beneficiaries?</p>
<p>No</p>
<p>Please specify results achieved this reporting period that focus on increasing gender equality and improving the empowerment of women.</p>
<p>Results reported can include site-level results working with local communities as well as work to integrate gender considerations into national policies, strategies and planning. Please explain how the results reported addressed the different needs of men or women, changed norms, values, and power structures, and/or contributed to transforming or challenging gender inequalities and discrimination.</p>
<p>The project doesn't target women or girls as direct beneficiaries but considers them as key stakeholders. The project integrated a gender dimension, as indicated in the SESP: "This GEF project emphasizes building awareness of the links between waste management and public health (including occupational exposures), with a special focus on the health implications of exposure to dioxins and mercury for vulnerable populations, such as female workers, pregnant women, and children. [...] Women represent a large portion of workers employed in healthcare services (according to the U.S. Bureau of Labor Statistics, 73% of medical and health service managers are women). Although similar statistics are not available for Ghana, Madagascar, Tanzania and Zambia, it can be assumed that the majority of healthcare workers are female. Therefore, the "nature" of the target beneficiaries instinctively lends itself to target women as key stakeholders. Additionally, the project will encourage, in the model HCFs, the emergence of 'champions' of better HCWM practices. Experience from the Global GEF/UNDP/WHO/HCWH Medical Waste project demonstrates that this values-based effort can reinforce women empowerment within the HCF staff and administration."</p> <p>In addition to reducing dioxins/furans and mercury releases (which have a specific impact on vulnerable populations such as pregnant women or children), the project will also contribute to infection risk reduction, through better waste management practices. In this manner, the population of health workers (as well as informal waste pickers), in which women are present in greater proportion will see improvement of their situation. Awareness raising was included in the project team's training and was also discussed as a priority action during the inception workshop for the regional component. Thus, further opportunities for activities on improving (and measuring) gender</p>

impact throughout the project will be pursued.

In this reporting period, gender dimensions of the project were discussed in the regional inception workshop and subsequent discussions lead to the first regional project board approving a budget allocation of USD 3,000 (at regional level) to promote gender equality. This funding was initially estimated for hiring a gender expert to provide a gender awareness session during the regional project teams training (ToT).

During this regional ToT (Dec-16), Tabitha Mutemi, representative of the Independent Electoral and Boundaries Commission (IEBC) of Kenya, voluntarily (without a fee) provided an interactive session on Gender and mainly introduced key conventions which ensure women rights in Africa. Her session also opened up a discussion on gender and healthcare waste area among 28 national experts from 8 African countries (including 4 project countries) and all experts were encouraged to incorporate a gender equality session in their HCWM training curriculum when they roll out these training activities as part of their national projects.

Therefore, in order to re-programme the approved budget allocation of 3,000 USD, in the second regional project board meeting (Jun-17), two proposals for gender-specific activities were discussed/agreed on. Firstly, to conduct a Gender assessment in HCWM and recommend possible activities by selecting one or two countries as a pilot; secondly, to support activities related to HCWM making use of the gender focal points within each UNDP Country Offices (CO). These options will be considered for the implementation at the regional level and results will be communicated in the next reporting period.

It should be noted that following activities and budget allocation, the regional component was rated up from Gender 0 (No noticeable contribution to gender equality) to Gender 1 (Some contribution to gender equality) in terms of UNDP corporate Gender marker rating.

At national level, the project is working with various community-based organizations, universities and private sector entities in making sure that gender considerations are integrated into the review of national policies, strategies to address the different needs of men or women, and to solve gender inequalities and discrimination in health care waste management. Also, the project has been using a gender lens in planning and carrying out project activities such as trainings and workshops. For instance, the project provided high level training on HCWM to 55 national experts, 31 of them were women, representing 56% of the total. Additionally, in this reporting period, the project was presented in 9 (nine) international conferences/events by 14 members of national project teams and partners (15% men, 85% women).

In Madagascar, the project supported the Ministry of Public Health in the implementation of the Scientific Colloquium Public Health for the Health System on 15th June 2017 at the Public Health Institution (INSPC) in Mahamasina, Madagascar. Through a specific Gender and Health intervention, as well as considering the cross-cutting theme Gender throughout the Colloquium, the participants, composed of active actors and future health actors in Madagascar, were all made aware on the importance of gender in the development of health. The Minister of Public Health and the General Secretary led the entire scholarly community of the eminent professors and teachers in charge of public health training in Madagascar during this colloquium. They recognized the importance of the consideration of gender in Public Health. In supporting this colloquium, the regional project confirmed its commitment to the development of the health sector, and in particular the promotion of gender

equality in the health sector.

In Ghana, a sensitization on the gender dimensions/risks of improper HCWM was organized through working group meetings during which project stakeholders were engaged in discussions to include gender in project implementation. Gender issues identified in HCWM in Ghana include occupational health and safety; waste segregation; waste collection; treatment and disposal.

I. Communicating Impact

Tell us the story of the project focusing on how the project has helped to improve people's lives.

(This text will be used for UNDP corporate communications, the UNDP-GEF website, and/or other internal and external knowledge and learning efforts.)

The project is being organized by United Nations Development Program (UNDP), the World Health Organization and Health Care Without Harm. The aim of the project, which will run until 2020, is to disseminate non-incineration waste treatment and substitute mercury containing medical devices in four African countries: Ghana, Madagascar, Tanzania and Zambia.

In Ghana for example, the project has resulted in one of project pilot facilities (the Eastern Regional Hospital) decommissioning its incinerator. This means that the hospital will no longer incinerate its medical waste, which will result in a reduction in the release of dioxins and furans and subsequently improve air quality within the hospital and the nearby community. Eventually, the hospital environment will become healthier for its patients, and improve the lives of health workers and community members at large.

The project also provided to the GEF the below text on Mercury Free Healthcare in Africa including a synopsis from Madagascar:

“””

Pushing for Mercury Free Healthcare in Africa

The use of mercury-containing devices such as thermometers and sphygmomanometers (blood pressure testing devices) is widespread in the African healthcare sector. When mercury-containing medical products break, liquid elemental Mercury evaporates, exposing healthcare workers, patients and visitors to potentially highly toxic levels. If mercury-containing products are discarded, the toxic waste is disposed of in uncontrolled dumpsites or burned in simple incinerators, resulting in a high environmental burden. The limited availability of low-cost mercury-free devices, unfamiliarity with their use and limited or no experience in their procurement are the barriers for introducing safer alternatives.

With financial support from the Global Environment Facility (GEF), and in partnership with WHO and the NGO Health Care Without Harm (HCWH) UNDP started a regional project in 2016. The main objective of the project which covers four African countries (Ghana, Madagascar, Tanzania and Zambia) is to demonstrate and promote best practices and techniques to reduce emissions of unintentionally-produced Persistent Organic Pollutants (uPOPs) and mercury releases from the healthcare sector. Data from the baseline analysis suggests that in the four project countries the healthcare sector releases a total of up to 287 kg mercury per year.

Rajaobelina Seheny Olivia is a nurse in University Hospital CHU-HJRA Ampefiloha in Antananarivo, Madagascar. She has spent 7 years in the nephrological reanimation unit where she used to monitor the temperature of patients twice a day, morning and evening. She experienced many troubles with mercury thermometers due to frequent breakages, difficulties in cleaning up the spillage and had no idea how to safely dispose them: “I was always afraid of hurting myself or the patient with the broken glass and above all the reprimands of my supervisor... Until January 2017, I was never confident in

cleaning up spilled mercury and I was not even aware of the hazard from the liquid mercury release from the broken thermometer. This changed when Dr. Hanta Ravaosendrasoa, one of the master trainers of the UNDP-GEF healthcare waste management project in Madagascar, gave us a training in our hospital about how to deal with a mercury spill and introduced mercury-free affordable and easily available alternatives which the project will deliver to the hospital soon to exchange Mercury-containing devices.”

The exposure is higher among women, as around three quarters of health workers are women. When the Minamata Convention comes into force in August 2017, it will require participating countries to phase out the manufacture, import and export of mercury-containing devices by 2020. The healthcare sector must be prepared for this change and enabled to procure, operate and validate the mercury-free thermometers and sphygmomanometers to ensure high-quality medical services.

The project is already supporting the participating countries in phasing-down/out the use of mercury-containing medical devices; improving practices for mercury-containing wastes; preparing awareness-raising and guidance materials on the dangers of mercury; conducting training on the use of mercury-free devices and on mercury spill management; adopting procurement processes and technical specifications to avoid the future releases of mercury.

To demonstrate how to meet the future obligations under the Minamata Convention, the project initially supports 25 model healthcare facilities (HCFs) in the four countries to introduce mercury-free devices. More than 3,500 mercury-containing devices are exchanged (one-for-one) against mercury-free ones (e.g. against digital thermometers, sphygmomanometers, digital blood pressure monitors, etc.). The mercury-containing devices will be collected and safe disposal is demonstrated.

At the regional level, in 2016 the project conducted a Training of Trainers on Advanced Healthcare Waste Management which included a range of topics on mercury phase-down. Experts from the project countries are currently providing trainings in their countries. This includes on-the-job training for healthcare workers and student interns. Training objectives are to explain the environmental, health and safety implications associated with mercury spills and persuade health workers to shift from the use of mercury containing devices to mercury free devices. The project and the experts actively advocate for the inclusion of the usage of mercury-free devices into the health professional curricula to ensure that future generations will have the right knowledge and will not be exposed unnecessarily.

At the national level, the project helps to draft national guidelines on mercury management and national phase-out strategies including procurement of mercury-free devices and the collection, transportation, storage and disposal of mercury-containing devices. The disposal of mercury waste in the project countries is challenging due to a lack of central storage places or treatment plants for the disposal and treatment of collected Mercury-containing devices. This challenge was discussed and noted after the project’s baseline assessments had been conducted and the project will continue to consider its options (including Public Private Partnerships) to overcome this issue as part of the project’s sustainability and exit strategies.

“””

Additionally, the project drafted another text about the work in progress to incorporate the health

impacts of mercury onto health professional curricula in Zambia:

“””

The “why” behind the “what”: Incorporation of Mercury dimension into health curricula in Zambia

Zambia was one of the first countries to sign the Minamata Convention on Mercury in October, 2013 and subsequently ratified it in March, 2016. As a Party to the Convention, the government of the Republic of Zambia is committed to protecting human health and the environment from the adverse effects of mercury. A 2012 National Inventory on mercury sources and releases in Zambia revealed that the main sources of mercury into society are mainly through intentionally used products such as thermometers, blood pressure gauges, fluorescent light bulbs and batteries. Additionally, mercury is also released unobstructed in waste streams of these mercury containing products and materials. Health-care facilities contribute to mercury pollution through breaks and spills of mercury-containing devices and the incineration of medical waste.

Mercury sphygmomanometers and thermometers, first developed over 100 years ago are used in health facilities for the measurement of blood pressure and temperature respectively. Zambia is no exception to the use of mercury containing medical devices (MCMDs).

Almost all its 1,600 plus health care facilities uses one form or another MCMDs. As mentioned previously, Zambia is determined to phase down/out mercury from the health sector by the year 2020, being a party to the Minamata Convention and implementing a national component of the GEF funded Project: unintended persistent organic pollutants and mercury releases from the health sector in Africa. The Project will promote initiatives to review the existing health sciences curriculum in health science training schools. This will be accompanied by the development of training resource materials and short-term training courses. It is hoped that this will be followed by the development of measurable indicators that will measure effectiveness of training modalities and develop benchmarks for ensuring Minamata Convention compliance.

Currently, aspects of mercury and its health effects are taught at both undergraduate and postgraduate levels in Environmental and Public Health Courses at the University of Zambia- School of Public Health. There is also a program of Community Health targeting clinicians and nursing students where general principles of Pollution Control and an overview of Toxicology are taught. Furthermore, aspects related to general Health Care Waste Management are addressed as well as and health effects. Given the wide acceptance and perception of mercury sphygmomanometers and thermometers as being the ‘gold standard’ blood pressure and temperature measuring devices; there is a critical need to improve the existing curricula to ensure a successful uptake of non-mercury containing devices by health professionals.

As one of the strategies in highlighting the importance of managing these unintentional releases of mercury into the environment, the Government of Zambia is therefore taking deliberate strides to incorporate different facets of the mercury discourse into the health curricula of a wide range of health programmes at various levels. The GEF funded UPOPs and Mercury releases from the Health Sector in Africa Project in Zambia, will review existing curricula which will identify entry points for the inclusion of mercury issues in health courses at various levels including diploma, degree and postgraduate levels. These courses will have a broad learning objective to ensure that there is understanding, recognition and knowledge of the health hazards associated with exposure to different types and forms of mercury, how to diagnose and manage mercury exposure and poisoning, how to prevent and reduce exposure to mercury and finally how to analyze the Public Health

implications of mercury health releases. It is hoped that through this transfer of knowledge on the health effects of mercury, the healthcare professionals will support the government's phase out of mercury containing devices in their facilities as they will have a full understanding of the "why" giving rise to the "what".

“””

What is the most significant change that has resulted from the project this reporting period?

(This text will be used for internal knowledge management in the respective technical team and region.)

Following monitoring visits to project sites, national project teams frequently note that management of all pilot hospitals has started to embrace non-incineration as an environmentally friendly technology for medical waste treatment in health care facilities and beyond. More concrete evidences of this change are expected in the next reporting periods and will be reported accordingly.

Describe how the project supported South-South Cooperation and Triangular Cooperation efforts in the reporting year.

(This text will be used for internal knowledge management within the respective technical team and region.)

Because of its structure, the regional project provides a good opportunity for South-South Cooperation among all 4 participating countries and the regional component of the project facilitates this exchange with activities at regional level.

As indicated in previous sections of this PIR, the project organized a regional Training-of-trainers workshop with 28 national experts; 18 experts from all 4 project countries and 10 from other African countries (Kenya, Uganda, Mauritius and South Africa) including 6 experts from the UNDP-GEF HCWM project in Kenya. A two-week intensive training on advanced healthcare waste management worked out really well and the collaboration between trainers and country teams led to building relationships among and between the teams to demonstrate a broader community of effort that will remain connected through HCWH's network of Global Green and Healthy Hospitals (GGHH). In addition to experts trained at regional level, HCWH will also provide access to all project pilot facilities to participate in the GGHH network, which will foster exchange opportunities beyond the end of the project itself. As a first activity through the GGHH network, the project was introduced through two separate Webinars to the GGHH network, which has 826 members in 48 countries on 6 continents which represent the interests of over 27,800 hospitals and health centers.

Furthermore, a representative from the MoH who is an active member of UNDP-GEF HCWM project being implemented in Kyrgyzstan was supported to participate to the recent regional project meeting held in Istanbul (Jun-16). The session on Kyrgyzstan's HCWM experience was very well received and generated a good level of participation. Main take-away points for our project countries were the experience shared on the coordination among different ministries on HCWM issues and warning/emphasizing the need for early action on the storage of mercury-containing devices upon their collections for replacement. Following her participation, the UNDP-GEF HCWM project in Kyrgyzstan shared all policies, guidelines and operational documents produced by their project for the use of 4 participating African countries.

Project Links and Social Media

Please include: project's website, project page on the UNDP website, Adaptation Learning

Mechanism (UNDP-ALM) platform, Facebook, Twitter, Flickr, YouTube, as well as hyperlinks to any media coverage of the project, for example, stories written by an outside source. Please upload any supporting files, including photos, videos, stories, and other documents using the 'file upload' button in the top right of the PIR.

Although it is not yet fully operational, the project will use the website of the former UNDP GEF Project on Global Healthcare Waste, www.gefmedwaste.org. In the next reporting period, the project will also consider its options for other social media tools.

Blog post by Susan Wilburn, HCWH - African Hospitals Are Becoming Leaders on Environmental Practices

<https://noharm-global.org/articles/blog/global/blog-african-hospitals-are-becoming-leaders-environmental-practices>

An article published in the WHO journal in Madagascar “Malagasy@Sante (N 116 - Fevrier 2017)” covers the national technical working group meeting of the Madagascar component of the project in February 2017 (only softcopy of the article is available).

The local newspaper had an interview with Mr. Tata Venance, the head of the “Service Environnement SSENV”, MoH, who is also the chair of the national technical working group of the project. He talks about the autoclaves to be procured for the hospitals in Antananarivo (only soft copy of the article is available). Below links include excerpts from the interview covered in different local news sites.

<http://www.tresorpublic.mg/?revue-de-presse=operation-autoclaves-dans-4-hopitaux-dantananarivo>

<http://www.newsmada.com/2017/06/14/dechets-medicaux-autoclaves-pour-quatre-hopitaux/>

In Tanzania, the national inception workshop organized in September 2016 was covered by some local media blogs in national language, Swahili:

<https://issamichuzi.blogspot.com/2016/09/wizara-ya-afya-na-undp-kuja-na-mradi-wa.html>

[http://www.bayanablogspotcom.blogspot.com/2016/09/wizara-ya-afya-na-undp-kuja-na-mradi-wa.html](http://www.bayanablogspot.com.blogspot.com/2016/09/wizara-ya-afya-na-undp-kuja-na-mradi-wa.html)

J. Partnerships

Give the name of the partner(s), and describe the partnership, recent notable activities and any innovative aspects of the work. Please do not use any acronyms. (limit = 2000 characters).

This information is used to get a better understanding of the work GEF-funded projects are doing with key partners, including the GEF Small Grants Programme, indigenous peoples, the private sector, and other partners. Please list the full names of the partners (no acronyms please) and summarize what they are doing to help the project achieve its objectives. The data may be used for reporting to GEF Secretariat, the UNDP-GEF Annual Performance Report, UNDP Corporate Communications, posted on the UNDP-GEF website, and for other internal and external knowledge and learning efforts. The RTA should view and edit/elaborate on the information entered here. All projects must complete this section. Please enter "N/A" in cells that are not applicable to your project.

Civil Society Organisations/NGOs
<p>Health Care Without Harm</p> <p>Healthcare Without Harm (HCWH) is an international coalition of 443 organizations in 52 countries working to transform the healthcare industry so it is no longer a source of harm to people and the environment. HCWH has been partnering with both UNDP and WHO in the past in addressing key issues related to the waste impact of the health sector. UNDP and HCWH work under a results-based micro-grant agreement in the context of this project.</p> <p>HCWH provides coordination and technical support to the project. HCWH provided support for the planning and implementation of the inception workshop for the regional expert team, steering committee and national working groups. HCWH reviewed the training materials for the project teams training in Nakuru, Kenya. HCWH's participation contributed extensively to the training programme providing 37 lecture materials and coordinated the adult learning and development of the participants as trainers in their daily repeat demonstrations of the important content from the workshop.</p> <p>HCWH provided expert guidance on the technical specifications of non-incineration technologies and mercury-free products and reviewed current national/institutional policies in project countries. HCWH supported the project outreach and provided membership for pilot facilities to the Global Green and Healthy Hospitals (GGHH) network, which will enhance exchange opportunities beyond the end of the project. Therefore, GGHH network will foster South-South cooperation and help for project sustainability in participating countries.</p> <p>Another distinctive technical support from HCWH is with the piloting of a bio-digester in Mwananyamala Hospital in Dar es Salaam. This pilot aims for safe disposal of placenta waste and other organic waste streams such as kitchen scraps, waste food, and paper with the additional benefit that will produce biogas which can be used for cooking. The activities are ongoing and first results will be expected in the next reporting period.</p> <p>--</p> <p>Ecological Restorations (Ghana)</p> <p>Ecological Restorations (ER) is a registered Ghanaian non-governmental organization, focused on</p>

providing outreach and awareness raising in a wide range of areas in environmental management. ER is involved in the mobilization and education of various key players, particularly rural communities in the management, development and restoration of ecological systems.

Ecological Restorations is also a member of the World Alliance for Mercury-Free Dentistry and have carried out a series of awareness raising on the Minamata Convention on Mercury with special emphasis on the reduction in mercury flows from dental amalgam waste in Ghana.

In the implementation of HCWM project in Ghana, ER has been part of the project from its inception stage and was part of the Local Project Appraisal Committee that approved the project document. Since implementation began in 2016, ER has supported the project in the review of the Ministry of Health Policy and Guidelines on Healthcare Waste Management in Ghana. In the next years of this project, ER is expected to provide further technical support mainly with facility level trainings and awareness raising on mercury reduction in the model health facilities.

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FAA or Fonds d'Appui pour l'Assainissement (Madagascar)

FAA or Fonds d'Appui pour l'Assainissement in Madagascar, whose executing agency is Medical Care Development International (MCDI), has begun to provide support to the WASH sector in 2010. Its main objective is to eliminate open defecation and improve sanitation in communities. The FAA works in all 22 regions of the country through 27 Implementing Partners, and it is also part of the broader Diorano WASH coalition. FAA is now in its expansion phase of four-year (2017-2020) that is focusing on scaling up to new geographical areas and sustaining results, as well as fostering an enabling environment for WASH actors through enhanced learning, coordination and resource mobilization.

FAA expressed its willingness to partner with UNDP-GEF project on HCWM during the development of the project document in 2014 as a co-financing partner. Recently, the director of the programme, Dr Rija Lalanirina FANOMEZA has confirmed the interest of FAA to collaborate with the project in Madagascar. They will specifically provide technical expertise in WASH sector within the basic health centers models in Manjakandriana since they had activities with the community served by these centers. Above all, FAA agreed to be an active member of the next monitoring and evaluation committee of the project where they will provide key technical support on WASH activities of the project.

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Voahary Salama (Madagascar)

Voahary Salama was established in 2000 and serves as an exchange platform for the stakeholders working within the framework of integrated approach of health, population and environment. Voahary Salama is a consortium of organizations composed of Catholic Relief Services, CARE and CARITAS National. Voahary Salama is a member of Diorano-WASH in Madagascar.

Voahary Salama has been a co-financing partner of the UNDP-GEF project on HCWM since the development of the project documentation in 2014 and is still interested to collaborate closely with the project. Voahary Salama also agreed to be an active member of the next monitoring and evaluation committee of the project. Voahary Salama through its work in multidisciplinary sectors, population, health and the environment will provide key technical advices and recommendations to move toward the objectives of the project.

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AGENDA (Tanzania)

In Tanzania, the project is collaborating with AGENDA in strengthening the public's role in promoting sustainable development and clean environment by improving the efficiency of resource use, reducing risks and hazards associated with chemicals, minimizing waste, and safeguarding environmental quality. The project is specifically engaging the NGO in activities aiming at advocating for mercury elimination.

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Tanzania Water and Sanitation Network (Tanzania)

The Tanzania Water and Sanitation Network (TAWASA NET) provides technical support and help project to collaborate with existing WASH programmes in Tanzania.

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Cleaner Production (Tanzania)

The project is engaging Cleaner Production in strengthening WASH in health facilities, specifically in the area of water management and water pollution.

Indigenous Peoples

The project does not involve any indigenous people at this stage.

Private Sector

Zoopak Medical Waste Treatment Facility (Ghana)

This facility is a subsidiary of Zoopak and Zoomlion Ghana Limited piloting non-incineration treatment of health care waste management in Ghana. Zoopak is partnering with the project to provide non-incineration health care waste treatment services to health care facilities within the Greater Accra region which are not part of the model facilities. The Zoopak facility provides training regarding waste segregation and the appropriate logistics needed in accordance with the World Health Organization's (WHO) regulations and treatment services to health care facilities which have subscribed to their services for a fee. As most of the beneficiaries are private facilities, the Ghana project component is supporting Zoopak to get some public hospitals to subscribe to their services.

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Tindwa Medical and Health Services (Tanzania)

Tindwa Medical and Health Services (TMHS) is an experienced company in occupational health and safety as well as emergency medical services in Tanzania. The project is partnering with TMHS to pilot the possibility of PPP models for the treatment of healthcare waste.

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Waste Master (Z) Limited (Zambia),

Waste Master is private sector entity, assures collection services for infectious healthcare waste in Lusaka. The project is partnering with Waste Master for the recycling of disinfected plastic healthcare waste.

GEF Small Grants Programme

The project has no partnership with GEF Small Grants Programme at this stage but will consider introducing GEF SGP into local NGOs as part of project's implementation in future years and its exit strategy.

Other Partners**Muhimbili University of Health and Allied Sciences (Tanzania)**

Muhimbili University of Health and Allied Sciences (MUHAS), Dar es Salaam, Tanzania, is a public university which provides technical guidance to the project in the review of national policy, standards, regulation of HCWM training materials.

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World Health Organization (WHO)

WHO has been a key partner of UNDP on all its activities related to improving health care waste management, including the participation in previous medical waste projects. WHO is a responsible party under this project through the modality of a UN-to-UN transfer agreement.

WHO provides project coordination and technical support. A WHO focal point has been appointed for the project in each WHO country office who is to participate in national working group meetings and teleconferences to help coordinate country project activities and facilitate national dialogue on strengthening health care waste management. Focal points receive the monthly progress reports of the national components of the project. At WHO HQ, project coordination is managed through monthly telephone conferences with the partner organizations (UNDP, and HCWH). WHO also attends the regional project meetings and provides technical input and guidance to map out project activities and milestones.

WHO is taking the lead in the development of national HCWM policies and guidelines. These policies

and guidelines provide an outline of how each country will meet national targets set through the Minamata and Stockholm Conventions on POPs (in accordance with existing national commitments related to these Conventions). WHO attended national working group meetings in Tanzania (March 2017), Ghana (March 2017) and Zambia (May 2017) to support the development of their respective National Policies and Guidelines on HCWM. Key developments on the review of the policy framework in project countries are summarized below.

WHO has written a summary version of WHO's 2014 "Safe management of wastes from health-care activities" (2014), also known as the "Blue Book", which is currently being edited and published using project funds. It will be available for dissemination in the second half of 2017. This document provides a brief overview and introduction to safe healthcare waste management for policy-makers, practitioners and health care facility managers.

In addition, WHO contributed to the development of the catalogue of healthcare waste-related equipment which is being used to facilitate the procurement process for the selection of equipment for each of the project countries. The document contains detailed technical specifications of each item to ensure appropriate equipment is selected.

WHO reviewed and provided inputs to the training materials for the regional project teams training in Nakuru, Kenya. A member of WHO travelled to Kenya to train participants on broader issues related to WASH in health care facilities, including an introduction to WHO/UNICEF's Water and Sanitation for Health Facility Improvement Tool (WASH FIT), which the project considers a distinctive element to be implemented with HCWM practices. Madagascar has been selected as the first project country to implement the tool and six pilot healthcare facilities were selected. The best practices and lessons learnt will be useful to expand the use of WASH FIT in other project countries.

WHO has participated in a number of international conferences and learning events since the start of the project to promote and advocate principles of environmentally sound HCWM to a range of partners and share experiences and learning from this project.

K. Grievances

Environmental or Social Grievance

This section must be completed by the UNDP Country Office if a grievance related to the environmental or social impacts of this project was addressed this reporting period. It is very important that the questions are answered fully and in detail. If no environmental or social grievance was addressed this reporting period then please do not answer the following questions. If more than one grievance was addressed, please answer the following questions for the most significant grievance only and explain the other grievance(s) in the comment box below. The RTA should review and edit/elaborate on the information entered here. RTAs are not expected to answer these questions separately.

What environmental or social issue was the grievance related to?
How would you rate the significance of the grievance?
Please describe the on-going or resolved grievance noting who was involved, what action was taken to resolve the grievance, how much time it took, and what you learned from managing the grievance process (maximum 500 words). If more than one grievance was addressed this reporting period, please explain the other grievance (s) here.
No grievance to report.

L. Annex - Ratings Definitions

Development Objective Progress Ratings Definitions

(HS) Highly Satisfactory: Project is on track to exceed its end-of-project targets, and is likely to achieve transformational change by project closure. The project can be presented as 'outstanding practice'.

(S) Satisfactory: Project is on track to fully achieve its end-of-project targets by project closure. The project can be presented as 'good practice'.

(MS) Moderately Satisfactory: Project is on track to achieve its end-of-project targets by project closure with minor shortcomings only.

(MU) Moderately Unsatisfactory: Project is off track and is expected to partially achieve its end-of-project targets by project closure with significant shortcomings. Project results might be fully achieved by project closure if adaptive management is undertaken immediately.

(U) Unsatisfactory: Project is off track and is not expected to achieve its end-of-project targets by project closure. Project results might be partially achieved by project closure if major adaptive management is undertaken immediately.

(HU) Highly Unsatisfactory: Project is off track and is not expected to achieve its end-of-project targets without major restructuring.

Implementation Progress Ratings Definitions

(HS) Highly Satisfactory: Implementation is exceeding expectations. Cumulative financial delivery, timing of key implementation milestones, and risk management are fully on track. The project is managed extremely efficiently and effectively. The implementation of the project can be presented as 'outstanding practice'.

(S) Satisfactory: Implementation is proceeding as planned. Cumulative financial delivery, timing of key implementation milestones, and risk management are on track. The project is managed efficiently and effectively. The implementation of the project can be presented as 'good practice'.

(MS) Moderately Satisfactory: Implementation is proceeding as planned with minor deviations. Cumulative financial delivery and management of risks are mostly on track, with minor delays. The project is managed well.

(MU) Moderately Unsatisfactory: Implementation is not proceeding as planned and faces significant implementation issues. Implementation progress could be improved if adaptive management is undertaken immediately. Cumulative financial delivery, timing of key implementation milestones, and/or management of critical risks are significantly off track. The project is not fully or well supported.

(U) Unsatisfactory: Implementation is not proceeding as planned and faces major implementation issues and restructuring may be necessary. Cumulative financial delivery, timing of key implementation milestones, and/or management of critical risks are off track with major issues and/or concerns. The project is not fully or well supported.

(HU) Highly Unsatisfactory: Implementation is seriously under performing and major restructuring is required. Cumulative financial delivery, timing of key implementation milestones (e.g. start of activities), and management of critical risks are severely off track with severe issues and/or concerns. The project is not effectively or efficiently supported.