

Terminal Evaluation Review form, GEF Independent Evaluation Office, APR 2018

1. Project Data

Summary project data			
GEF project ID		2927	
GEF Agency project ID		GF/CPR/07/008 - 104036	
GEF Replenishment Phase		GEF-4	
Lead GEF Agency (include all for joint projects)		UNIDO	
Project name		Environmentally Sustainable Management of Medical Waste in China	
Country/Countries		China	
Region		Asia and the Pacific	
Focal area		Persistent Organic Pollutants (POPs)	
Operational Program or Strategic Priorities/Objectives		Reducing and eliminating production, use and release of POPs	
Executing agencies involved		Ministry of Environmental Protection (MEP) (formerly, State Environmental Protection Administration (SEPA))/Foreign Economic Cooperation Office (FECO)	
NGOs/CBOs involvement		National Institute of Hospital Administration (NIHA) Academic and Research Institutions: <ul style="list-style-type: none"> - Shenyang Academy of Environmental Sciences (SAES) - Chinese Academy for Environmental Planning (CAEP) - Institute of High Energy Physics of Chinese Academy of Sciences - Beijing Normal University - Tianjin Research Institute of Environmental Science - Zhejiang University - School of Chemical Engineering of Tianjin University - Research Institute of Standards and Norms - China CDC - State Hazardous Waste Engineering Center (Tianjin) - The Chinese Association of Environmental Protection Technologies 	
Private sector involvement		Project beneficiaries: hospitals, medical waste management facilities, medical waste equipment manufacturers; project preparers and implementors: private sector international and national consultants; private project co-financers.	
CEO Endorsement (FSP) / Approval date (MSP)		October 31, 2007	
Effectiveness date / project start		November 20, 2007	
Expected date of project completion (at start)		December 2012	
Actual date of project completion		June 30, 2017	
Project Financing			
		At Endorsement (USD)	At Completion (USD)
Project Preparation Grant	GEF funding	350,000	350,000
	Co-financing	313,400	313,400
GEF Project Grant		11,650,000	11,644,582
Co-financing	IA own	100,000	100,000
	Government	23,300,000	33,304,499
	Other multi- /bi-laterals	200,000	200,000
	Private sector	9,557,140	18,294,300
	NGOs/CSOs	0	0

Total GEF funding	12,000,000	11,994,582
Total Co-financing	33,157,140	52,212,199
Total project funding (GEF grant(s) + co-financing)	45,157,140	64,206,781
Terminal evaluation/review information		
TE completion date	April 2018	
Author of TE	Carlo Lupi, Zhu Jiangxin	
TER completion date	10/22/2018	
TER prepared by	Yuliya Gosnell	
TER peer review by (if GEF IEO review)	Molly Sohn	

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF IEO Review
Project Outcomes	S	S	NR	MS
Sustainability of Outcomes	ML	S	NR	ML
M&E Design	NR	HS	NR	S
M&E Implementation	NR	S	NR	S
Quality of Implementation	S	S	NR	S
Quality of Execution	S	S	NR	S
Quality of the Terminal Evaluation Report	NR	MS ¹	NR	MS

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The global environmental objective of the project is minimization of the generation and emissions of unintentionally produced POPs (mainly PCDDs/PCDFs) and other harmful pollutants released by the medical waste treatment sector in China in an effort to fulfill obligations under the Stockholm Convention.

The main objective is subdivided into eight components:

1. Establishment of the regulatory framework for medical waste management and setting of performance levels for medical waste disposal facilities.
2. Strengthening of institutional capacity for integrated medical waste management at local and regional levels.
3. Adoption of Best Environmental Practices (BEP) in medical waste management at medical care institutions.
4. Demonstration of Best Available Techniques (BAT) using thermal combustion for incineration and pyrolysis processes at medical waste disposal facilities.

¹ Alamo, Silvia, *Checklist on evaluation report quality*, average score of five points.

5. Application of BAT/BEP for thermal non-combustion processes (autoclaving) in urban and particularly, rural areas.
6. Establishment of a coordinated medical waste management and disposal system at local and regional levels.
7. Development of a strategy action plan to promote commercial models for the medical waste management, and to raise awareness of stakeholders.
8. Establishment of continuous monitoring and evaluation procedures and budget for the medical waste management cycle.

3.2 Development Objectives of the project:

Reduction of the risk of spreading of communicable diseases and environmental pollution caused by medical waste disposal, while simultaneously creating a market for medical waste disposal.

3.3 Were there any **changes** in the Global Environmental Objectives, Development Objectives, or other activities during implementation?

No major changes to the objectives, except added focus on occupational health and safety of medical personnel, as suggested by Switzerland council in a response to the project reviews. Additionally, the duration of the implementation phase of the project was nearly five years longer than originally planned.

4. GEF IEO assessment of Outcomes and Sustainability

Please refer to the GEF Terminal Evaluation Review Guidelines for detail on the criteria for ratings.

Relevance can receive either a Satisfactory or Unsatisfactory rating. For Effectiveness and Cost efficiency, a six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess. Sustainability ratings are assessed on a four-point scale: Likely=no or negligible risk; Moderately Likely=low risk; Moderately Unlikely=substantial risks; Unlikely=high risk. In assessing a Sustainability rating please note if, and to what degree, sustainability of project outcomes is threatened by financial, sociopolitical, institutional/governance, or environmental factors.

Please justify ratings in the space below each box.

4.1 Relevance	Rating: Satisfactory
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After the outbreak of the Severe Acute Respiratory Syndrome (SARS) in 2003, the government of China took measures to control future potential spread of infections through improved management of contaminated medical waste. In 2004, the National Development and Reform Commission (NDRC) and State Environmental Protection Agency (SEPA) initiated the National Plan for the Construction of Facilities for Disposal of Hazardous and Medical Waste, a nationwide investment program intending to build 332 disposal facilities. In the same year, China ratified the Stockholm Convention, which identified medical waste disposal as the major source of PCDDs/PCDFs release. According to article 5 of the Convention, China became obligated to promote the usage of BAT/BEP for its existing incinerators and

required to use BAT/BET in all facilities constructed in 2005 and beyond. In this context, the project aiming to identify and implement BAT/BET at rapidly constructed or modified facilities and to develop a national system for effective WM, while utilizing domestic resources invested at a ratio of 3:1 to the GEF grant amount, is relevant. The approach undertaken – a large scale reorganization of the medical waste management system with introduction of the BAT/BEP to accomplish internationally accepted results, while developing solutions suitable for the socio-economic and environmental situation of the country – also fits the context well.

4.2 Effectiveness	Rating: Satisfactory
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According to the project design, for each of the eight components of the objective stated in Section 3.1, one or more outcomes were to be achieved. The Terminal Evaluation Report lists 21 outcomes, and rates effectiveness of 20 of them. The overall satisfactory effectiveness rating is an average rating of 20 rated outcomes.

Out of 20 outcomes, six were rated as highly satisfactory:

- demonstrate BAT at an incineration medical waste disposal facility;
- demonstrate BAT at pyrolysis disposal facilities;
- demonstrate BAT at an autoclaving facility;
- develop a medical waste equipment certification and accreditation system;
- establish training and accreditation system for the BAT/BET supporting lifecycle management;
- strengthen national capacity to develop new treatment technologies appropriate for the country's socio-economic situation.

The authors of the Terminal Evaluation Report assigned the highly satisfactory ratings to outcomes when targets were exceeded. In the cases of demonstration of BAT standards, waste disposal facilities exceeded expectations by utilizing additional equipment and/or providing services not anticipated by the project implementors (while meeting strict emissions targets). While it is reasonable to support the ratings on these three first outcomes, and on the last sixth outcome (where national capacity to develop technologies was not only strengthened, but new technologies were actually developed), the ratings on outcomes four and five (development of an equipment certification system, and a training and accreditation system) should be satisfactory. The certification system developed in the course of the implementation of the project is not utilized by equipment manufacturers because it adds additional cost to the final manufactured goods, and thus, the system (it is still created, hence, satisfactory rating) has no value at the moment (and therefore, it could not have exceeded expectations). The training and accreditation system, and the workshops and training it assumed, were developed as expected with the number of training bases equal to the number of bases planned. Thus, the rating is satisfactory.

13 project outcomes were rated as satisfactory (the project has successfully accomplished its targets for all the outcomes listed below):

- strengthen of the regulatory system;
- upgrade or establish allowable pollution levels;
- establish a long-term national medical waste management coordination mechanism;
- strengthen supervision and inspection of medical care facilities;
- strengthen environmental impact assessment;
- strengthen national capacity to audit operations of medical waste management facilities;
- establish BEP in medical care institutions;
- demonstrate BAT in non-incineration processes;
- demonstrate application of integrated medical waste management at municipal level;
- demonstrate application of integrated medical waste management among dedicated medical waste facilities;
- formulate socio-economic policies that promote adoption of BAT/BET;
- promote commercial models of medical waste management;
- raise stakeholder awareness on medical waste management issues through a series of workshops.

All satisfactory ratings can be supported as the project reached its targets in all the 13 listed above outcomes.

Only one outcome was understandably rated as moderately satisfactory:

- demonstrate BAT/BET for treatment and disposal of medical waste in remote rural areas.

The reasoning behind the moderately satisfactory rating for this outcome per the authors of the Terminal Evaluation Report is as follows:

In 2003, rural medical facilities producing less than 1 ton of medical waste per day lost their ability to have an incineration facility on-site. The regulation attempted to decrease emissions generated by difficult to reach and supervise sites. In place of incineration facilities, the national government attempted creating long-term storage medical waste facilities, from which regional facilities would pick up waste on a regular basis. Authorities were not, however, able to secure a storage site in pilot location and built an autoclaving facility in a pilot site instead.

4.3 Efficiency	Rating: Moderately Satisfactory
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The project preparation phase was completed on budget and on time. The implementation phase, however, lasted about twice longer than the originally intended time frame of five years, and the project

exceeded its budget by almost US \$20 million (1/3 of the total actual costs), supplied by co-financing institutions, both the national government and private co-financers.

The reasons for the delays and costs overruns, as stated by the authors of the Terminal Evaluations Review, were procurement issues, relocation of contracted facilities, local population rejecting planned disposal facilities in their communities, land unavailability (in a case of a proposed waste storage facility in a rural area), opposition from the industry to the imposed 0.1 ngTeq/Nm³ emissions limit, and the complexity of the procedure for the development and approval of a medical waste catalogue (one of the project's expected outcomes).

Delays and additional expenditures were necessary for successful completion of the project, and the commitment of the national government to the development of a reliable medical waste management system, which could address potential outbreaks of infection), and to compliance with international emissions limits ensured the necessary inflow of co-financing. For the above reasons, the project receives the moderately satisfactory rating for its efficiency.

4.4 Sustainability	Rating: Moderately Likely
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The outcomes of the project achieved during the implementations stage are moderately likely to remain sustainable in the future, and the risk of accomplishments not being sustained is low.

The reasons for the project to be likely be sustained in the foreseeable future are as follows:

- Endorsement and resolution of the national government to meet the Stockholm Convention requirements to reduce POP emissions and to prevent potential future outbreaks of infection created the momentum in cooperation among national authorities in the development of a national medical waste management system, which will remain in place and continue operating and monitoring facilities after the project's completion.
- Facilities selected for upgrading with BAT/BEP for demonstration purposes received the technologies, appropriate personnel training, and supervisory mechanisms to operate at the levels of allowable emissions they have demonstrated.
- Awareness of harmful medical waste pollution has been raised among major stakeholders and general population, who are likely to insist on future emissions compliance.
- Appropriate medical waste management processes have been successfully replicated at 15 incineration and 140 non-incineration plants, and 1500 medical facilities, and the replication model has the potential to be adopted throughout the country.
- Educational and research institutions became involved in technical research for the project, have developed new technologies suitable for the country, and grew the expertise of current staff to develop new technologies as the need for them arises.

Below is a list factors, which have the potential to negatively affect the sustainability of the project results. While the risk of these events taking place exists, given the commitment of the government to complete the project – providing additional co-financing and resolving causes of the project delays – it is unlikely that the events describe below are going to occur. And if they do, reversion to the 0.5 ngTeq/Nm³ emissions level will have greater consequences; it would mean that the country would not comply with the requirements of the Stockholm convention, and the pollution generated within the country will have global effects. Not passing the medical waste catalogue would affect the project outcomes in a different way: it would decrease the efficiency of the entire system, safety of personnel, and will, again, influence pollution levels as some materials would be disposed of incorrectly.

- The majority of medical waste disposal facilities in the country continue operating at the currently accepted 0.5 ngTeq/Nm³ emissions level, which is higher than the 0.1 ngTeq/Nm³ required by the Stockholm Convention and adopted by demonstration facilities. The national government has not yet approved the regulation supporting the lower emissions level, as the stricter limit will incur compliance costs. In the even the regulation does not become effective, the demonstration facilities currently exhibiting the lower emissions level may relax their standards.
- Similarly, the national government has not yet approved a new catalogue of medical waste, which classifies medical waste on the basis of it hazardous characteristics and material composition. The new classifications, already in use by demonstration and replication facilities, aims to improve medical waste segregation for disposal. Non-approval of the catalogue may force medical and medical waste disposal facilities revert to the old less precise and at times misleading classification.

5. Processes and factors affecting attainment of project outcomes

5.1 Co-financing. To what extent was the reported co-financing essential to the achievement of GEF objectives? If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for it? Did the extent of materialization of co-financing affect project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

Co-financing played an important role in achieving the objectives of this project. At the project preparation stage, co-financing amounted to approximately one half of total preparation costs, with US\$350,000 provided by GEF, and \$313,400 through co-financing. At the implementation stage, the amount of co-financing from the national government and the national private sector at endorsement totaled slightly over US\$33 million, or about three quarters of expected costs. The actual costs exceeded the budget by additional US\$20 million, and as the national government was strongly committed to completing the project, it provided the provided the necessary co-financing (and it encouraged the private sector to do the same). No additional GEF funds were used. Given the government's interest in the project and the amount of funds it has already invested into it, the outcomes of the project are likely

to remain sustainable (with low risk of factors adversely influencing some of the outcomes described in Section 4.4).

5.2 Project extensions and/or delays. If there were delays in project implementation and completion, then what were the reasons for it? Did the delay affect the project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

Project delays, as described in Section 4.3, were an attempt to resolve procurement issues, overcome government process hurdles, and work with population resisting the construction of medical waste disposal facilities. Thus, the delays, not anticipated at the start, were necessary to complete the project, and the fact that the government persevered through the project implementation phase lasting an additional five years, indicates that the outcomes of the project are likely to be sustained.

5.3 Country ownership. Assess the extent to which country ownership has affected project outcomes and sustainability? Describe the ways in which it affected outcomes and sustainability, highlighting the causal links:

Strong country ownership. The project originated as an initiative of the national government through its National Plan for the Construction of Medical Waste Disposal Facilities, and subsequent commitment to meet the Stockholm Convention requirements to meet medical waste disposal emissions standards. The national government then applied for GEF grant funding, and in the project preparation stage, formed the steering group comprising of government agencies, coordination among which resulted in cooperation among environmental and health departments, health care centers and disposal facilities on local, municipal, and national levels (TE p.18). The stake the government took in the project – through developing and announcing its own investment plan, accepting the Stockholm Convention requirements, and securing GEF interest and funding, was high enough for the government to complete its obligations and deliver results on expected outcomes of the project.

UNIDO as an implementing agency worked together with the national government. Its role was to contract a number of international consultants to prepare the project, coordinate it, provide technical knowledge in specialized fields, evaluate the progress of the project (TE p. 20). The role of the consultant was instrumental in facilitating project coordination, resolving international procurement hurdles, and developing technical guidelines. The project, however, could not have succeeded without the willingness of the national government to complete it, and the ownership it took over the delivering the results.

6. Assessment of project's Monitoring and Evaluation system

Ratings are assessed on a six point scale: Highly Satisfactory=no shortcomings in this M&E component; Satisfactory=minor shortcomings in this M&E component; Moderately

Satisfactory=moderate shortcomings in this M&E component; Moderately Unsatisfactory=significant shortcomings in this M&E component; Unsatisfactory=major shortcomings in this M&E component; Highly Unsatisfactory=there were no project M&E systems.

Please justify ratings in the space below each box.

6.1 M&E Design at entry	Rating: Satisfactory
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The authors of the Terminal Evaluation Report rated M&E design as highly satisfactory as it followed the standard GEF and UNIDO procedures and properly assigned all monitoring responsibilities, and preparation of reports, reviews, and evaluations (TE p.55). The authors, however, also concluded that the evaluation approach was highly complex with 130 indicators to monitor results on the eight components of the objectives the project aimed to accomplish (TE p.6). For many of the indicators, no baseline value was or could be determined, and future data collection or assessment was problematic. For this reason, the M&E design at entry can be rated as satisfactory, rather than highly satisfactory.

6.2 M&E Implementation	Rating: Satisfactory
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Authors of the Terminal Evaluation Report state they have received all expected evaluation documents from UNIDO, which were prepared later than expected, understandably, since the project was delayed. The majority of the M&E activities were carried out by consultants recruited by UNIDO as planned. While conducting M&E during implementation, the consultants discovered that few indicators had assessed baseline values, which made it difficult to evaluate progress. Furthermore, data was not always collected during the implementation process, often for confidentiality reasons. Thus, accurate assessment of reduction in emissions, the main outcome of the project, was not entirely possible (the main demonstration plants did present emissions data, however). At medical care facilities, the system of classification of medical waste was not fully developed by the end of the implementation period, and an older version of the system was used at smaller remote facilities, therefore, assessing the change accurately, was also challenging (TE p.21-22).

7. Assessment of project implementation and execution

Quality of Implementation includes the quality of project design, as well as the quality of supervision and assistance provided by implementing agency(s) to execution agencies throughout project implementation. Quality of Execution covers the effectiveness of the executing agency(s) in performing its roles and responsibilities. In both instances, the focus is upon factors that are largely within the control of the respective implementing and executing agency(s). A six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess.

Please justify ratings in the space below each box.

7.1 Quality of Project Implementation	Rating: Satisfactory
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The Terminal Evaluation rates UNIDO implementation as satisfactory (TE p.55). The report states that the major role of UNIDO was the recruitment of consultants and technical experts (TE p.20), who provided the necessary assistance and expertise to national agencies, and conducted M&E, prepared reports and resolved hurdles. These activities were conducted smoothly, except in the case when UNIDO was not able to recruit an International Chief Technical Advisor as envisioned in the M&E, but the role was assumed by a recruited earlier expert (TE p.20).

7.2 Quality of Project Execution	Rating: Satisfactory
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The TE rates project execution as satisfactory (TE p.55). The report states that UNIDO delivered all required monitoring documents such as “The Project Implementation Review reports (year 2014, 2015 and 2016), The meeting minutes of the Inception Workshop, The Final Report of the 5th Tripartite Meeting without annex, The Mid Term Evaluation Report, some of the annual workplans and the annual progress report” as expected, but with a few documents missing (TE p.21). The report does not list either execution issues or outstanding accomplishments of the implementing agency explicitly, but it places a high emphasis on the importance of the national agencies in the execution of the project, which appears as outweighing the contribution of UNIDO.

8. Assessment of Project Impacts

Note - In instances where information on any impact related topic is not provided in the terminal evaluations, the reviewer should indicate in the relevant sections below that this is indeed the case and identify the information gaps. When providing information on topics related to impact, please cite the page number of the terminal evaluation from where the information is sourced.

8.1 Environmental Change. Describe the changes in environmental stress and environmental status that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

The project reduced emissions of PCDD/PCDF at six demonstration facilities by 2.17 gTEQ/year against the target of 2.59 gTEQ/year. Thus, the actual reduction of emissions amount to approximately 84% of the target. However, the baseline level of emissions was set at 0.5 ngTeq/Nm³ – the officially allowable emissions level in the country. This level may have not been necessarily correct, and the actual level may have been higher, which means that the reduction of emissions achieved as a result of the implementation of the project may have been higher (PE p.26).

In the later stages of the project, when 15 incineration and 140 non-incineration facilities replicated BAT/BEP in place at the demonstration facilities, the total level of emissions was reduced by additional 13.19 qTeq/year at incineration facilities and 31.34 gTeq/year at non-incineration facilities. Therefore, overall, the project reduced emissions by 46.7 gTeq/year against the target of 52.41 gTeq/year, or by 90% of the target reduction (this result, again, is likely to be underestimated) (TE p.27).

8.2 Socioeconomic change. Describe any changes in human well-being (income, education, health, community relationships, etc.) that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

Education and Awareness: During the project, approximately 50,000 people were trained in medical waste management, both technical and regulatory aspects of it (TE p.x). The training was conducted for employees of disposal facility and healthcare staff. Furthermore, significant awareness of the medical waste disposal issue was raised among key stakeholders and in communities.

Health: “The risk of adverse health effects from POPs is decreased for those local communities living in close proximity to POPs wastes that have been disposed of or contaminated” (TE p.12-13).

8.3 Capacity and governance changes. Describe notable changes in capacities and governance that can lead to large-scale action (both mass and legislative) bringing about positive environmental change. “Capacities” include awareness, knowledge, skills, infrastructure, and environmental monitoring systems, among others. “Governance” refers to decision-making processes, structures and systems, including access to and use of information, and thus would include laws, administrative bodies, trust-building and conflict resolution processes, information-sharing systems, etc. Indicate how project activities contributed to/ hindered these changes, as well as how contextual factors have influenced these changes.

a) Capacities

The project “strengthened the regulatory framework for medical waste management and upgraded/established pollution performance levels for dedicated medical waste disposal facilities”. “Capacity for integrated waste management...” was increased “...at national and local levels...” in an effort to make the medical waste disposal process more efficient (PE p.12).

In addition, the project affected the research capacity of the country’s educational institutions – they developed and/or began applying the necessary skills to development of new technologies appropriate for the national socio-economic status (PE p.48).

b) Governance

The project developed a real time data monitoring system, which allowed tracking the composition weight and movements of waste from the point of generation in medical care facilities to the point of its disposal, where data could be verified to ensure waste had not leaked. Such system allowed transparent monitoring of waste management by government authorities (PE p.41).

8.4 Unintended impacts. Describe any impacts not targeted by the project, whether positive or negative, affecting either ecological or social aspects. Indicate the factors that contributed to these unintended impacts occurring.

The Terminal Evaluation report does not describe unintended impacts, either positive or negative.

8.5 Adoption of GEF initiatives at scale. Identify any initiatives (e.g. technologies, approaches, financing instruments, implementing bodies, legal frameworks, information systems) that have been mainstreamed, replicated and/or scaled up by government and other stakeholders by project end. Include the extent to which this broader adoption has taken place, e.g. if plans and resources have been established but no actual adoption has taken place, or if market change and large-scale environmental benefits have begun to occur. Indicate how project activities and other contextual factors contributed to these taking place. If broader adoption has not taken place as expected, indicate which factors (both project-related and contextual) have hindered this from happening.

15 incineration and 140 non-incineration medical waste disposal facilities, and 1500 medical care facilities replicated have replicated the BAT/BET, and associated with them emissions reductions results of the original project demonstration facilities. The national government expects all facilities across the country to adopt the BAT/BET across once the legislation supporting the internationally accepted 0.5 ngTeq/Nm³ emissions level, and the new catalogue on medical waste management classification is passed.

9. Lessons and recommendations

9.1 Briefly describe the key lessons, good practices, or approaches mentioned in the terminal evaluation report that could have application for other GEF projects.

The project has demonstrated effective implementation of BAT/BEP at incineration and non-incineration medical waste disposal facilities, and health care institutions, and consequent reduction of PCDD/PCDF emissions. While implementation of BAT/BET at demonstration facilities involved a significant investment and assistance from the project implementors, achieving the same emissions targets required only small incentives (PE p.55).

In addition, the project implementors have developed an integrated system of medical waste management at local, municipal, and national levels, which can process waste in the most efficient way – different types of waste at different facilities, while some of the facilities became able to accept overflow waste in the event of an outbreak of an infection. The system has the potential to become transparent with data on waste tracked online in real time by relevant government authorities, cooperating in support of a regulatory waste management system.

Furthermore, the project addressed the sustainability of the newly developed system through developing the research capacity of educational institutions in their efforts to develop new technologies, trained personnel of health care and disposal facilities, and established a certification system for locally manufactured equipment. Thus, this suggests that the waste management system in China may have gained the ability not only to sustain the already gained results, but to develop itself in the future.

The precise project results, however, were difficult to measure (where quantitative data was to be collected) as no baseline values were established. During the implementation phase of the project data was difficult to collect for confidentiality reasons, and out of fear that facilities would be penalized for not complying with previously established emissions limits.

9.2 Briefly describe the recommendations given in the terminal evaluation.

“Recommendation 1: UNIDO in cooperation with the Government of China, should consider to use the capacity and infrastructure developed under this project on Environmentally Sound Management of healthcare waste as a demonstration and resource for the training and assistance to similar initiatives in other developing countries.” (TE, p. 56)

“Recommendation 2: For future projects, UNIDO should establish the respective baseline, and allocate the necessary resources for it. A solution for the measurement of such baseline could be through the adoption of standardized WHO / UN method for the measurement of HCW in hospitals already at PPG stage (for instance the Individualized Rapid Assessment Tool developed and adopted by UNDP for the measurement of HCW management in various stage of project implementation.” (TE p.57)

Lessons should be based on the project's actual experience. Action may or may not lead to a specific action. They may also come up with a recommendation that is not very useful.

10. Quality of the Terminal Evaluation Report

A six point rating scale is used for each sub-criteria and overall rating of the terminal evaluation report (Highly Satisfactory to Highly Unsatisfactory)

Criteria	GEF IEO comments	Rating
To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	The assessment of relevant outcomes, impacts, and achievements of objectives is both thorough and consistent with the project design, although little information is given on the analysis of the UNIDO performance.	S
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	The report's ratings are not always explained as with M&E project design and implementation, and project implementation and execution.	MS
To what extent does the report properly assess project sustainability and/or project exit strategy?	The TE assesses relevant risk factors to the sustainability of the project in detail and supports the conclusions with facts.	S
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	Lessons learned are presented, but they are incomplete.	MS
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The project includes actual total project costs, as well as costs per activity (component).	S
Assess the quality of the report's evaluation of project M&E systems:	The report's evaluation of project M&E is rather brief and general and could have used more detail.	MS
Overall TE Rating		MS

11. Note any additional sources of information used in the preparation of the terminal evaluation report (excluding PIRs, TEs, and PADs).

No additional sources were used in the preparation of this TER.