Evaluation Office of UN Environment

Terminal Evaluation of the GEF-UN Environment Project "Pilot Project on the Development of Mercury Inventory in China"

GEF Project ID: 4962

Final Report

September 2017

Evaluation Office of UN Environment

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Pilot Project on the Development of Mercury Inventory in China
GEF Project ID 4962
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ABOUT THE EVALUATION[1]

Joint Evaluation: No

Report Language(s): English

Evaluation Type: Terminal Project Evaluations

1. **Brief Description:** This report is a terminal evaluation of a UN Environment-GEF project implemented between 2013 and 2017.The project's overall development goal was to strengthen China's capacity for identification of mercury sources and priority actions to address mercury issues under a future global convention, so that to protect human health and the environment from the toxic exposure of mercury.

The evaluation sought to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UN Environment, the GEF and their executing partner, Foreign Economic Cooperation Office – Ministry of Environmental Protection of China.

Key words: mercury inventory, mercury emissions, chemicals and wastes, mercury reduction, sound chemical management, mercury sources and priority actions; Terminal Evaluation; GEF; GEF Project;

[1] This data is used to aid the internet search of this report on the Evaluation Office of UN Environment Website –

Acronyms and Abbreviations

BNU	Beijing Normal University
CAS	Chinese Academy of Sciences
CNEMC	China National Environment Monitoring Center
DTIE	Division of Technology, Industry and Economics (of UN Environment)
EA	Executing Agency
EPB	Environmental Protection Bureau
FECO	Foreign Economic Cooperation Office
GEF	Global Environment Facility
IHEP/CAS	Institute of High Energy Physics Chinese Academy of Sciences
INC	Intergovernmental Negotiating Committee
M&E	Monitoring and Evaluation
MEP	Ministry of Environmental Protection (China)
MoU	Memorandum of Understanding
MSP	Medium Size Project
NGO	Non-governmental Organization
NPMT	National Project Management Team
PCA	Project Cooperation Agreement
PIR	Project Implementation Review
PSC	Project Steering Committee
PET	Project Expert Team
PVC	Polyvinyl chloride
RCEES	Research Center for Eco-Environment Sciences
SCC	Solid Waste and Chemicals Management Center
SC	Stockholm Convention
Mercury Toolkit	Toolkit for identification and quantification of mercury releases
TOC	Theory of Change
TOR	Terms of Reference
UN	United Nations
USTB	University of Science and Technology Beijing
VCM	Vinyl chloride monomer

Project Identification Table

Project title	Pilot project on the development of a mercury inventory in China		
UNEP PIMS ID:		**IMIS number:**	**4C63**
Sub-programme:	Chemicals and Waste	**Expected Accomplishment(s):**	
UNEP approval date:	28/12/2012	**PoW Output(s):**	
GEF project ID:	4962	**Project Type:**	Medium-sized Project(MSP)
Focal Area(s):	Persistent Organic Pollutants	**GEF Focal Area Strategy:**	CHEM-3: Pilot sound chemicals management and mercury reduction.
GEF approval date:	August 2011	**GEF Strategic Priority/Objective:**	Pilot sound chemicals management and mercury reduction
UNEP approval date	July 2012	**Actual start date:**	January 1, 2013
Planned completion date:	31/09/2014	**Actual completion date:**	May 2017
Planned project budget at approval:	USD 4,146,265	**Total expenditures reported as of 30 June 2017:**	
GEF Allocation:	USD 1,000,000	**GEF grant expenditures reported as of 30 June 2016:**	USD 713,892
Expected MSP co-financing:	USD 3,146,265	**Secured MSP co-financing**	
No. of revisions:	3	**Date of last revision:**	June 2016
Mid-term review/ evaluation date:	None	**Terminal Evaluation date**	April 2017

Executive Summary

A. Introduction

The medium size project "*Pilot project on the development of a mercury inventory in China"* funded by the Global Environment Facility (GEF) was implemented from January 2013 to May 2017 by the United Nations Environment. The project was nationally executed by the Minamata Convention Implementation Division of the Foreign Economic and Cooperation Office (FECO), Ministry of Environmental Protection (MEP) of China.

The objective of the project was to strengthen China's capacity for identification of mercury sources and priority actions to address under the Minamata Convention in a view to protect human health and the environment from the toxic exposure of mercury by phasing out mercury

B. Evaluation findings and conclusions

The evaluation was conducted in-depth that included a review of project documents and a field visit to interview project personnel, intended beneficiaries, project partners, and other stakeholders involved in the project by using a participatory approach. Based on the information available and the findings of the discussions held, the evaluation developed the theory of change of the project's "impact pathways" and conducted the review of outcome to impacts, which led to the following conclusions.

In the terms of reference for this terminal evaluation, it was assumed that evaluation results would be able to provide greater insights to the following four key questions:

(a) *Has the project been successful in facilitating the identification of good practices and replicable elements of prevention and control of mercury pollution that can be reproduced in other provinces in the country?*
Good practices and replicable elements of prevention and control of mercury pollution that can be reproduced in other provinces in the country have been satisfactorily identified and proposed in the sound mercury action plan developed by the project.

(b) *To what extent has the project succeeded in strengthening China's capacity for identification of mercury sources and priority actions to address mercury issues?*
The project has been very successful in strengthening China's capacity for identification of mercury sources and priority actions to address mercury issues. This was possible thanks to the adoption and use of the mercury toolkit by national and provincial stakeholders with technical assistance provided by UN environment.

(c) *What are the main contributing factors that have influenced the project's project implementation and attainment of project results?*
The commitment of the project team, the active participation of key stakeholders and the recruitment of high quality experts were the main factors that contributed to the successful attainment of project results.

(d) *To what extent did the project encourage women's participation in the activities proposed, and ensure that vulnerable / minority groups are well represented in the development of the national action plan?*

Although the project recognizes that pregnant women and children are more susceptible to mercury exposure, the design did not include specifically the participation of women in the project activities.

Relevance: The project is in line with GEF Focal Area Strategy CHEM-3 Pilot sound chemicals management and mercury reduction. It is also relevant to China's program of Comprehensive Heavy Metal (including mercury) Pollution Treatment. China has signed and ratified the Minamata Convention

Efficiency: The project encountered administrative and management issues resulting in significant delays that required more than double the time for project completion. However, quality outputs have been satisfactorily delivered within the planned budget. The management costs were also kept within planned budget.

Effectiveness - Attainment of objectives and likelihood of impact: The project's intended outcomes were satisfactorily delivered on the basis that the planned activities have been successfully completed, the corresponding outputs delivered, and that all the key performance indicators can be tracked. Measures designed to move towards the intermediate states have started, but have not produced results yet. However, according to the mid-long term strategy developed, it was understood that the results would be seen well after the project. Given that follow up projects are currently being implemented, it is likely that the intended impact will occur in the long term.

Sustainability: Chances for sustainability of project results are high. China has already benefitted from international support and follow up projects to implement the Minamata Convention are currently being undertaken, and strong linkages have been established with the project under evaluation.

Catalytic role and replication: The project was designed to strengthen the capacities of national and local stakeholders for the identification of mercury sources and priority actions. It has catalyzed the development of tools adapted for the local context, it has also catalyzed policy changes as well as the mobilization of funding for follow up projects. The project was also designed for replication in other provinces, and the planned activities have been satisfactorily achieved.

Project implementation and management: The implementation approach outlined in the project document was adopted. According to information gathered, there is clear evidence that the project steering committee played its role in influencing project management. It is also clear that the project logical framework was used as basis for implementation and the verifiable indicators therein were used to track progress.

Stakeholders' participation: Key stakeholders (national and local authorities, national associations and research institutions) identified during the preparatory phase were actively involved during project implementation. Although awareness raising activities targeting vulnerable groups were not undertaken, publication of project results and lessons is planned in two major news media: China Environment News and China Daily.

Country ownership and drivenness: National counterparts were directly involved in the project formulation, and assumed full responsibility for its execution by providing necessary support through a committed project team from the Minamata Convention Implementation Division of the Foreign Economic and Cooperation Office of the Ministry of Environmental Protection.

Financial planning and management: The standard procedures of the executing agency was applied. According to information available, the GEF funds were effectively managed and all the outputs were satisfactorily delivered. The variances that occurred were fully justified and the management costs were kept within the planned budget despite the extension (of 30 months) required for project completion.

United Nations Environment supervision and backstopping: Although the task manager changed three times, this did not negatively impacted on the project. They attended all the steering committee meetings, and based on the information gathered from documents available, there are indications that the task managers provided adequate supervision, guidance and backstopping. Guidance and supervision of the task managers were highly appreciated by the national counterparts.

Monitoring and evaluation: The monitoring & evaluation plan proposed in the project document is consistent with UN Environment's' standard procedures. The plan is adequate and allows for monitoring progress and results at output level. Information gathered clearly indicates that the monitoring and evaluation system was operational and facilitated the tracking of results and monitoring of progress.

Summary of Performance Rating

Criterion	Rating
A. Strategic relevance	S
B. Achievement of outputs	S
C. Effectiveness: Attainment of project objectives and results	S
1. Achievement of direct outcomes	S
2. Likelihood of impact	HL
3. Achievement of project goal and planned objectives	S
D. Sustainability and replication	L
1. Financial	L
2. Socio-political	L
3. Institutional framework	L
4. Environmental	L
5. Catalytic role and replication	S
F. Factors affecting project performance	
1. Preparation and readiness	MS

2. Project implementation and management	S
3. Stakeholders participation and public awareness	S
4. Country ownership and driven-ness	S
5. Financial planning and management	S
6. UN Environment supervision and backstopping	S
7. Monitoring and evaluation	S
a. M&E Design	S
b. Budgeting for M&E activities	S
c. M&E Plan Implementation	S
Overall project rating	S

C. Recommendations

Recommendation 1: The reconstruction theory of change (TOC) has identified a number of intermediate states (project recommendations integrated into national policies and mercury action plan adopted, and effective implementation of sound mercury action plan across the country, and key sectors adopting mercury reducing systems), that need to occur for impact of the project, which was to protect human and the environment from the toxic effect of mercury. It is also reported national financial capacity exists to implement the Minamata Convention to a certain degree, but in the long term for its full and smooth implementation, there is need for significant international financial as well as technical support. In 2005, China's annual consumption of mercury accounted for about 50% of the world's total, and has emitted about 195 tonnes of mercury to air through coal combustion (representing about 40% of global mercury emission from coal combustion) in that year. In that context and to ensure impact of the project and for significant global environmental benefits, it is essential that international support is made available to assist China in fully implementing the Convention.

Recommendation 2: Follow up projects are currently being implemented to assist China in the implementation of the Minamata Convention. For sustenance of project results and impact, it is recommended that strong linkages be created between the project and the on-going or future projects. FECO should also ensure that the recommendations, action plan and lessons learned of the project under evaluation be considered and adopted in these on-going and future projects.

Recommendation 3: The project results, lessons learned and good practices were supposed to be published on the MEP website. It appears that this has not been done (paragraph 95). For information dissemination purposes, it is suggested that FECO could consider creating a Minamata Convention page on the MEP website that would not only report about the project but also about on-going and future projects on mercury.

1 Introduction

1. This terminal evaluation of the Medium Size Project (MSP) "*Pilot Project on the Development of Mercury Inventory in China*" was carried out on behalf of UN Environment, and it covered the implementation period from January 2013 to March 2017. While GEF provided the core funding ($ 1,000,000), co-financing (cash and in kind: $ 3,146,265) was obtained from the government of China, UN Environment and Norway. Originally planned for two years, the project was completed in 54 months. The main implementing partner at national level was the Foreign Economic Cooperation Office of the Ministry of Environmental Protection (FECO-MEP).

2. The evaluation has two main objectives: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UN Environment and main project partners. The evaluation identified lessons of operational relevance for future project formulation and implementation.

3. The evaluation focuses on the following key questions, based on the project's intended outcomes:

(a) Has the project been successful in facilitating the identification of good practices and replicable elements for the prevention and control of mercury pollution that can be reproduced in other provinces in the country?
(b) To what extent has the project succeeded in strengthening China's capacity for identification of mercury sources and priority actions to address mercury issues?
(c) What are the main contributing factors that have influenced the project's project implementation and attainment of project results?
(d) To what extent did the project encourage women's participation in the activities proposed, and ensure that vulnerable / minority groups are well represented in the development of the national action plan?

4. The terminal evaluation was carried out in-depth by using a participatory approach whereby key stakeholders were kept informed and consulted throughout the evaluation process. Efforts were made to adopt both quantitative and qualitative evaluation methods to determine project achievements against the project outputs, outcomes and impacts. The findings of the evaluation were based on a desk review of project documents (see annex 2), complemented by face to face interviews, Skype interviews, and email exchange. The national and local stakeholders that included FECO-MEP, national project coordinator, sub-contractors and provincial Environment Protection Bureau (EPB) were interviewed during field mission in China from 6 to10 March 2017. During the field mission, the interviews were facilitated by a translator provided by FECO as most stakeholders were not very fluent in English. The UN Environment task manager and project officer were interviewed by Skype.

5. Despite the non-availability of some documents such as Project Implementation Review (PIR) reports[2], the evaluation could adequately base its judgement on other available reports such as progress reports submitted by the Foreign Economic Cooperation Office, the main executing partner of the project, to assess the project. However, the evaluation could not assess whether the planned co-financing materialized as balance sheets for co-funds were not available despite several requests.

2 The Project

2.1 Context[3]

6. The project was formulated during the preparation phase of the Minamata Convention, which is a global treaty to protect human health and the environment from the adverse effects of mercury. During the first Inter Intergovernmental Negotiating Committee (INC-1) that took place on 7-11 June 2010 in Stockholm, Sweden, the country representatives indicated that effective implementation of the future global legally binding instrument would require capacity building and technical and financial assistance.

7. During INC-2, China presented the results of the project entitled "*Capacity Building on Atmospheric Mercury Releases Control from Coal Combustion and Management in China*". These results indicated that China's coal consumption (for power generation, steel production and other sectors), a significant source of mercury release, has increased from less than 1.5 to more than 2.5 billion tons between 2001 and 2008. Moreover, from information gathered, the estimated mercury releases from power plants in China were 108.6 tons for 2005.

8. Furthermore, it was found that China was using about 50 % of the mercury produced in the world in its industries (e.g. PVC production, CFL lamps, etc.). The releases of mercury in China were not systematically and comprehensively analyzed and documented. Although China was taking active measures to deal with all aspects of mercury management such as establishing standard systems, pollution control planning and improving engineering to promote mercury pollution prevention and control, there were still data gaps. Inventories needed to be enhanced, scientific data was lacking and the regulatory framework relative to mercury needed to be strengthened. It was in this context that the project was developed to build China's capacity for mercury inventory by making use of the UN Environment document *Toolkit for Identification and Quantification of Mercury Releases*.

2.2 Objectives and components

9. The aim of the project was **to strengthen China's capacity for identification of mercury sources and priority actions to address mercury issues under the Minamata convention, so as**

[2] Only the PIR the financial year 2015 (FY2015) was available to the evaluation.
[3] Information in Section 2.1 are taken from the Project Document

to protect human health and the environment from the toxic exposure of mercury. Table 1 below gives the expected outputs and outcomes of the project.

Table 1: Expected outputs and outcomes of the project

Project Component	Planned Outputs	Expected Outcomes
Component 1. Initial guidance on mercury management identified and baseline strengthened	1. Project's workplan, budget and monitoring plan endorsed by stakeholders and available 2. Basic information on mercury management in China available to relevant stakeholders	Outcome 1. Project baseline strengthened and information needs identified
Component 2. Development of mercury inventories by industrial sector and geographical distribution in China	1. Comprehensive overview of mercury management in the key industrial sectors identified 2. Quantitative and qualitative data on mercury releases available: Development of a detailed inventory in two provinces and semi-quantitative inventory nationwide	Outcome 2. Comprehensive information on mercury sources and releases in two provinces in China enables a better understanding and sound planning on mercury management
Component 3. Assessment and strengthening of existing monitoring capacity for mercury analysis in the environment and humans	1. Report on national capacity for mercury analysis and database of laboratories able to perform mercury analysis 2. Collected data of good quality for mercury releases in the environment and biota from key sectors in China available	Outcome 3. Improved understanding of the presence of mercury in the environment and humans guides China to develop targeted mercury reduction strategies
Compnent 4. Prioritization of mercury sources, mercury management gap analysis and initial action plan developed	1. Scheme of criteria developed 2. Priority sectors and activities identified and developing mercury reduction plans 3. China addressing gaps identified in mercury management 4. Mercury monitoring system in place confirming in the long term mercury reduction in the environment and in humans 5. China medium and long term strategy to decrease mercury emissions according to the action plan developed	Outcome Sound mercury action plan that addresses priority issues identified from increased knowledge of the sources of mercury releases, management gaps and monitoring needs
Component 5. Lessons learned, final report, and strategies for needs to reduce mercury	1. Final report including preliminary inventory, analytical capacity, and initial action plan for China 2. Lessons learned and recommendations requested in other provinces and countries 3. Suggestions for dissemination implemented and report disseminated in all provinces in China 4. Monitoring and evaluation plan fully implement assess rate of project's success	Outcome 5. Additional provinces able to participate in the national efforts to reduce mercury emissions in China triggered by the increased awareness and availability of mercury data

A. Target areas/groups

10. The intervention areas and target groups for the project were identified as government enforcing agencies, policy makers, local EPB, solid wastes managing centers, environmental

monitoring centers, and industrial sectors using and releasing mercury (e.g. power sector, ferrous and non-ferrous industries, PVC manufacturing industries, etc.).

B. Milestones/key dates in project design and implementation

11. The project was designed to be implemented within 2 years and the work plan highlighted the time frame for the execution of the different project components. Activities of the first two components were expected to be completed by the end of the first year while the remaining last three components that included dissemination of lessons learned and results were to be implemented during the second year.

12. The project was launched through an Inception Workshop on 5 – 6 March 2013 in Beijing. The workshop was chaired by the Director of the Mercury Division of FECO. During workshop discussions, it was agreed that Tsinghua University and China Electricity Council would be responsible to develop inventory for coal-fired power plants; the Solid Waste and Chemicals Management Center of MEP with the China Chlor-alkali Association would be responsible for the inventory in Vinyl Chloride Monomer (VCM) production; and the Institute of High Energy Physics of the Chinese Academy of Sciences would undertake the inventory for the Hunan and Guizhou provinces. It was also agreed to establish a Project Expert Team (PET), led by FECO and comprised of the above mentioned institutions that would monitor the implementation of the whole project, and would also be responsible to develop the associated work plans. During the Inception Workshop, UN Environment provided the project team and PET with some useful guidance materials including the updated UN Environment mercury toolkit document for the inventory of mercury in the pilot provinces.

13. The National Project Management Team (NPMT), led by the Deputy Director General of FECO/MEP (Project Supervisor), and constituted by the Deputy Division Chief of Mercury Working Group (MWG) of FECO/MEP (Project Manager, PM) and three other officers of the MWG (project coordinators), was established in April 2013.

14. In October 2013, the Mercury Working Group of FECO/MEP was renamed the Mercury Convention Implementation Division[4].

15. During its first meeting on 26 April 2013, the PET discussed on the approach for the inventory in the two pilot provinces, Guizhou and Hunan, and decided that 2010 would be the year for assessment for the inventory.

16. Training workshops were held on 27 – 30 April 2014 in Guiyang and Changsha, located in the two pilot provinces. The purpose of the workshops was to train the officers of the local EPBs on the use of the mercury toolkit to identify industrial sectors using and/or releasing mercury, and to develop appropriate survey questionnaires to gather information from these sectors.

17. Identification of relevant industrial sectors using and releasing mercury and detailed inventories in the two pilot provinces were completed in the 4th quarter of 2014.

[4] Minamata Convention was adopted on 10 October 2013.

18. UN Environment Mercury Toolkit training workshop was held in Xi'an, Shaanxi province, (selected province for replication) on 26 – 27 January 2015. The local EPB and representatives of local enterprises using and releasing mercury attended this workshop.

19. During the PSC meeting held in Beijing on 19 January 2016, upon a proposal from the UN Environment task manager, it was agreed to update the mercury inventory for coal-fired power plants for the year 2014 for the two pilot provinces and to compare with the one done for the year 2010 and taking into consideration the following criteria: number of power plants, type of coal used, new technology adopted, old plants closed, new plants operational, amount of coal burned, amount of electricity generated.

20. The final report of the project was available in December 2016, which did not include two dissemination activities of the project in the press - China Environment News and China Daily – that are planned for second quarter of 2017[5].

21. Three no-cost extensions were granted to allow for completion of project activities because of delays due to: administrative issues; more time required for training of local EPBs on inventory; industries not willing to submit data or to participate in project; more required time to develop new inventory in the coal power sector for the year 2014; and time required to draft the final report of the project. The project was expected to be completed by May 2017

2.3 Implementation arrangements

22. UN Environment acted as the project's implementing agency and was responsible for project management, overview, monitoring and liaison with GEF. The project was nationally executed by MEP-FECO and a Project Cooperation Agreement (PCA) was signed with UN Environment in December 2012. At provincial level, the project was executed by the local EPBs and contracts were signed accordingly with FECO.

23. The execution of the different components were sub-contracted to the following institutions: Tsinghua University, Beijing Normal University (BNU), Institute of High Energy Physics Chinese Academy of Sciences (IHEP-CAS), University of Science and Technology Beijing (USTB), Research Center for Eco-Environment Sciences Chinese Academy of Sciences (RCEES-CAS), Solid Waste and Chemicals Management Center (SCC), and China National Environment Monitoring Center (CNEMC).

2.4 Project financing

24. The financing for the project came from four sources: an allocation of US$ 1,000,000 from the GEF, a total contribution of US$ 1.2 million from the government of China, US$ 800,000 from Norway and US$ 1,146,265 from UN Environment (see Annex 5).

[5] Contract for $40,000 already signed

2.5 Project partners

25. The main project partners were: the sub-contractors listed earlier (section 2.3) who were responsible to deliver the main outputs of the project, the local EPBs of the Guizhou, Hunan and Shaanxi provinces who were responsible to implement the project at provincial level, and a number of associations such the China Electricity Council and the China Chlor-alkali who participated or provided data for the inventory.

2.6 Changes in design during implementation

26. There were no major changes in the design during implementation except for three no cost extensions, which did not affect the design however, that were granted due to delays to allow for successful completion of project activities (cf. section 3.2).

2.7 Reconstructed Theory of Change of the project

27. The reconstructed theory of change given in the Figure 1 below was developed by the evaluation based on the planned project outputs and outcomes, and on a number of intermediate states not mentioned in the project document. The change is based on the premise that the availability of comprehensive information on mercury sources and releases, and improved understanding of the presence of mercury in the environment and humans, would enable China develop a sound mercury action plan that would be effectively implemented across the country in the context of the Minamata Convention. In that respect the project will contribute to strengthen China's capacity for identification of mercury sources and priority actions.

28. The first outcome (cf. Figure 1) relates to the identification of information gaps and to what is required to strengthen management capacity at national and provincial level to fill those gaps. In particular, the project sought to build national and provincial capacities stakeholders on the use of the mercury toolkit, which is a very comprehensive document that not only allows for the development of a mercury inventory and helps to identify the major sources of mercury releases in a given country, but it also assists countries to identify the most cost-effective reduction measures for decision making.

29. The second outcome is based on the mercury inventory in the two pilot provinces. With the availability of comprehensive information on mercury sources and releases from all the sectors (e.g. the most polluting sectors or industries or the type of existing abatement systems) in the pilot two provinces, this would enable a better understanding of mercury status in China and thus allow for a sound planning on mercury management.

30. Outcome 3, which relates to monitoring of environmental and health impacts of mercury, is crucial to understand the trends and historical impact of mercury in the population, and the correlation between the use /release of mercury and the number of affected people and contaminated sites. It is thus anticipated that an improved understanding of the presence of mercury in the environment and humans would guide China to develop targeted mercury reduction strategies.

31. With priority issues that would be identified during information gathered during the mercury inventories in the pilot provinces and in the study on monitoring of impact of mercury on human health and the environment, the project is sought to assist China to develop a sound mercury action plan that would address those priority issues (Outcome 4), and thus build China's capacity on mercury management.

32. With increased awareness and promotion project outcomes, it is anticipated that all the provinces of China would be able to participate in the national efforts to reduce mercury emissions in the context of the Minamata Convention to which the country is party to.

33. The important drivers towards project impact include the availability of inventory data on mercury and China's commitment to fulfil its obligation towards the convention (Figure 1). As described in the early paragraphs, without a detailed mercury inventory, it would not be possible to identify gaps and the required needs, and hence development of a sound action plan would be difficult. According to information available, China is the largest user and emitter of mercury, and most of the source categories listed in the mercury toolkit is present in China. To effectively reduce mercury use and release, it is essential that China fully implement the convention.

34. The likelihood of impact will depend on a number of assumptions that include sustained commitment and involvement of key national and provincial stakeholders. Moreover, given the scope of the mercury issue in China, it is assumed that international support would be available to assist China to fully implement the Minamata Convention.

35. Impact will also be largely dependent on the occurrence of the following intermediate states, not mentioned in the logical framework but necessary:

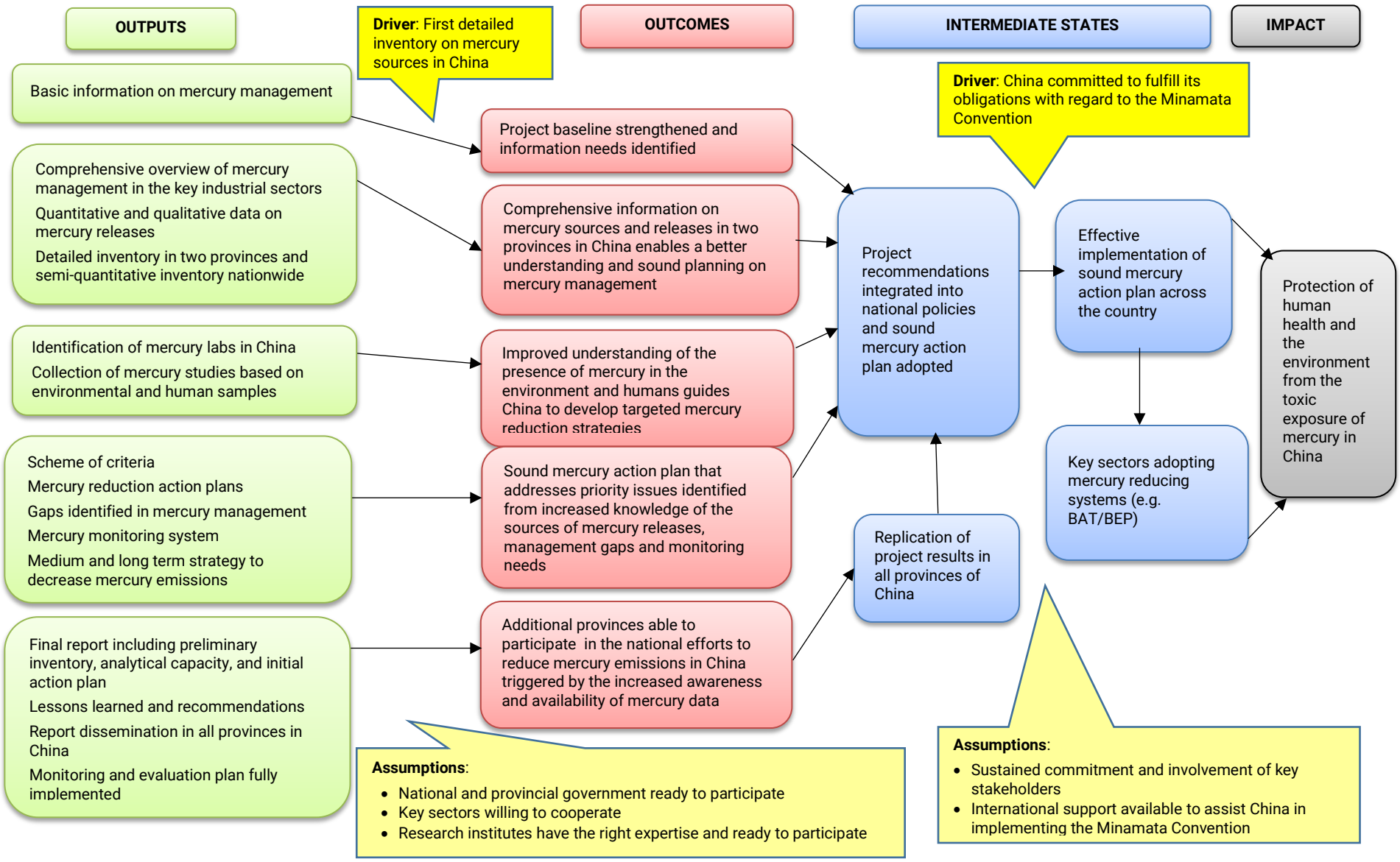
(i) *Project recommendations integrated into national policies and mercury action plan adopted*: Follow up projects are being implemented (cf. section 3.3.2), it is assumed the recommendations of the project would be considered and fully adopted.

(ii) *Effective implementation of sound mercury action plan across the country*: For effective implementation of the convention, it is essential all sectors using and releasing mercury adopt the mercury action plan. The national and provincial authorities would have a crucial role to play in ensuring that the plan is promoted and adopted by the relevant sectors.

(iii) *Key sectors adopting mercury reducing systems or alternative methods (e.g. BAT/BEP)*: In order to eliminate and/or reduce the use and release of mercury, adoption of reducing systems or alternative methods is necessary. This would require Chinese enterprises to adopt and/or develop cleaner methods. Given the scope of the work, both technical and financial assistance would be required. It is therefore assumed that international support would be available to assist Chinese enterprises to shift to cleaner production processes.

(iv) *Replication of project results in all provinces of China*: The inventories have been carried out in only two pilot provinces. For impact, it is necessary that project results are replicated in all the provinces of China. It would therefore require sustained commitment and involvement of key stakeholders, and continued international support to fully implement the Convention across all the provinces China.

Figure 1: Reconstructed Theory of Change



3 Evaluation Findings

3.1 Strategic relevance

36. This project, which aimed to protect human health and the environment from the toxic exposure of mercury by phasing out mercury, is in line with GEF Focal Area Strategy CHEM-3: Pilot sound chemicals management and mercury reduction. In China nearly all ten categories and 44 sub-categories, indicated in the UN Environment Toolkit for Identification and Quantification of Mercury Releases (referred to as Mercury Toolkit) are present. It is assumed that main categories in China include mining, power generation, manufacture of steel and nonferrous metals, cement, chemicals and waste disposal.

37. The GEF proposed intervention on mercury in China is complementary to UN Environment's Subprogram 5 (Harmful Substances and Hazardous Waste), executed by UN Environment DTIE OzonAction and Chemicals Branches. The UN Environment Mid Term Strategy for the years 2014-2017, which was developed, included the Subprogram 5 on Harmful Substances and Hazardous Wastes. China is one of the largest producer and consumer of mercury in the world; therefore dealing with mercury in China is considered as a priority with the potential to have significant global impact.

38. The Chinese Government recognized that, in order to control mercury pollution at global level, the best approach and priority task were to seek and use safe alternative technologies and products and to halt the manufacture, trade and consumption of mercury-containing products. In 2009, the State Council issued the Guidance on the Strengthening of Heavy Metal Pollution Prevention and Control Work. Subsequently, the Ministry of Environmental Protection in conjunction with the National Development and Reform Commission and other seven departments established a program of Comprehensive Heavy Metal Pollution Treatment. This program that targeted lead, mercury, cadmium, arsenic and chromium with overall focus on heavy metal pollution control has been adopted by the State Council and has entered its implementation phase with integration in the 12th Five Year Plan (2010 – 2015) for environmental protection. This project, which is directly relevant to these initiatives, will reinforce national efforts to sound mercury management.

Alignment with the Bali Strategic Plan

39. The project's focus on strengthening China's capacity for identification of mercury sources and priority actions is consistent with the Bali Strategic Plan for Technology Support and Capacity-building. In particular, the project is in line with one of the Bali Strategic Plan objectives: "*To strengthen the capacity of Governments of developing countries as well as of countries with economies in transition, at all levels to develop national research, monitoring and assessment capacity to support national institutions in data collection, analysis and monitoring of environmental trends and in establishing infrastructure for scientific development and environmental management, in order to ensure sustainability of capacity-building efforts*".

Gender balance, human rights based approach and inclusion of indigenous peoples issues, needs and concerns

40. The project document mentioned it would advocate for a sound representation of women and affected groups, however the project design did not explicitly make any provisions for consideration of gender or inclusion of indigenous peoples issues. Furthermore, although Non-Governmental Organizations (NGOs) and civil society representatives were recognized to be instrumental for the dissemination information and informing the communities about the risks associated with mercury, there are no indication whether these awareness raising activities specifically targeted women, children and affected / vulnerable groups.

South – South Cooperation

41. The project did not explicitly intend to promote South-South cooperation, which was not mentioned in the project document. Nevertheless, a delegation from the project team that included representatives from the Department of International Cooperation of MEP, the Department of Pollution Prevention and Control of MEP, the Department of Science, Technology and Standards of MEP, the Department of Environmental Monitoring of MEP and FECO undertook a mission in Russia in 13 – 17 October 2014. They met with the representatives from Ministry of Natural Resources and Environment of the Russian Federation and Scientific Research Institute for atmospheric air protection, who were also implementing a UN Environment- GEF project on mercury release inventory. During the three-day workshop, discussions were focused on mercury release inventory development methodology, mercury management and regulation policy gaps, and recommendations on project implementation (methodological, practical and administrative issues). The lessons and experience shared by the Russian project team was considered very valuable and very useful for successful project implementation in China.

Safeguards

42. Environmental and social safeguards are adequately described in the project document. For instance, the project recognized that reduction on mercury use would have a positive impact in the poor populations. The financially disadvantaged (and specifically women and children) are often those most affected by the adverse impacts of mercury exposure. Addressing the environmental and health hazards associated with mercury would therefore be crucial to ensure that hard won development gains are not compromised.

43. The overall rating for relevance is **Satisfactory**.

3.2 Achievement of outputs

44. The project was approved on 28 December 2012 and officially launched in 5 – 6 March 2013 to be closed by May 2017. Most of the activities of the project were subcontracted to national service providers, and the following paragraphs look at achievement of outputs for the different components.

3.2.1 Component 1

45. The expected outputs for this components, which were (i) Project's work plan, budget and monitoring plan endorsed by stakeholders and available and (ii) Basic information on mercury management in China available to relevant stakeholders, were successfully delivered.

46. For the first output, due to delays encountered, three no-cost extensions were granted, revisions of work plans and reallocations of budgets were discussed and approved accordingly during PSC meetings. The second output was subcontracted to the Institute of High Energy Physics, Chinese Academy of Sciences (IHEP, CAS), who was also contracted ($60,000)[6] to undertake the detailed inventory in the two pilot provinces. With the assistance of the Division of Technology, Industry and Economics (DTIE) of UN Environment, and based on the Mercury toolkit document, in April 2014 IHEP produced a comprehensive guidance document of good quality for baseline information and inventory of mercury use and release in various sectors in China. This document that exists in both Chinese and English versions, was used during the inventory exercise in the two pilot provinces.

3.2.2 Component 2

47. For component 2, the expected outputs were (i) comprehensive overview of mercury management in the key industrial sectors identified and (ii) Quantitative and qualitative data on mercury releases available: Development of a detailed inventory in two provinces and semi-quantitative inventory nationwide.

48. During the inception workshop, it was decided that coal fired power plants and vinylchloride monomer (VCM) production would be the two key industrial sectors to be reviewed in the project[7]. The first output was subcontracted[8] to the Solid Waste and Chemicals Management Center (SCC) of MEP, who produced a detailed and comprehensive report covering the whole VCM sector. The total mercury release for the VCM sector was calculated using input and output factors that were developed based national data and information gathered for the sector. In 2010, the total mercury input for VCM production in China was about 803 tons. From this amount, about 715.2 tons of mercury could be in the products, about 81.2 tons released through fugitive atmospheric emissions, pipe residues and other unknown paths, 1.3 tons discharged through wastewater discharge, 3.6 tons released through solid wastes, and 2.5 tons found in waste acid.

49. For the second output on coal fired power plant, the Tsinghua University was subcontracted ($65,000)[9] to undertake a detailed inventory for the whole sector across the country for the year 2010. An inventory report of good quality that included gap analysis and useful recommendations was submitted. The inventory results indicated that in 2010, the total output (release) of mercury from coal power plants in China was 272 tons, with 102 tons

[6] The contract signed with FECO (March 2014 to March 2015) was for both outputs of Component 1 (baseline information document) and Component 2 (inventory in pilot provinces)

[7] Information taken from the inception workshop report.

[8] Contract of $65,000 (March 2014 – March 2015) signed with FECO

[9] Ist contract signed with FECO: March 2014- March 2015. Second contract: June 2016 – January 2017

emitted to air, 2 tons released to water and 168 tons released along with solids (ashes and gypsum). Gap analysis and policy recommendations on mercury emissions in the coal fired power plant were also made in the report. In June 2016, after decision taken at PSC meeting and following a second subcontract ($50,000) with FECO, Tsinghua University successfully completed a second inventory for the coal fired power plant sector for the year 2014. Due to an increase in coal consumption in 2014 compared to 2010, it was found that the total mercury output for 2014 was 328 tons, and the mercury releases into air, water, waste gypsum and fly ash were 95, 4, 103 and 126 tons, respectively. During the inventories, Tsinghua University has been able to develop national emission factors for the power plant sector, which are more adapted to the national context. These emission factors were developed based on studies on mercury removal efficiencies of air pollution control devices and analyses of mercury in coal undertaken at coal fired power plants of the two pilot provinces.

50. The detailed inventories in the two pilot provinces, Guizhou and Hunan, were successfully completed by IHEP in 2015[10]. 2010 was the year of assessment for the inventory. Local EPB of the two pilot provinces were trained to use the mercury toolkit as well as to develop survey questionnaires in order gather information from local enterprises. Delays were encountered during the gathering of information phase due to reluctance of enterprises to return the survey questionnaires. However, through site visits and phone calls, the local EPB were able to obtain the required information from most of the enterprises.

51. The inventories revealed that most of the source categories mentioned in the mercury toolkit exists in the two provinces. That for the Hunan province revealed an estimated total release of 66.5 tons[11] of mercury annually to the environment: 33.3 tons to air, 0.3 ton to water and 32.9 tons as solids[12]. For the Guizhou province, the total release was estimated at 39.6 tons (air: 10.5 tons, water: 0.2 ton and solid: 28.9 tons). For both provinces the major sectors responsible for these emissions were: coal fired power plants, cement production, industrial boilers and non-ferrous production.

3.2.3 Component 3

52. This component was on the assessment and strengthening of existing monitoring capacity for mercury analysis in the environment and humans. The first expected output "*report on national capacity for mercury analysis and database of laboratories able to perform mercury analysis*" was successfully delivered by China National Environment Monitoring Center (CNEMC)[13]. The study revealed that more than 22,000 accredited laboratories exist in China. The study also revealed that most provinces in China have monitoring stations adequately equipped for the monitoring of mercury in air, water and soil. The second expected output "*collected data of good quality for mercury releases in the environment and biota from key*

[10] Contract signed with FECO for $60,000: March 2014 – March 2015
[11] Excluding amount of mercury found in products such as in lamps or elemental mercury produced from mines
[12] Solids include ashes or gypsum
[13] Contract signed with FECO for $35,000: March 2014 – March 2015

sectors in China available" was successfully completed by IHEP[14]. The study that was based mainly on published research data covered the following topics: mercury sources, mercury in the environment (air, water, and soil), mercury in food, and mercury in humans (hair and blood). The study revealed cases of occupationally exposed workers (of chlor-alkali plants) having hair mercury levels much higher than internationally accepted norms (e.g. more than 30 times higher than WHO standard).

3.2.4 Component 4

53. This component addressed the issue of prioritization of mercury sources, mercury management gap analysis and initial action plan development. For this component five outputs were planned to be delivered. The first two outputs, (i) Criteria for prioritization of mercury sources and (ii) priority sectors and activities identified and developing mercury reduction plans, were de-facto produced during the inventory in the two pilot provinces. The inventories revealed that the coal-fired power generation and VCM production were two key industrial sectors for the mercury reduction and pollution control in China.

54. The University of Science and Technology of Beijing (USTB) was subcontracted ($30,000) to deliver the third output relative to addressing China's gaps in mercury monitoring and management in key sectors. The evaluation feels that while the gaps in the key sectors such as cement production, waste incineration and non-ferrous production have been clearly identified in the report, proposals to address these gaps have not been properly described.

55. The fourth output was successfully produced by CNEMC under the same contract to deliver output 1 of component 3. The fifth output on medium and long term strategy to decrease mercury emissions was satisfactorily completed by the Beijing Normal University[15].

3.2.5 Component 5

56. This component relates to dissemination of lessons learned and project results. A final report on lessons learned from the project that included inventory taking experiences from using the toolkit in the two pilot provinces, experiences on inventory taking in coal fired power plant and VCM sectors, and experiences on the development of action plans, was drafted by the Research Center for Eco-Environment Sciences, Chinese Academy of Science (RCEES) in March 2016[16]. Workshops for sharing of lessons and experiences were successfully organized in the Shaanxi and Henan provinces in 23 – 25 September 2015 and 24 – 25 November 2015 respectively. Other workshops dissemination and two trainings for key sectors were undertaken in the first half of 2016 in the Guizhou and Sichuan provinces respectively. To promote project results to a wider audience, two dissemination activities of the project in the press - China Environment News and China Daily – are planned for second quarter of 2017.

57. Given that all outputs have been satisfactorily delivered, the overall rating on achievement of outputs is **satisfactory**

[14] Contract signed with FECO for $35,000: March 2014 – March 2015
[15] Contract of $30,000 with FECO: March 2014 – March 2015
[16] Contract of $30,000 with FECO: November 2015 – March 2016

3.3 Effectiveness: Attainment of project objectives and results

3.3.1 Direct outcomes based on the reconstructed TOC

58. The direct outcomes from the TOC (Section 2.7, Figure 1) are the outcomes mentioned in the project logical framework. As described in section 3.2 (achievements of outputs), most of the planned activities have been successfully completed, the corresponding outputs satisfactorily delivered, and all the key performance indicators can be tracked. The following paragraphs describe the achievement of each planned outcome.

59. **Outcome 1:** *Project baseline strengthened and information needs identified* - Stakeholders[17] at both national and provincial level indicated that the training on the use of the mercury toolkit to gather baseline information on mercury use and release and to identify needs was very relevant and was of high quality. In particular, the provincial EPB officers of the two pilot provinces indicated that, with the assistance of IHEP and Tsinghua University, they successfully used the mercury toolkit to gather the required information from the local enterprises for a complete mercury inventory. With the experience gained, they also indicated that they could do the inventory again without any assistance.

60. **Outcome 2**: *Comprehensive information on mercury sources and releases in two provinces in China enables a better understanding and sound planning on mercury management* – The complete inventory in the two pilot provinces has enabled the identification of major sectors releasing the highest amount of mercury. In particular, it has allowed to identify the needs of these sectors to effectively reduce mercury emissions. According to feedback gathered during the field mission, it appears that these findings were taken into consideration to develop the mercury action plan (component 4).

61. **Outcome 3:** *Improved understanding of the presence of mercury in the environment and humans guides China to develop targeted mercury reduction strategies* – The comprehensive studies on mercury in food, human and the environment have produced very valuable results that would definitely guide China to develop targeted mercury reduction strategies. For example, it has been found that in general, levels in rivers located in industrialized zones contain much higher level of mercury than in other regions. This would warrant for example more strict control on the release of waste waters from industries. Similarly, while it is generally accepted that human is mostly to mercury through the consumption of seafood, the studies however revealed that in China 40% of human mercury burden comes from the consumption of cereals.

62. **Outcome 4:** *Sound mercury action plan that addresses priority issues identified from increased knowledge of the sources of mercury releases, management gaps and monitoring needs* - According to information available, the mercury action plan to reduce mercury release from coal-fired power plants and vinyl chloride monomer production was developed based on information and priority issues identified during the inventories and the studies. For example, to reduce mercury release from the coal fired power plants, the recommended strategies include the use of raw coal containing low mercury or to adopt better air pollution control devices.

[17] Interview with FECO and provincial EPBs

Indeed, it was found out during the inventory exercise the high amounts of mercury released by this sector was due to the high mercury content of the coal used and the inadequate air pollution control devices in many of the power plants.

63. **Outcome 5**: *Additional provinces able to participate in the national efforts to reduce mercury emissions in China triggered by the increased awareness and availability of mercury data* – There are already indications that additional provinces are participating in the national efforts to reduce mercury emissions in China. For example, as a result of workshops run in September and November 2015 to raise awareness and to share lessons and experiences (cf. section 3.2.5), the Shaanxi EPB assisted the Tsinghua University to gather information for a complete inventory for the Shaaxi province.

64. Given that all outcomes were satisfactorily delivered, the evaluation considers that the objective of the project, which was to strengthen China's capacity for identification of mercury sources and priority actions to address under the Minamata Convention, has been successfully achieved.

3.3.2 Likelihood of impact

65. Despite the project's objective being met, this is not sufficient for impact (project goal), which was to protect human health and the environment from the toxic exposure by phasing out mercury. As mentioned and described in details earlier (Section 2.7), a number of intermediate states (Table 2 and Figure 1), not mentioned in the project document but identified by the evaluation, need to occur for effective impact of the project.

66. There are indications that these intermediate states are likely to happen. For instance, China has signed the Minamata Convention on 10 October 2013, ratified on 31 August 2016 and is fully committed to implement it by 2025. Furthermore, China is benefitting from international support (one of the assumptions of the TOC, Figure 1) as a number of follow up projects for the management of mercury are currently being implemented: (i) Mercury Initial Assessment Project (GEF-UNIDO, $ 1 M); (ii) China's Demonstration Project of Mercury Reduction and Minimization in VCM Production (PPG phase: GEF-UNIDO, $ 16.2 M); and (iii) Capacity Strengthening for the Implementation of the Minamata Convention (GEF – World Bank, $ 8 M). These projects are assisting China to fulfil its obligations towards the Convention, which is the main impact driver for the intermediate states to happen (Figure 1).

67. The review of outcomes to impact is summarized in Table 2 below. From the above one can conclude that:

a. Outcomes: The project's intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after project funding.
b. Intermediate: The measures designed to move towards the intermediate states have started, but have not produced results yet. According to the mid-long term strategy however, it was understood that the results would be seen well after the project, for these reasons a **+** is given.

c. Impact: It is likely that the intended impact will occur in the long term.

68. Given that the intended outcomes were satisfactorily delivered that there is likelihood of impact of project in the long term, the rating on effectiveness is **Satisfactory**.

Table 2: **Ratings of Review of Outcome to Impact Analysis**

Results rating of project entitled: Pilot Project on the Development of Mercury Inventory in China							
Outputs	**Outcomes**	**Rating D -A)**	**Intermediate states**	**Rating (D – A)**	**Impact (GEBs)**	**Rating (+)**	**Overall**
Basic information on mercury management in China available	Project baseline strengthened and information needs identified	**A**	Project recommendations integrated into national policies and sound mercury action plan adopted	**C**	To protect human health and the environment from the toxic exposure of mercury by phasing out mercury	**+**	Highly Likely
1 overview of mercury management in the key industrial sectors 2 Quantitative and qualitative data on mercury releases: detailed inventories	Comprehensive information on mercury sources and releases in two provinces in China enables a better understanding and sound planning on mercury management						
1 List of Hg labs in China able to analyse mercury 2 Research data on Hg in human, biota and environment for China	Improved understanding of the presence of mercury in the environment and humans guides China to develop targeted mercury reduction strategies		Effective implementation of sound mercury action plan across the country				
1 Mercury reduction plans for priority sectors 2 Mercury monitoring system 3 Medium and long term strategy to decrease mercury	Sound mercury action plan that addresses priority issues identified from increased knowledge of the sources of mercury releases, management gaps and monitoring needs		Key sectors adopting mercury reducing systems (e.g. BAT/BEP)				
1 Final report for China 2 Lessons learned and recommendations disseminated in all provinces	Additional provinces able to participate in the national efforts to reduce mercury emissions in China triggered by the increased awareness and availability of mercury data		Replication of project results and lessons in all provinces of China				

	Rating justification: A All the outputs have been satisfactorily delivered involving key stakeholders, and key indicators can be tracked. For these reasons a rating **A** has been given		**Rating justification: C** Given that China has signed and ratified the Minamata Convention and follow up projects are being implemented, the identified intermediate states, not planned to occur during project life, are likely to happen well after the project life, by 2025 according to the mid-long term strategy		**Rating justification: AC+** The AC+ rating corresponds to **Likelihood** impact of project.		

3.4 Sustainability and replication

3.4.1 Socio-political sustainability

69. As mentioned earlier (section 3.1), well before the adoption of the Minamata Convention, China had already taken initiatives for the strict control and phasing out of mercury. For instance, China recognized that the best approach to phase out mercury was to seek and use safe alternative technologies and products. In 2009, the State Council issued a guidance document on the prevention and control of heavy metal pollution including mercury. Subsequently, MEP established a prevention program for heavy metals. This program, which was adopted by the State Council, has been integrated in the 12th Five Year Plan (2010 – 2015) for environmental protection. Furthermore, China has signed the Minamata Convention when it was opened for signature in October 2013, and ratified it in 2016. Finally, a number of follow up projects on mercury management (paragraph 68) are being implemented by the Minamata Convention Implementation Division of FECO. For these reasons, socio-political risks are considered low.

3.4.2 Financial resources

70. As explained in one of the outputs of this project "*Preliminary Mid-long term Strategy on Reducing Mercury Releases in China*", national financial capacity exists to implement the Convention to a certain degree in China. However, in the long term for its full and smooth implementation, the report mentions that there is need for significant international financial as well as technical support. Some financial risks therefore do exist. However given China's past experience in securing significant support for the implementation of other Conventions such as the Stockholm Convention, and having already secured international support for follow up projects (cf. section 3.3.2) these risks are considered low.

3.4.3 Institutional framework

71. FECO, which was responsible to execute the project, is an institution affiliated to Ministry of Environmental Protection of China. It was founded in 1989 and mandated to coordinate and manage the funds of projects in cooperation with international financial organizations and for implementation of multilateral environmental agreements (MEAs) and bilateral assistances in

the field of environmental protection. FECO, staffed with about 200 officers, is sub-divided into divisions. It is one of these divisions, the Mercury Convention Implementation Division[18] that was responsible to execute the project. This division is currently implementing 7 internationally funded projects on mercury including those mentioned previously (cf. 3.3.2) as well as a nationally funded (by MEP) on recovery of mercury using Best Available Technologies and Best Environmental Practices (BAT/BEP). Under these conditions, the institutional framework is considered robust for sustenance of project results, and therefore risks related to institutional framework and governance are considered low.

3.4.4 Environmental sustainability

72. The project is considered ecologically sustainable as it sought to strengthen China's capacity for identification of mercury sources and priority actions to be addressed under the Minamata Convention in order to protect human health and the environment from the toxic exposure of mercury by phasing out mercury. Furthermore, no environmental risk that can influence or jeopardize the project outcomes and future flow of project benefits has been identified; therefore, this risk is considered low.

3.4.5 Catalytic role and replication

Catalytic role

73. As described earlier (cf. section 3.2.2), the project catalysed the development of emission factors for the coal fired power plant and the VCM sector. These emission factors, which were more adapted to the local context and significantly different from those mentioned in the mercury toolkit, were used during the inventory exercise.

74. In the Guizhou province, monitoring of heavy metal in soil and water form part of the routine duties of the monitoring center of the local EPB. However mercury is not included, but thanks to the project, the local EPB have included mercury in list to be monitored.

75. The project also catalyzed policy changes; the 13th Five year plan (2016 – 2020) has included the requirements for monitoring mercury emissions in major sectors such coal power plants.

76. Finally, the project has contributed to the securing of more than $ 25 M[19] in cash grant for follow up projects on mercury sound management (cf. section 3.3.2).

Replication

77. One of the purpose of the project was to identify a series of lessons learned including on a) mercury management practices at the provincial level; b) experiences on inventory taking

[18] Formerly known as the mercury working group before the adoption of the Minamata Convention

[19] (1) Mercury Initial Assessment Project (GEF-UNIDO, $ 1 M); (2) China's Demonstration Project of Mercury Reduction and Minimization in VCM Production (PPG phase: GEF-UNIDO, $ 16.2 M); and (3) Capacity Strengthening for the Implementation of the Minamata Convention (GEF – World Bank, $ 8 M).

from using the toolkit; and c) experiences on the development of action plans, to be shared with other Chinese provinces for replication purposes in the context of the Minamata Convention.

78. In this context, workshops for sharing of lessons and experiences were successfully organized in the Shaanxi, Sichuan and Henan provinces in 2015 and 2016 (paragraph 65).

79. During a PSC meeting held on 19th January 2016, upon suggestion by the UN Environment task manager it was recommended that FECO should establish linkages between the project and other projects on mercury that were being implemented including the MIA project, VCM project and other projects (see paragraph 52). The project manager[20] of the MIA project and the capacity building projects confirmed that linkages were established, and that the results of the project under evaluation were significantly contributing to successful implementation of these two projects. For example, Tsinghua University, who was responsible for the detailed inventory for the coal fired power sector in the project, assisted in the development of the nationwide mercury inventory in the different sectors in China for the MIA project.

3.5 Efficiency

80. The project was initially planned for 2 years but later extended to almost 5 years for the completion of the planned activities and achievement of outputs. While the project was approved in July 2012, it was not until December 2012 that a project cooperation agreement (PCA) was signed between UN Environment, the implementing agency, and FECO/MEP, the executing agency, for an amount of $ 870,000. Considering that at December 2013, after 1 year, only 6% ($ 60,245, Table 3) of the total contract value ($ 870,000) has been engaged indicates that the implementation process was very slow during the first year. These delays were mainly due to administrative reasons that could have been easily avoided with better planning. For instance, the contracts to deliver the inventories in the pilot province were signed only in March 2014, while it is mentioned in the project document that activities for this output should have started in April 2013, four months after the start of the project. This slow progress of the project was mentioned in the progress report for the period Jan – June 2014.

Table 3: Expenditures of GEF funds at December 2016*

Period	Dec 2013	June 2014	Dec 2014	June 2015	Dec 2015	June 2016	Dec 2016
Cumulative expenditures ($)	60,245	183,234	348,145	370,944	521,709	663,962	713,892
Cumulative expenditure (%)*	6.9	21.0	40.0	42.6	60.0	76.3	82.1

*Expenditures taken from half financial reports**Percentage with respect to total contract of $ 870,000

81. Delays in reporting from the national contractors was one of the reasons for delays. For instance although activities were successfully completed, reporting to UN Environment was significantly delayed (up to 1 year), and this is reflected in the PIR report for the period July 2014

[20] The MIA and capacity building projects are being managed by the same person, who is Deputy Director of Mercury Convention Implementation Division, FECO.

– June 2015. These delays appear to be the difficulties of many of the national contractors to master the English language, and they therefore required to get their reports, originally drafted in Chinese, to be translated into English. This was confirmed during the field mission, it required the service of a translator to interview many of the national contractors as they were not fluent in English. The delay to submit reports can also be seen in Table 3, while many sub-contracts to deliver the outputs were signed in March 2014 (Table 4), most of the final payments were done during the period Dec 2015 – June 2016 (based on figures of financial sheets) when the final reports in English version were submitted to FECO.

82. Some measures to promote efficiency were adopted during design and implementation of the project and these included:

i. This project is complementary of previous initiatives and it has benefitted from the experts who were involved in these initiatives (cf. section 4.1).
ii. As mentioned early (cf. section 3.4.3), the project was executed by an existing infrastructure, the Mercury Convention Implementation Division[21] of FECO, responsible to implement all mercury related projects. According to feedback gathered during field mission, generally good synergies exist between the different on-going projects. For instance, generally
iii. The early identification (during the preparatory phase) of key stakeholders such as research institutions, the national associations and the pilot provinces (cf. section 4.1) and their active participation in the project contributed to the successful completion of project activities.
iv. Planning the project steering committee meetings, the inception workshop and mid-term review back to back with other technical meetings, such as the lessons learned, and planning meeting was an efficient way to reduce costs.

Table 4: Sub-Contracts for the different outputs

Sub-contractor (value $)	Output	Contract signature (Duration)	Date of report submission
Tsinghua University (65,000)	Coal power plants inventory (2010)	March 2014 (for 1 year)	N/A*
Solid Waste and Chemicals Management Center (65,000)	VCM sector inventory	March 2014 (for 1 year)	Dec 2014
Institute of High Energy Physics (IHEP) (60,000)	Pilot provinces inventory	March 2014 (for 1 year)	March 2016
Beijing Normal University (30,000)	Mid-long term Hg reduction strategy analysis	March 2014 (for 1 year)	May 2016
University of Science and Technology Beijing (30,000)	Gap analysis for related sectors in China	March 2014 (for 1 year)	May 2016
IHEP/CAS (35,000)	Hg in environment and human	March 2014 (for 1 year)	N/A*
China National Environment Monitoring Center (35,000)	Monitoring capacity study and recommendations	March 2014 (for 1 year)	May 2016
Tsinghua University (50,000)	Coal power plants inventory (2014)	June 2016 (6 months)	March 2017
Research Center for Eco-Environment Sciences (30,000)	Final report compiling	Sep 2015 (6 months)	Dec 2016
China Daily (20,000)	Article of project output	June 2016 (for 1 year)	
China Env. News (20,000)	Article of project output	June 2016 (for 1 year)	

*Copy of report not submitted to the evaluation

[21] Formerly known as the mercury working group before the adoption of the Minamata Convention

83. Despite the delays, quality outputs have been satisfactorily delivered within the planned budget, and the management costs have been also been kept within the planned budget (see Table 5, under section financial management). As at December 2016, 82.1% of GEF funds have been engaged, most of the unspent budget correspond to the second inventory that was undertaken by Tsinghua University for the coal fired power sector (contract signed in June 2016 but report delivered only in March 2017), the terminal evaluation, and to dissemination activities planned in 2017. Rating on efficiency is **Satisfactory**.

4 Factors affecting project performance

4.1 Preparation and readiness

84. The project document contains relevant, precise, and concise information to achieve the objectives of the project. However, the work plan was revised after the initially planned project duration was extended much beyond the timeframe originally planned. It therefore appears that the project framework was way too ambitious and it would have been difficult to implement the project within the initially planned timeframe.

85. The project was a follow -up of two projects implemented (which started in 2006) by MEP in collaboration with the Norwegian Ministry of the Environment ("*Capacity-building to reduce mercury pollution in China - Case Study in Guizhou"*) and the Italian Ministry for the Environment and Territory ("*Capacity Building on Atmospheric Mercury Releases Control from Coal Combustion and Management in China"*). Therefore, it can be understood that the capacities of the executing agencies were properly considered during project development.

86. The main project partners (cf. section 2.3) were already identified during the preparatory phase and for many their roles have been adequately described in the project document[22]. Some partners were selected because of their past experience in similar projects. For example, , Tsinghua University andPeking University, Chinese Academy of Sciences and other who were involved in previous projects on mercury (*sought to characterize anthropogenic mercury releases, prepare atmospheric mercury releases inventory, develop fate models of atmospheric mercury transport, migration and transformation, elucidate concentration and species distribution of mercury in the environment, assess ecological and environmental impacts, evaluate mercury pollution control measures, and prepare economic analysis of key*), were sub-contracted to undertake some of the project components. For instance, Tsinghua University was responsible to develop the inventory for coal fired power plant sector.

87. The project document provides a project coordination and management structure including the setting up of a Project Steering Committee (PSC), a National Project Management Team (NPMT) and a Project Expert Team (PET). The roles and responsibilities of the NPMT and the PET were clearly described in the project document. Based on these observations, the project document seems clear and realistic to enable effective and efficient implementation.

[22] Table 1 of project document: Stakeholders Mapping

88. Given that project timeframe was too ambitious rating on preparation and readiness is **Moderately Satisfactory**.

4.2 Project implementation and management

89. The approach planned in the project document was adopted for project implementation. UN Environment was the GEF implementing agency and a task manager was nominated, who was responsible for overall project management and supervision. The UN Environment task manager changed three times during the project implementation phase, which did not seem to have negatively impacted on the implementation process. The task managers[23] attended all the PSC meetings, and provided the necessary guidance for project implementation, and also assisted the NPMT in the reallocation of project funds due to project extension. For example, during the PSC meeting of January 2016, the task manager recommended that project should link with other mercury bilateral and GEF projects to avoid duplication. During the same meeting, he suggested to update the inventory for the coal fired power sector using data for the year 2014 (previous one was for 2010). In general, his guidance and assistance was greatly appreciated by the national counterparts[24].

90. No changes in the project design as well as no operational and institutional problems occurred during project implementation. However, the project was considerably delayed mainly due to slow administration procedures and national subcontractors to submit final reports. The project management responded by granting three no cost extensions to allow for completion of project activities, the unspent GEF funds were rephrased accordingly.

91. At the country level, project execution was done by FECO, and a PCA was signed with UN Environment in December 2012 for an amount of $ 870,000. The NPMT, constituted by FECO officers of the Mercury Convention Implementation Division was established in April 2013 (see paragraph 31). The PSC and the PET (also referred to as the Project Expert Panel in the progress reports) were established during the first quarter of 2013. The project document clearly mentions that the PSC will make recommendations for adaptation where necessary. However, as only the minutes of the PSC meeting held on 19 January 2016 was made available to the evaluation[25], it is not possible to assess the extent of project management response to potential recommendations that would have been made by the PSC. Similarly, while the progress reports mention that the PET met several times, minutes of these meetings were however not made available to the evaluation. One should nevertheless recognize that despite delays quality outputs have been successfully delivered indicating an effective management of the project by the executing agency. Furthermore, according to the progress reports[26] as well as to the PIR report submitted to the evaluation[27], it is clear that the project logical framework was used as basis for implementation and the verifiable indicators therein were used to track progress.

[23] Interview data with last task manager by Skype
[24] Feedback gathered during field mission
[25] The other PIR reports were not available.
[26] Progress reports up to 1st quarter 2016 were made available to the evaluation.
[27] Only the PIR report for the financial year July 2014 – June 2015 was submitted to the evaluation.

92. Given no major problems were identified during the implementation process, rating on project implementation and management is **Satisfactory**.

4.3 Stakeholder participation, cooperation and partnerships.

93. The key project partners were already identified during the preparatory phase of the project. MEP/FECO was responsible to coordinate and execute the project. The research institutes such as Tsinghua University, Institute High Energy Physics and Beijing Normal University were contracted to execute the different components of the project, and they were also members of the PSC and the PET.

94. National associations such as the China National Coal Association and the China Non-ferrous Metals Industrial Association cooperated greatly with the project by providing necessary data for the inventories. At provincial level, the involvement and dedication of the local EPB was vital for the successful completion of mercury inventory in the two pilot provinces. At the start, the local enterprises were reluctant to provide data for the inventory. However, through adequate communication (e.g. phone calls and site visits), the local EPB were able to gather the necessary information/data from the local enterprises for the mercury inventory. Based on these observations and findings during the field mission, the evaluation considers that the participation of the stakeholders has been satisfactory and contributed to the successful delivery of outputs.

4.4 Communication and public awareness

95. The project documents mentions that the project would raise awareness at different levels of the society. The awareness the stakeholders (e.g. MEP officers, local EPBs, local enterprises, and national associations) have been adequately raised either through direct involvement in the project (e.g. PSC meetings or providing data) or by attending awareness and dissemination workshops held in the provinces in 2015 and 2016. The other sectors of the society were not specifically targeted, although it is planned to disseminate the project results by publication in two national media: China Environment News and China Daily, in the second quarter of 2017 (cf. section 3.2.5).

96. The project document also mentions that lessons learned and good practices from the project would be disseminated through UN Environment and MEP websites. The evaluation could not find any information or results regarding the project on these websites. However, as mentioned earlier there are indications that linkages have been established between the project under evaluation and two on-going GEF funded projects[28] (cf. section 3.4.5, under heading Replication).

4.5 Country ownership and driven-ness

97. The project was fully executed by a project team constituted by 5 dedicated officers of the Minamata Convention Implementation division of FECO, which is an office of MEP (cf. section 3.4.3). This division, which is currently implementing 7 internationally and 1 nationally

[28] The two projects are (1) Capacity Strengthening for the Implementation of the Minamata Convention implemented ($8M) by World Bank and (2) MIA project ($1M) implemented by UNIDO

funded projects on mercury, has established strong linkages between these on-going projects and the project under evaluation. The MIA project, for example, for which a nationwide mercury inventory for the Year 2014 was required, benefitted greatly from the project under evaluation. In particular, the updated inventory for the coal fired power plant sector (for the year 2014) developed in the project was very useful for the MIA mercury inventory.

98. As mentioned earlier, the project has catalyzed the inclusion of the requirements for the monitoring of mercury in the 13th Five Year Plan for environmental protection (cf. 3.4.5). According to information available[29], at provincial level, the project was adequately executed by the local EPBs, and monitoring of mercury in water and soil has been included in their routine duties. For these reasons, ownership of the project is considered high.

4.6 Financial planning and management.

99. As mentioned earlier (cf. section 2.3), for the execution of the project a PCA was signed between UN Environment and FECO in December 2012 for an amount of $ 870,000. An initial disbursement of $ 75,000 to FECO. Upon cash advance request made by FECO, further disbursements were made by UN Environment. For example a cash advance of $ 204,750 was made by FECO on 29 September 2013, for activities planned for the period July – December 2013.

100. The funds were managed by the financial division of FECO, and the internal standard procedures were applied for purchase, procurement (*based on previous experience and technical background for consultants*) and payment of consultants and services. For example, Tsinghua University, who were already identified during the preparatory phase, were recruited to carry out the inventory for the coal fired power plant sector (cf. section 3.2.2).

101. As project implementation was delayed by two and a half years, three no-cost extensions (December 2014, January 2016, and July 2016) were granted to allow for completion of project activities, and the re-phasing of unspent project funds were done accordingly. These are reflected in the half yearly financial sheets.

102. As can be seen in Table 5, which was prepared on the basis of information gathered from financial documents submitted to the evaluation, there have been variances between the original GEF budget allocations and FECO allocations. For some of the budget lines, the variances were significant. These variances were however fully justified. For example, the *National Travel* budget line was increased (by $32,000) to allow the project team to learn from the Russian experience (see paragraph 51). Similarly, the budget for *reporting, dissemination and workshops* was increased (by $ 35,000) for more dissemination activities in the provinces. There are no evidence however whether the decisions to increase these allocations were discussed and approved during PSC meetings. Nevertheless, based on the figures reported in Table 5, one can conclude that the GEF funds have been effectively managed. It can also be noted that despite the delays, the project coordination costs were kept within the planned budget.

[29] Interview with FECO and provincial EPBs

103. Despite numerous requests, it was not possible to get financial statements for national co-funding. It is therefore not possible to assess whether the planned national co-financing have materialized. There are indications however that counterpart co-funding have materialized to some extent. For instance, it is reported that the Chinese counterparts have provided $52,000 for training purposes (Table 5).

Table 5: Variance with respect to original GEF allocation after third extension

Budget Line	Original GEF allocation ($)	FECO budget allocation ($)	Variance ($)	Comments / Justifications from FECO
Project Coordination	40,000	40,000	0	
Consultant (work plan + final report)	15,000	30,000	+15,000	Budget increased to pay consultants for final reports
National travel	15,000	47,000	+32,000	Budget was increased to learn and share experiences from other inventory projects, and to communicate with other countries (Russia) on the implementation of inventory project, to find the gap between China and other countries (Russia) to complete our project. And also to communicate with pilot provinces.
Sub-contracts	490,000	490,000	0	
Training	160,000	108,000	-52,000	Budget of some activities covered by co-finance from Chinese side
Meeting/Workshops/Conferences	160,000	130,000	-30,000	Transfer to the national travel budget line to fund mission in Russia learning experience
Reporting, dissemination workshops, etc.	90,000	125,000	+35,000	Budget was increased for more dissemination activities in provinces
Terminal Evaluation	30,000	30,000	0	

4.7 UN Environment Supervision, guidance and technical backstopping.

104. Initially planned for two years, the implementation of the project lasted over four and a half years. During that period, the UN Environment task manager changed three times. The respective task managers attended all the PSC meetings, four in total (1st meeting: back to back with Inception Workshop in March 2013, 2nd in July 2015, 3rd in 2015 and 4th in January 2016). The change in task manager did not seem to have negatively impacted on the implementation process. Indeed, based on the information gathered from the documents available[30], there are indications that the task managers provided adequate supervision, guidance and backstopping. For example, in response to the half year progress report submitted by FECO for the period January – June 2014, the task manager (first one) made the following requests/recommendations to FECO: (i) to send draft reports for the inventories in the pilot provinces (ii) to send preliminary report for activity 5 of output 3 on laboratory capacity to monitor mercury (iii) to share preliminary results on mercury in humans and environment in China (iv) to be review and upgrade the draft document on initial action plan on mercury (v) to evaluate the dimension of the problem regarding input and output of mercury for inventory exercise before actual measurements as these are considered costly. According to the PIR report (July 2014 – June 2015), the suggestion/recommendation (iv) was discussed at a PSC

[30] Only one PIR report and only one detailed PSC minutes meeting were made available to the evaluation – Only a summary for the July 2014 PSC meeting was available.

meeting held on 2 July 2014, which was attended by the task manager, and it was agreed that the initial action plan for Hg reduction should be reviewed and amended to be more quantitative and practical and that could to be more easily adopted by the Chinese government. He took advantage of his mission in China to undertake field trips to the pilot provinces (3 – 4 July 2014) to discuss project progress with the local EPBs.

105. The guidance and supervision of the task managers were highly appreciated by the national counterparts. In particular, they indicated that the task managers were of great assistance in the re-phasing of unspent GEF funds (as a result of the three no cost extensions). They were also very satisfied with the technical advice / training provided by UN Environment, DTIE on the proper use of the mercury toolkit[31].

4.8 Monitoring and evaluation.

4.8.1 Monitoring and Evaluation Design

106. The monitoring & evaluation (M & E) plan proposed in the project document is consistent with UN Environment's standard procedures. It is also consistent with the GEF Monitoring and Evaluation policy. The plan is adequate and allows for monitoring progress at results level. The SMART objectively verifiable indicators at results level and their sources of verification proposed in the project results framework (PRF) seem adequate to monitor progress. Realistic assumptions for the project outcomes and outputs have also been identified in the PRF.

107. The costed M&E plan given as appendix 5 appears adequate. The plan mentions that the executing agency, MEP-FECO would submit half-yearly reports as well as a yearly Project Implementation Report (PIR) report to UN Environment. It would also be responsible for the recruitment of local/international staff or consultants and the execution of the activities according to the work plan and expected outcomes.

108. The plan includes the costing and planning of the inception workshop, PSC meetings, independent financial audit and independent terminal evaluation as well as the entities responsible for each monitoring activity. As mentioned earlier (cf. section 3.5), to reduce costs, the inception workshop and the PSC meetings were planned back to back with technical meetings. As a result, the only budgeted M&E activities were the independent terminal evaluation and the independent financial for an overall cost of $30,000, which the evaluation considers as adequate. Moreover, the overall approach described in section 6 of the project document to monitor progress in terms of activities and deliverables is appropriate and is clearly linked to oversight, reporting, and governance.

4.8.2 Monitoring & evaluation implementation

109. The PSC and the PET were established in the first quarter of 2013. The PSC was comprised of the UN Environment task Manager, the project team (5 FECO officers), Tsinghua University, China Solid Waste and Chemicals Management Center, IHEP-CAS, BNU, USTB. The

[31] Feedback gathered during field mission

PET was constituted by the same members as the PSC except for the task manager who was not part of the team.

110. The inception workshop was held in March 2013 in Beijing. The PSC was supposed to meet three times (2 physical meetings and one teleconference). However, as the project was extended to 54 months), 4 physical PSC meetings were held in Beijing in March 2013 (back to back with inception workshop), in July 2014, in 2015, and in January 2016 respectively. Similarly, instead of two, four PIRs were expected. However only the PIR for the Financial Year 2015 (FY 2015) was available. Nevertheless, according to information gathered from this PIR, the progress reports the inception workshop report, and the minutes of the PSC meetings, clearly indicates that the M&E system was operating satisfactorily, and this appeared to have facilitated the tracking of results and monitoring of progress, and to improve on project performance. . For example, during the PSC meeting of 2014, the Director of the Department of Chemicals, of MEP made some suggestions on the implementation of the project. In particular, he recommended that attention should be paid to the enforceability of policy recommendations regarding pollution control of mercury. During the same meetingit was decided that the initial action plan for mercury reduction needed be reviewed and improved. Similarly, the decision to update the inventory for the coal fired power plant was taken during the January 2016 PSC meeting.

111. Comprehensive half yearly progress reports were submitted with some delays, the final report was submitted in December 2016, but the midterm review was not undertaken. The planned budget ($30,000) was effectively used for the independent terminal evaluation and the independent final audit of the project. The rating on M&E is **Satisfactory**.

5 Conclusions and Recommendations

5.1 Conclusions

112. This pilot project on the development of mercury inventory was designed to strengthen China's capacity for identification of mercury sources and priority actions to address under the Minamata Convention. The ultimate goal of the project was to protect human health and the environment from the toxic exposure of mercury by phasing out mercury. It was understood right from the design that the goal would not be achieved during the project life, but rather in the longer term by 2025 through the implementation of the Minamata Convention.

113. In the terms of reference for this terminal evaluation, it was assumed that evaluation results would be able to provide greater insights to the following four key questions:

(a) *Has the project been successful in facilitating the identification of good practices and replicable elements of prevention and control of mercury pollution that can be reproduced in other provinces in the country?*
Good practices and replicable elements of prevention and control of mercury pollution that can be reproduced in other provinces in the country have been satisfactorily identified and proposed in the sound mercury action plan developed by the project.

(b) *To what extent has the project succeeded in strengthening China's capacity for identification of mercury sources and priority actions to address mercury issues?*
The project has been very successful in strengthening China's capacity for identification of mercury sources and priority actions to address mercury issues. This was possible thanks to the adoption and use of the mercury toolkit by national and provincial stakeholders with technical assistance provided by UN Environment.

(c) *What are the main contributing factors that have influenced the project's project implementation and attainment of project results?*
The commitment of the project team, the active participation of key stakeholders and the recruitment of high quality experts were the main factors that contributed to the successful attainment of project results.

(d) *To what extent did the project encourage women's participation in the activities proposed, and ensure that vulnerable / minority groups are well represented in the development of the national action plan?*
Although the project recognizes that pregnant women and children are more susceptible to mercury exposure, the design did not include specifically the participation of women in the project activities.

114. Although it was slow to start, the project was adequately managed by a project team constituted by officers of the Minamata Convention Implementation Division of FECO, an office of the Ministry of Environmental Protection. The bulk of the project activities were subcontracted to prestigious research institutions such as Tsinghua University, IHEP and Beijing Normal University, most of which were already identified during the preparatory phase of the project. With the technical assistance of UN Environment and support from the Project Expert Team, the subcontractors were able to successfully deliver all the planned outputs. For example, IHEP produced a comprehensive toolkit adapted for the Chinese context that was successfully used for the mercury inventories in Guizhou and Hunan, the two pilot provinces. The active involvement of the local EPBs and local enterprises contributed to the satisfactory completion of these inventories.

115. The planned outcomes were also successfully delivered. For instance, the comprehensive information gathered on mercury sources and releases from the inventories in two pilot provinces in China has enabled for a better understanding and sound planning on mercury management. The project has also generated increased knowledge of the sources of mercury releases, management gaps and monitoring needs, which have allowed the development of sound mercury action plans. Finally, the project has also enabled additional provinces to participate to national efforts for the reduction of mercury release.

116. Impact of the project is highly likely under the condition that the following intermediate states, not mentioned in the project document but identified by the evaluation, occur: (i) project recommendations integrated into national policies and mercury action plan adopted; (ii) effective implementation of sound mercury action plan across the country; (iii) key sectors adopting mercury reducing systems or alternative methods (e.g. BAT/BEP); and (iv) replication of project results in all provinces of China. Given the scope of the efforts needed, China would require international assistance to fully implement these elements. There are indications that

this is happening, China is currently implementing two follow-up projects on mercury in the context of the Minamata Convention

117. For replication purposes, the key results and lessons learned were shared with a wide range of stakeholders (local authorities, policy makers, local enterprises, academia, NGOs, etc.) in the Henan, Shaanxi and Sichuan provinces. Apart from sharing the project outcomes, these workshops provided an opportunity to raise the awareness of the major stakeholders on the need to phase out mercury in the production of goods (e.g. in the VCM sector, CFLs, etc.) and also on the need to minimize the release of mercury to the environment during manufacturing processes through the use of appropriate abatement systems (e.g. BAT/BEP).

118. The project suffered significant delays that required three no cost extensions for completion of activities. Initially planned for 2 years, the project lasted for 54 months. The project was slow to start, the inception workshop took place three months after the PCA was signed between FECO and UN Environment. Similarly, the bulk of activities were supposed to start during the first year of implementation but sub-contracts with consultants were signed only during the second year. Difficulties for local consultants to report in English also delayed the implementation process

119. Despite the delays, all the planned outputs and outcomes have been satisfactorily delivered. The on-going follow up projects to implement the Minamata Convention and inclusion of requirements to monitor mercury in the 13th Five Year plan for environmental protection are very good indicators that the project results / outcomes are likely to be sustained. For these reasons, the overall project rating is **Satisfactory**. The ratings of the different evaluation aspects related to project implementation are summarized in the following table.

Table 6: Summary of Performance Ratings

Criterion	Summary Assessment	Rating
A. Strategic relevance	Project is in line with GEF Focal Area Strategy CHEM-3 Pilot sound chemicals management and mercury reduction. It is relevant to China's program of Comprehensive Heavy Metal (including mercury) Pollution Treatment. And China is party to the Minamata Convention	S
B. Achievement of outputs	All planned outputs satisfactorily delivered.	S
C. Effectiveness: Attainment of project objectives and results		S
1. Achievement of direct outcomes	Capacity in China strengthened for identification of mercury sources and priority actions given that planned activities have been successfully completed, the corresponding outputs satisfactorily delivered, and all the key performance indicators can be tracked.	S

2. Likelihood of impact	The measures designed to move towards the intermediate states have started, but have not produced results yet	HL
3. Achievement of project goal and planned objectives	Follow up projects are being implemented and are assisting China to implement the Minamata Convention. Achievement of project goal, which is to protect human health and the environment against the toxic effect of mercury, is likely to occur by 2025 according to the mid-long term strategy	S
D. Sustainability and replication		L
1. Financial	China is already benefitting from international financial support through the follow up projects that are currently being implemented.	L
2. Socio-political	China has signed and ratified the Minamata Convention and is committed for its full implementation	L
3. Institutional framework	The Minamata Convention Implementation Division of FECO (formerly called the Mercury Working Group) has been established to specifically implement the Minamata Convention.	L
4. Environmental	No environmental risk that might jeopardize the project results has been identified.	L
5. Catalytic role and replication	The project has catalysed the development of emission factors for mercury inventory and policy changes by inclusion of mercury monitoring requirements in the 13th Five Year plan. The lessons and experience of the project have already been shared in Shaanxi, Sichuan and Henan provinces for replication.	S
F. Factors affecting project performance		
1. Preparation and readiness	The timeframe was too ambitious for project execution. However the capacity of stakeholders were adequately assessed during project design	MS
2. Project implementation and management	Agreed implementation approach adopted. Project Results framework used to monitor activities and track progress	S
3. Stakeholders participation and public awareness	Involvement of stakeholders has been satisfactory. The national associations such as the China National Coal Association provided data for the inventory. The local EPBs were actively invoved in the pilot provinces. Awareness of stakeholders adequately	S

	raised	
4. Country ownership and driven-ness	Ownership is high. Project was executed by five dedicated FECO officers of the Minamata Convention Implementation division, and requirement for mercury monitoring included in the 13th Five Year Plan for environmental protection	S
5. Financial planning and management	FECO standard procedures were applied. Variances with respect to original budget planning fully justified	S
6. UN Environment supervision and backstopping	UN Environment supervision and backstopping considered adequate. Recommendations and suggestions for improvement made during PSC meetings and in the PIR report FY 2015. Support and guidance highly appreciated by national counterparts.	S
7. Monitoring and evaluation		S
a. M&E Design	The M&E design is consistent with UN Environment standard's procedures as well as with GEF monitoring and evaluation policy.	S
b. Budgeting and funding for M&E activities	Adequate costed M&E plan proposed.	S
c. M&E Plan Implementation	Information gathered from the PIR of FY 2015 clearly indicated that the M&E system was operational, which facilitated the tracking of results and monitoring of progress. 4 PSC meetings, attended by the UN Environment task managers, were undertaken.	S
Overall project rating		S

5.2 Lessons learned

120. The project has been successfully completed and the following paragraphs describe a number of useful lessons.

Lesson 1: **Committed executing agency, active participation of stakeholders, and appropriate technical guidance are the basis to achieve success**

121. Although the project was slow to start, all the planned outputs and outcomes were satisfactorily delivered thanks to the commitment and dedication of the project team and the guidance provided by expert team (many coming from prestigious Chinese research institutions). The active involvement / participation of key stakeholders such as the local EPBs who were instrumental in the inventory exercises in the pilot provinces, and national associations who provided vital information for the inventories were also important factors for success.

Lesson 2: Early and clear communication with stakeholders ensure high response rates during surveys and avoid delays in project execution

122. The local enterprises were reluctant to submit data/information for the mercury inventories in the pilot provinces, which caused delays. Upon proper communication, the local EPBs were however successful in gathering the necessary information to complete the inventories (). The lesson that could be learned is that an early and appropriate communication with potential respondents in surveys would avoid delays in responses. Additionally, whenever possible the major potential respondents (local enterprises in this case) could be identified and invited in inception meetings / workshops to ensure better response.

Lesson 3: Better planning by informing relevant departments early in the project would avoid administrative delays during project implementation

123. Due partly to slow administrative procedures, the project required 54 months for successful completion against an initial planned duration of 24 months (paragraph 66). Most of the bulk activities of the project were planned to start in the first year of implementation, but the consultants were sub-contracted only during the second year (paragraph 83, Table 3). Had the relevant department / officer responsible to issue contracts at FECO been informed earlier during project implementation through better planning, these delays could have significantly been reduced.

5.3 Recommendations

124. The following recommendation is addressed to UN Environment and the international community.

125. **Recommendation 1**: The reconstruction theory of change (paragraph 45) has identified a number of intermediate states (project recommendations integrated into national policies and mercury action plan adopted, and effective implementation of sound mercury action plan across the country, and key sectors adopting mercury reducing systems), that need to occur for impact of the project, which was to protect human and the environment from the toxic effect of mercury. It is also reported national financial capacity exists to implement the Minamata Convention to a certain degree, but in the long term for its full and smooth implementation, there is need for significant international financial as well as technical support (paragraph 72). In 2005[32], China's annual consumption of mercury accounted for about 50% of the world's total, and has emitted about 195 tonnes of mercury to air through coal combustion (representing about 40% of global mercury emission from coal combustion[33]) in that year. In that context and to ensure impact of the project and for significant global environmental benefits, it is essential that international support is made available to assist China in fully implementing the Convention.

[32] Information taken from the project document

[33] 484 tonnes of mercury were emitted to air on a global scale from the combustion of coal according to the Global Mercury Assessment report 2013 of UNEP

126. The following recommendations are addressed to FECO.

127. **Recommendation 2**: Follow up projects are currently being implemented to assist China in the implementation of the Minamata Convention (paragraph 52). For sustenance of project results and impact, it is recommended that strong linkages be created between the project and the on-going or future projects. FECO should also ensure that the recommendations, action plan and lessons learned of the project under evaluation be considered and adopted in these on-going and future projects.

128. **Recommendation 3**: The project results, lessons learned and good practices were supposed to be published on the MEP website. It appears that this has not been done (paragraph 95). For information dissemination purposes, it is suggested that FECO could consider creating a Minamata Convention page on the MEP website that would not only report about the project but also about on-going and future projects on mercury.

Annex 1: Response to stakeholders' comments

- No comments were received

Annex 2: Evaluation TOR

TERMS OF REFERENCE[34]

Terminal Evaluation of the UNEP/GEF Project "Pilot project on the development of a mercury inventory in China"

PROJECT BACKGROUND AND OVERVIEW

Project General Information35

Table 1. Project summary

UNEP PIMS ID:		**IMIS number:**	
Sub-programme:	Chemicals and Waste	**Expected Accomplishment(s):**	
UNEP approval date:		**PoW Output(s):**	
GEF project ID:	4962	**Project Type:**	Medium-sized Project(MSP)
Focal Area(s):	Persistent Organic Pollutants	**GEF Focal Area Strategy:**	CHEM-3: Pilot sound chemicals management and mercury reduction.
GEF approval date:	August 2011	**GEF Strategic Priority/Objective:**	Pilot sound chemicals management and mercury reduction
UNEP approval date	July 2012	**Actual start date:**	January 1, 2013
Planned completion date:	31/09/2014	**Actual completion date:**	May 2017
Planned project budget at approval:	USD 4,146,265	**Total expenditures reported as of 30 June 2016:**	
GEF Allocation:	USD 1,000,000	**GEF grant expenditures reported as of 30 June 2016:**	
Expected MSP co-financing:	USD 3,146,265	**Secured MSP co-financing**	
No. of revisions:		**Date of last revision:**	
Mid-term review/ evaluation date:	None	**Terminal Evaluation date**	December 2016

Project rationale

Due to its persistence, bioaccumulation and toxicity to human and wild life, as well as its long-range transport in the atmosphere, mercury has high attention in both the environmental science and the public policy sphere. Mercury can produce a range of adverse human health effects, including permanent damage to the nervous system, in particular the developing nervous system.

[34] TOR template version of February 11 2015

As a big mercury producer and consumer, China produces about 700 tons of mercury every year, and its annual consumption is over 1,000 tons, accounting for 50 % of the world's total. In 2005, China's anthropogenic mercury emission to the atmosphere was about 700 tons, about 30 % of global emission. In China, almost all emission sources as listed in the ten categories and 44 sub-categories stipulated in the Toolkit for Identification and Quantification of Mercury Releases of UNEP can be found. It is assumed that the mercury pollution is large in scale and is caused by a wide range of sources including exploitation of mercury mining, power generation, steel and nonferrous metals production, cement production, chemical and other national pillar industries, among which coal firing, non-ferrous metals production and manufacturing of polyvinyl chloride (PVC) by the acetylene process are China's largest mercury sources.

Without the GEF support, China's mercury releases will not decrease and the development of a standardized inventory on mercury in China, as a first step to develop a national mercury reduction plan, will not be possible. Each sector will continue making efforts by their own without an integrated approach. China would not be able to develop a mercury inventory using standardised methodology, UNEP Toolkit, if international support is not provided. The development of a mercury inventory in China is therefore considered as the basis for any future plan for mercury reduction.

This project is the first GEF supported intervention on mercury in China. It was designed to support China develop a detailed mercury releases inventory in two provinces, where mercury management is a priority. It would assist China to develop a national mercury action plan to decrease mercury releases in the years to come, and also strengthen China's capacity for identification of mercury sources and priority actions to address mercury issues under a future global convention.

It was expected that the results of this project would comprehensively promote mercury pollution control in China by: developing the first inventory project on mercury in China; facilitating detailed inventory making at provincial level; providing training in developing a full national inventory of mercury in China; providing a preliminary baseline for China's national mercury pollution control; and building national mercury pollution management capacity.

The project is expected to contribute to the Intergovernmental Negotiation Committee (INC) process and the development of the substantive paragraphs in the future legally binding instrument on mercury. This project is expected to also support obligations and activities that might become relevant in the future legally binding instrument on mercury, or at least ensure that they are addressed by one of the eight Mercury Partnership areas.

All GEF proposed interventions in GEF V, whether POPs, mercury, chemicals or Ozone, are complementary to UNEP's Subprogram on Chemicals and Waste (formerly 'Harmful Substances and Hazardous Waste'), executed by UNEP DTIE Chemicals Branch. China is one of the largest producer and consumer of mercury in the world; therefore dealing with mercury in China is considered as a priority with the potential to have significant global impact.

Table 2, illustrates the project's logical framework. Please note that this is an abridged version that mainly depicts the project objectives, components, planned outputs, expected outcomes including their indicators.

Table 2. Project Results Framework*

Project Goal: To protect human health and the environment from the toxic exposure of mercury by phasing out mercury
Project Objective: to strengthen China's capacity for identification of mercury sources and priority actions to address under a future global convention

Project Component	Planned Outputs	Expected Outcomes	Outcome Indicators
Component 1. Initial guidance on mercury management identified and baseline strengthened	1. Project's workplan, budget and monitoring plan endorsed by stakeholders and available 2. Basic information on mercury management in China available to relevant stakeholders	Outcome 1. Project baseline strengthened and information needs identified	1.1 Work plan, budget and monitoring and evaluation plan endorsed 1.2 Initial guidance materials identified
Component 2. Development of mercury inventories by industrial sector and geographical distribution in China	1. Comprehensive overview of mercury management in the key industrial sectors identified 2. Quantitative and qualitative data on mercury releases available: Development of a detailed inventory in two provinces and semi-quantitative inventory nationwide	Outcome 2. Comprehensive information on mercury sources and releases in two provinces in China enables a better understanding and sound planning on mercury management	2.1 Number of key industrial sectors identified through consultations including a national workshop 2.2 Number of Chinese provinces conducted detailed mercury inventory
Component 3. Assessment and strengthening of existing monitoring capacity for mercury analysis in the environment and humans	1. Report on national capacity for mercury analysis and database of laboratories able to perform mercury analysis 2. Collected data of good quality for mercury releases in the environment and biota from key sectors in China available	Outcome 3. Improved understanding of the presence of mercury in the environment and humans guides China to develop targeted mercury reduction strategies	3.1 Number of national laboratories recognised and able to perform mercury analysis 3.2 Number of studies providing data sets results on environmental and human samples
Compnent 4. Prioritization of mercury sources, mercury management gap analysis and initial action plan developed	1. Scheme of criteria developed 2. Priority sectors and activities identified and developing mercury reduction plans 3. China addressing gaps identified in mercury management 4. Mercury monitoring system in place confirming in the long term mercury reduction in the environment and in humans 5. China medium and long term strategy to decrease	Outcome Sound mercury action plan that addresses priority issues identified from increased knowledge of the sources of mercury releases, management gaps and monitoring needs	4.1 Criteria for prioritization of mercury sources 4.2Number of priority mercury sources by sector and province 4.3 Number of sectors being assessed for mercury management gaps and proposals to address them 4.4 Assessment and identification of needs for environmental and human mercury monitoring 4.5 Number of action plans for mercury reduction developed

Project Component	Planned Outputs	Expected Outcomes	Outcome Indicators
	mercury emissions according to the action plan developed		
Component 5. Lessons learned, final report, and strategies for needs to reduce mercury	1. Final report including preliminary inventory, analytical capacity, and initial action plan for China 2. Lessons learned and recommendations requested in other provinces and countries 3. Suggestions for dissemination implemented and report disseminated in all provinces in China 4. Monitoring and evaluation plan fully implement assess rate of project's success	Outcome 5. Additional provinces able to participate in the national efforts to reduce mercury emissions in China triggered by the increased awareness and availability of mercury data	5.1 Number of consultation workshops to discuss the outcomes of the national exercise to identify lessons learned, good practices and recommendations on:(a) mercury management practices; (b) inventory taking; and (c) action plan development 5.2 Number of workshops to discuss draft report, strategies and lessons learned 5.3 final project report endorsed and diffused 5.4 Number of Steering Committee Meeting reports available as part of the Monitoring and Evaluation Plan

*Source: Prodoc 22.06.2012

Executing Arrangements

UNEP was the **GEF Implementing Agency** for the project. UNEP was responsible for overall project supervision, overseeing the project progress through the monitoring and evaluation of project activities and progress reports, including technical issues. UNEP was expected to work in close collaboration with the Executing Agency and provide technical and administrative support.

In China, the Ministry of Environmental Protection (MEP) is responsible for coordinating all mercury activities. The Foreign Economic Cooperation Office (FECO) is part of MEP and coordinates China's participation and input into mercury negotiations. It is also in charge of executing activities related to mercury management. **MEP-FECO** was the **Executing Agency** for this project. As executing agency, MEP-FECO was responsible for: : (i) provision of technical support for international negotiations and policy studies on the Mercury Convention, (ii) provision of support for development and implementation of mercury-related policy and regulations, as well as coordination of key governmental stakeholders, (iii) mobilization of co-financing from international, bilateral, and national sources, (iv) collecting data and information, compiling reports, organizing training activities, and publishing information. In addition, MEP-FECO provided guidance to ensure the successful implementation of the project through regular monitoring, administrative, progress and financial reports to UNEP.

The **National Project Management Team (NPMT)** was responsible for the day-to-day management and execution of the project, and oversaw the local project management offices. It was composed of staff from MEP, Industries Association, research institutions and other relevant agencies. MEP designated a coordinator/team leader.

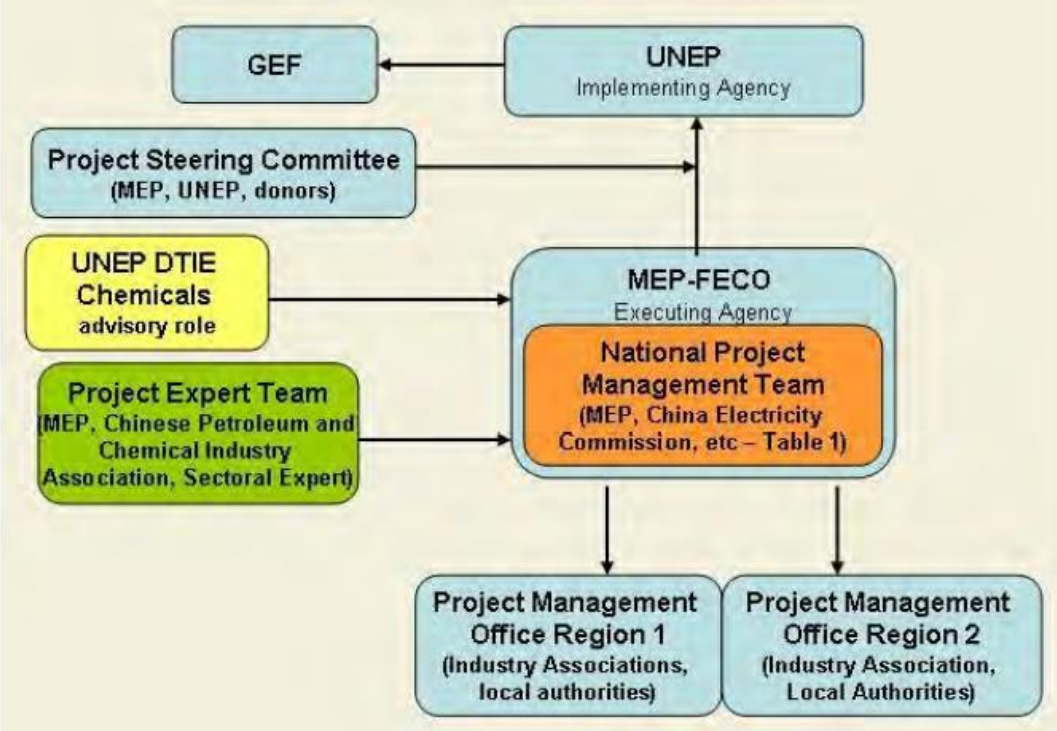
A **Project Steering Committee (PSC)** was formed by bilateral donors, UNEP DTIE Chemicals, MEP FECO, Ministry of Finance, Ministry of Civil Affairs, and other GEF implementation organisms. It was created to assess progress made and the effectiveness of operations and technical outputs obtained against resources spent. It also recommended actions for adaptation where necessary and confirmed implementation plans. The meetings of the Steering Committee were carried out in Chinese and English.

A **Project Expert Team (PET)** and Project Coordinator were established within the Executing Agency, composed by the expert from Ministry of Civil Affairs, the Project Coordinator, Technical Assistant and Management Assistant. This team was in charge of the execution and management of the project and it reported to UNEP and the Project Steering Committee.

The provinces selected for the vertical approach included those where a range of mercury sources are present, i.e. Guizhou and Hunan. Local authorities from these two provinces participated in the coordination and execution of the activities in this project. They carried out inventory surveys and demonstration province activities that involved provincial authorities, industry authorities and relevant research or testing institutions.

The Figure below shows the project management structure.

Figure 1. Project Organogram



Source: Prodoc 22062012

Project Cost and Financing

The approved GEF grant for the project was US$ 1,000,000.00, and in addition the project had co-financing for the amount US$ 3,146,265. The breakdown of the project budget by component is presented in Table 3, followed by the breakdown of confirmed co-financing by source in Table 4.

Table 3. Project budget by Component

Project Component	Grant Amount ($)	Confirmed Co-financing ($)
Identification of initial guidance and strengthening of current baseline	65'000	1,146,265
Development of mercury inventories by industrial sector and geographical distribution	200'000	800,000
Assessment and strengthening of existing monitoring capacity for mercury analysis in the environment and humans	90,000	200,000
Prioritization of mercury sources, gaps analysis and initial action plan developed	250,000	440,000
Lessons learned, final report, and strategies for needs to reduce mercury agreed	340,000	310,000
Subtotal	945,000	2,896,265
Project management cost	55,000	250'000
Total project costs	**1,000,000**	**3,146,265**

Table 4. Sources of confirmed Co-financing for the project by source and by name

Sources of Co-financing	Name of Co-financier (source)	Type of Co-financing	Co-financing Amount ($)
National Government	Foreign Economic Cooperation Office (FECO/MEP)	In-kind	500,000
National Government	Foreign Economic Cooperation Office (FECO/MEP)	Grant	200,000
Local Governments	Provincial Environmental Protection Bureau	In-kind	250,000
Local Governments	Provincial Environmental Protection Bureau	Grant	250,000
GEF Agency	United Nations Environment Programme (UNEP)	In-kind	1,146,265
Bilateral Aid Agency through FECO	Norway: Sino-Norwegian projects	Grant	800,000
Total Co-financing			**3,146,265**

Implementation Issues

The project was intended to complete in June 2015, however it was prolonged to end in December 2016 following a no-cost project extension….

A final Workshop was undertaken by FECO and it is reported that the project generally had no major implementation issues affecting delivery.

TERMS OF REFERENCE FOR THE EVALUATION

Objective and Scope of the Evaluation

In line with the UNEP Evaluation Policy[36] and the UNEP Programme Manual[37], the Terminal Evaluation is undertaken at completion of the project to assess project performance (in terms of relevance,

[36] http://www.unep.org/eou/StandardsPolicyandPractices/UNEPEvaluationPolicy/tabid/3050/language/en-US/Default.aspx

effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UNEP and [main project partners]. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation, e.g. the experiences on the application of the Toolkit in China may contribute to the further improvement and updating of the UNEP Mercury Toolkit for Identification and Quantification of Mercury Releases, in line with the overall strategic thinking of GEF on Global mercury releases and control.

In addressing the evaluation criteria in section II. 5 below, the evaluation results should be able to provide greater insights into the following **key questions**, based on the project's intended outcomes, (and expanded by the consultant as deemed appropriate):

(e) This project is the pioneer in the mercury inventory in pilot regions and industries in China and will serve as a basis for further studies or works involving mercury releases and mercury pollution control. Has the project been successful in facilitating the identification of good practices and replicable elements of e prevention and control of mercury pollution that can be reproduced in other provinces in the country?

(f) Because China is a relatively large mercury producer and consumer, the outcomes of this project will automatically have a global impact, to what extent has the project succeeded in strengthening China's capacity for identification of mercury sources and priority actions to address mercury issues?

(g) What are the main contributing factors that have influenced the project's project implementation and attainment of project results?

(h) In accordance with UNDAF outcome 3, China recognises that rural-urban income and gender disparities have grown sharply, and despite considerable policy effort the gap between eastern and western provinces has not narrowed. To what extent did the project encourage women's participation in the activities proposed, and ensure that vulnerable / minority groups are well represented in the development of the national action plan?

Overall Approach and Methods

The Terminal Evaluation of the Project will be conducted by an independent consultant under the overall responsibility and management of the UNEP Evaluation Office in consultation with the UNEP Task Manager and the Sub-programme Coordinator of the Chemicals and Waste Sub-programme.

It will be an in-depth evaluation using a participatory approach whereby key stakeholders are kept informed and consulted throughout the evaluation process. Both quantitative and qualitative evaluation methods will be used to determine project achievements against the expected outputs, outcomes and impacts. It is highly recommended that the consultant(s) maintains close communication with the project team and promotes information exchange throughout the evaluation implementation phase in order to increase their (and other stakeholder) ownership of the evaluation findings.

The findings of the evaluation will be based on the following:

(a) A **desk review** of relevant background documentation, including, but not limited to:

[37] http://www.unep.org/QAS/Documents/UNEP_Programme_Manual_May_2013.pdf

- Project design documents (including minutes of the project design review meeting at approval); Annual Work Plans and Budgets or equivalent, revisions to the project (Project Document Supplement), the logical framework and its budget;
- Project reports such as six-monthly progress and financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence etc.;
- Other project-related material (outputs) produced by the project staff or partners.

(b) **Interviews (individual or in group) with**:

- UNEP Task Manager and Fund Management Officer
- Project management team and other relevant staff in UNEP dealing with mercury related activities as necessary
- Relevant GEF Secretariat staff
- Project partners (MEP-FECO)
- Relevant resource persons including: National Coal Association, Petroleum and Chemistry Federation, Non-ferrous Metals Industrial Association, Medical Devices Association, China Battery Association, China Association of Light Industry, NGOs and civil society representatives.

(c) **Surveys:** As appropriate, these interviews could be combined with an email questionnaire.
(d) **Field visit** to China
(e) **Other data collection tools**: the Consultant shall seek additional information and opinions by e-mail, or through telephone communication.

Key Evaluation principles

Evaluation findings and judgements should be based on **sound evidence and analysis**, clearly documented in the evaluation report. Information will be triangulated (i.e. verified from different sources) to the extent possible, and when verification was not possible, the single source will be mentioned. Analysis leading to evaluative judgements should always be clearly spelled out.

The evaluation will assess the project with respect to **a minimum set of evaluation criteria** grouped in five categories: (1) Strategic Relevance; (2) Attainment of objectives and planned result, which comprises the assessment of outputs achieved, effectiveness and likelihood of impact; (3) Sustainability and replication; (4) Efficiency; and (5) Factors and processes affecting project performance, including preparation and readiness, implementation and management, stakeholder participation and public awareness, country ownership and driven-ness, financial planning and management, UNEP supervision and backstopping, and project monitoring and evaluation. The evaluation consultants can propose other evaluation criteria as deemed appropriate.

Ratings. All evaluation criteria will be rated on a six-point scale. Annex 3 provides guidance on how the different criteria should be rated and how ratings should be aggregated for the different evaluation criterion categories.

Baselines and counterfactuals. In attempting to attribute any outcomes and impacts to the project intervention, the evaluators should consider the difference between *what has happened with, and what would have happened without, the project*. This implies that there should be consideration of the baseline conditions, trends and counterfactuals in relation to the intended project outcomes and impacts. It also means that there should be plausible evidence to attribute such outcomes and impacts to the actions of the project. Sometimes, adequate information on baseline conditions, trends or

counterfactuals is lacking. In such cases this should be clearly highlighted by the evaluators, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgements about project performance.

The "Why?" Question. As this is a terminal evaluation and a follow-up project is likely [or similar interventions are envisaged for the future], particular attention should be given to learning from the experience. Therefore, the "*Why?*" question should be at the front of the consultants' minds all through the evaluation exercise. This means that the consultants need to go beyond the assessment of "*what*" the project performance was, and make a serious effort to provide a deeper understanding of "*why*" the performance was as it was, i.e. of processes affecting attainment of project results (criteria under category F – see below). This should provide the basis for the lessons that can be drawn from the project. In fact, the usefulness of the evaluation will be determined to a large extent by the capacity of the consultants to explain "*why things happened*" as they happened and are likely to evolve in this or that direction, which goes well beyond the mere review of "*where things stand*" at the time of evaluation.

A key aim of the evaluation is to encourage reflection and learning by UNEP staff and key project stakeholders. The consultant should consider how reflection and learning can be promoted, both through the evaluation process and in the communication of evaluation findings and key lessons.

Communicating evaluation results. Once the consultant(s) has obtained evaluation findings, lessons and results, the Evaluation Office will share the findings and lessons with the key stakeholders. Evaluation results should be communicated to the key stakeholders in a brief and concise manner that encapsulates the evaluation exercise in its entirety. There may, however, be several intended audiences, each with different interests and preferences regarding the report. The Evaluation Manager will plan with the consultant(s) which audiences to target and the easiest and clearest way to communicate the key evaluation findings and lessons to them. This may include some or all of the following; a webinar, conference calls with relevant stakeholders, the preparation of an evaluation brief or interactive presentation.

Evaluation criteria

This chapter provides guidelines on the nature of questions that should be considered in assessing project performance under different evaluation criteria

Strategic relevance

The evaluation will assess, in retrospect, whether the project's objectives and implementation strategies were consistent with global, regional and national environmental issues and needs.

The evaluation will assess whether the project was in-line with the GEF Persistent Organic Pollutants (POPs) focal area's strategic priorities and operational programme(s).

The evaluation will also assess the project's relevance in relation to UNEP's mandate and its alignment with UNEP's policies and strategies at the time of project approval. UNEP's Medium Term Strategy (MTS) is a document that guides UNEP's programme planning over a four-year period. It identifies UNEP's thematic priorities, known as Subprogrammes (SP), and sets out the desired outcomes [known as Expected Accomplishments (EAs)] of the Subprogrammes. The evaluation will assess whether the project makes a tangible/plausible contribution to any of the EAs specified in the MTS 2010-2013 and MTS 2014-2017 The magnitude and extent of any contributions and the causal linkages should be fully described.

The evaluation should assess the project's alignment / compliance with UNEP's policies and strategies. The evaluation should provide a brief narrative of the following:

(a) *Alignment with the Bali Strategic Plan (BSP)*[38]. The outcomes and achievements of the project should be briefly discussed in relation to the objectives of the UNEP BSP.
(b) *Gender balance*. Ascertain to what extent project design, implementation and monitoring have taken into consideration: (i) possible gender inequalities in access to and the control over natural resources; (ii) specific vulnerabilities of women and children to environmental degradation or disasters; and (iii) the role of women in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation. Are the project intended results contributing to the realization of international GE (Gender Equality) norms and agreements as reflected in the UNEP Gender Policy and Strategy, as well as to regional, national and local strategies to advance HR & GE?
(c) *Human rights based approach (HRBA) and inclusion of indigenous peoples issues, needs and concerns*. Ascertain to what extent the project has applied the UN Common Understanding on HRBA. Ascertain if the project is in line with the UN Declaration on the Rights of Indigenous People, and pursued the concept of free, prior and informed consent.
(d) *South-South Cooperation.* This is regarded as the exchange of resources, technology, and knowledge between developing countries. Briefly describe any aspects of the project that could be considered as examples of South-South Cooperation.
(e) *Safeguards*. Whether the project has adequately considered environmental, social and economic risks and established whether they were vigilantly monitored. Was the safeguard management instrument completed and were UNEP ESES requirements complied with?

Based on an analysis of project stakeholders, the evaluation should assess the relevance of the project intervention to key stakeholder groups.

Achievement of Outputs

The evaluation will assess, for each component, the projects' success in producing the programmed outputs (products and services delivered by the project itself) and milestones as per the ProDocs and any modifications/revisions later on during project implementation, both in quantity and quality, as well as their usefulness and timeliness.

Briefly explain the reasons behind the success (or failure) of the project in producing its different outputs and meeting expected quality standards, cross-referencing as needed to more detailed explanations provided under Section F (which covers the processes affecting attainment of project results). Were key stakeholders appropriately involved in producing the programmed outputs?

Effectiveness: Attainment of Objectives and Planned Results

The evaluation will assess the extent to which the project's objectives were effectively achieved or are expected to be achieved.

The **Theory of Change** (ToC) of a project depicts the causal pathways from project outputs (goods and services delivered by the project) through outcomes (changes resulting from the use made by key stakeholders of project outputs) towards impact (long term changes in environmental benefits and living conditions). The ToC will also depict any intermediate changes required between project outcomes and impact, called 'intermediate states'. The ToC further defines the external factors that influence change along the major pathways; i.e. factors that affect whether one result can lead to the next. These external factors are either drivers (when the project has a certain level of control) or assumptions (when the

[38] http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf

project has no control). The ToC also clearly identifies the main stakeholders involved in the change processes.

The evaluation will reconstruct the ToC of the project based on a review of project documentation and stakeholder interviews. The evaluator will be expected to discuss the reconstructed TOC with the stakeholders during evaluation missions and/or interviews in order to ascertain the causal pathways identified and the validity of impact drivers and assumptions described in the TOC. This exercise will also enable the consultant to address some of the key evaluation questions and make adjustments to the TOC as appropriate (the ToC of the intervention may have been modified / adapted from the original design during project implementation).

The assessment of effectiveness will be structured in three sub-sections:

(f) Evaluation of the **achievement of outcomes as defined in the reconstructed ToC**. These are the first-level outcomes expected to be achieved as an immediate result of project outputs. For this project, the main question will be to what extent the project has contributed to the immediate outcomes.

(g) Assessment of the **likelihood of impact** using a Review of Outcomes to Impacts (ROtI) approach[39]. The evaluation will assess to what extent the project has to date contributed, and is likely in the future to further contribute, to [intermediate states], and the likelihood that those changes in turn to lead to positive changes in the natural resource base, benefits derived from the environment and human well-being. The evaluation will also consider the likelihood that the intervention may lead to unintended negative effects (project documentation relating to Environmental, Social and Economic. Safeguards)

(h) Evaluation of the **achievement of the formal project overall objective, overall purpose, goals and component outcomes** using the project's own results statements as presented in the Project Document[40]. This sub-section will refer back where applicable to the preceding sub-sections (a) and (b) to avoid repetition in the report. To measure achievement, the evaluation will use as much as appropriate the indicators for achievement proposed in the Logical Framework (Logframe) of the project, adding other relevant indicators as appropriate. Briefly explain what factors affected the project's success in achieving its objectives, cross-referencing as needed to more detailed explanations provided under Section F. Most commonly, the overall objective is a higher level result to which the project is intended to contribute. The section will describe the actual or likely **contribution** of the project to the objective.

(i) The evaluation should, where possible, disaggregate outcomes and impacts for the key project stakeholders. It should also assess the extent to which HR and GE were integrated in the Theory of Change and results framework of the intervention and to what degree participating institutions/organizations changed their policies or practices thereby leading to the fulfilment of HR and GE principles (e.g. new services, greater responsiveness, resource re-allocation, etc.)

Sustainability and replication

Sustainability is understood as the probability of continued long-term project-derived results and impacts after the external project funding and assistance ends. The evaluation will identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of benefits. Some of these factors might be direct results of the project while others will include contextual circumstances or developments that are not under control of the project but that may condition the sustainability of benefits. The evaluation should ascertain to what extent follow-up work has been initiated and how project results will be sustained and enhanced over time. The reconstructed ToC will assist in the evaluation of sustainability, as the drivers and assumptions required to achieve higher-level results are often similar to the factors affecting sustainability of these changes.

[39] Guidance material on Theory of Change and the ROtI approach is available from the Evaluation Office.

[40] Or any subsequent **formally approved** revision of the project document or logical framework.

Four aspects of sustainability will be addressed:

(j) *Socio-political sustainability.* Are there any social or political factors that may influence positively or negatively the sustenance of project results and progress towards impacts? Is the level of ownership by the main stakeholders sufficient to allow for the project results to be sustained? Are there sufficient government and other key stakeholder awareness, interests, commitment and incentives? Did the project conduct 'succession planning' and implement this during the life of the project? Was capacity building conducted for key stakeholders? Did the intervention activities aim to promote (and did they promote) positive sustainable changes in attitudes, behaviours and power relations between the different stakeholders? To what extent has the integration of HR and GE led to an increase in the likelihood of sustainability of project results?

(k) *Financial resources.* To what extent are the continuation of project results and the eventual impact of the project dependent on financial resources? What is the likelihood that adequate financial resources[41] will be or will become available to use capacities built by the project? Are there any financial risks that may jeopardize sustenance of project results and onward progress towards impact?

(l) *Institutional framework.* To what extent is the sustenance of the results and onward progress towards impact dependent on issues relating to institutional frameworks and governance? How robust are the institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. required to sustaining project results and to lead those to impact on human behaviour and environmental resources, goods or services?

(m) *Environmental sustainability.* Are there any environmental factors, positive or negative, that can influence the future flow of project benefits? Are there any project outputs or higher level results that are likely to affect the environment, which, in turn, might affect sustainability of project benefits? Are there any foreseeable negative environmental impacts that may occur as the project results are being up-scaled?

Catalytic role and replication. The *catalytic role* of UNEP interventions is embodied in their approach of supporting the creation of an enabling environment and of investing in pilot activities which are innovative and showing how new approaches can work. UNEP also aims to support activities that upscale new approaches to a national, regional or global level, with a view to achieve sustainable global environmental benefits. The evaluation will assess the catalytic role played by this project, namely to what extent the project has:

(n) *catalyzed behavioural changes* in terms of use and application, by the relevant stakeholders, of capacities developed;

(o) provided *incentives* (social, economic, market based, competencies etc.) to contribute to catalyzing changes in stakeholder behaviour;

(p) contributed to *institutional changes*, for instance institutional uptake of project-demonstrated technologies, practices or management approaches;

(q) contributed to *policy changes* (on paper and in implementation of policy);

(r) contributed to sustained follow-on financing (*catalytic financing*) from the Local Governments, private sector, donors etc.;

(s) created opportunities for particular individuals or institutions ("*champions*") to catalyze change (without which the project would not have achieved all of its results).

Replication is defined as lessons and experiences coming out of the project that are replicated (experiences are repeated and lessons applied in different geographic areas) or scaled up (experiences are repeated and lessons applied in the same geographic area but on a much larger scale and funded by other sources). The evaluation will assess the approach adopted by the project to promote replication effects and determine to what extent actual replication has already occurred, or is likely to occur in the

[41] Those resources can be from multiple sources, such as the national budget, public and private sectors, development assistance etc.

near future. What are the factors that may influence replication and scaling up of project experiences and lessons?

Efficiency

The evaluation will assess the cost-effectiveness and timeliness of project execution. It will describe any cost- or time-saving measures put in place in attempting to bring the project as far as possible in achieving its results within its (severely constrained) secured budget and (extended) time. It will also analyse how delays, if any, have affected project execution, costs and effectiveness. Wherever possible, costs and time over results ratios of the project will be compared with that of other similar interventions. The evaluation will also assess the extent to which HR and GE were allocated specific and adequate budget in relation to the results achieved.

The evaluation will give special attention to efforts by the project teams to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. to increase project efficiency.

Factors and processes affecting project performance

Preparation and readiness. This criterion focuses on the quality of project design and preparation. Were project stakeholders[42] adequately identified and were they sufficiently involved in project development and ground truthing e.g. of proposed timeframe and budget? Were the project's objectives and components clear, practicable and feasible within its timeframe? Are potentially negative environmental, economic and social impacts of projects identified? Were the capacities of executing agencies properly considered when the project was designed? Was the project document clear and realistic to enable effective and efficient implementation? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project implementation? Were counterpart resources (funding, staff, and facilities) and enabling legislation assured? Were adequate project management arrangements in place? Were lessons from other relevant projects properly incorporated in the project design? What factors influenced the quality-at-entry of the project design, choice of partners, allocation of financial resources etc.? Were design weaknesses mentioned in the Project Review Committee minutes at the time of project approval adequately addressed?

Project implementation and management. This includes an analysis of implementation approaches used by the project, its management framework, the project's adaptation to changing conditions and responses to changing risks including safeguard issues (adaptive management), the performance of the implementation arrangements and partnerships, relevance of changes in project design, and overall performance of project management. The evaluation will:

(t) Ascertain to what extent the project implementation mechanisms outlined in the project document have been followed and were effective in delivering project milestones, outputs and outcomes. Were pertinent adaptations made to the approaches originally proposed?

(u) Evaluate the effectiveness and efficiency of project management and how well the management was able to adapt to changes during the life of the project.

(v) Assess the role and performance of the teams and working groups established and the project execution arrangements at all levels.

(w) Assess the extent to which project management responded to direction and guidance provided by the UNEP Task Manager and project steering bodies including the Project Steering Committee (PSC) and the Project Expert Team (PET).

[42] Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or 'stake' in the outcome of the project. The term also applies to those potentially adversely affected by the project.

(x) Identify operational and political / institutional problems and constraints that influenced the effective implementation of the project, and how the project tried to overcome these problems.

Stakeholder participation, cooperation and partnerships. The Evaluation will assess the effectiveness of mechanisms for information sharing and cooperation with other UNEP projects and programmes, external stakeholders and partners. The term stakeholder should be considered in the broadest sense, encompassing both project partners and target users of project products. The TOC and stakeholder analysis should assist the evaluators in identifying the key stakeholders and their respective roles, capabilities and motivations in each step of the causal pathways from activities to achievement of outputs, outcomes and intermediate states towards impact. The assessment will look at three related and often overlapping processes: (1) information dissemination to and between stakeholders, (2) consultation with and between stakeholders, and (3) active engagement of stakeholders in project decision making and activities. The evaluation will specifically assess:

(y) the approach(es) and mechanisms used to identify and engage stakeholders (within and outside UNEP) in project design and at critical stages of project implementation. What were the strengths and weaknesses of these approaches with respect to the project's objectives and the stakeholders' motivations and capacities?

(z) How was the overall collaboration between different functional units of UNEP involved in the project? What coordination mechanisms were in place? Were the incentives for internal collaboration in UNEP adequate?

(aa) Was the level of involvement of the Regional, Liaison and Out-posted Offices in project design, planning, decision-making and implementation of activities appropriate?

(bb) Has the project made full use of opportunities for collaboration with other projects and programmes including opportunities not mentioned in the Project Document? Have complementarities been sought, synergies been optimized and duplications avoided?

(cc) What was the achieved degree and effectiveness of collaboration and interactions between the various project partners and stakeholders during design and implementation of the project? This should be disaggregated for the main stakeholder groups identified in the inception report.

(dd) To what extent has the project been able to take up opportunities for joint activities, pooling of resources and mutual learning with other organizations and networks?

(ee) How did the relationship between the project and the collaborating partners (institutions and individual experts) develop? Which benefits stemmed from their involvement for project performance, for UNEP and for the stakeholders and partners themselves? Do the results of the project (strategic programmes and plans, monitoring and management systems, sub-regional agreements etc.) promote participation of stakeholders, including users, in environmental decision making?

Communication and public awareness. The evaluation will assess the effectiveness of any public awareness activities that were undertaken during the course of implementation of the project to communicate the project's objective, progress, outcomes and lessons. This should be disaggregated for the main stakeholder groups identified in the inception report. Did the project identify and make us of existing communication channels and networks used by key stakeholders? Did the project provide feedback channels?

Country ownership and driven-ness. The evaluation will assess the degree and effectiveness of involvement of government / public sector agencies in the project, in particular those involved in project execution and those participating in the project Steering Committee, Project Expert Team and partnership arrangements:

(ff) To what extent has the Government assumed responsibility for the project and provided adequate support to project execution, including the degree of cooperation received from the various public institutions involved in the project?

(gg) How and how well did the project stimulate country ownership of project outputs and outcomes?

Financial planning and management. Evaluation of financial planning requires assessment of the quality and effectiveness of financial planning and control of financial resources throughout the project's lifetime. The assessment will look at actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co-financing. The evaluation will:

(hh) Verify the application of proper standards (clarity, transparency, audit etc.) and timeliness of financial planning, management and reporting to ensure that sufficient and timely financial resources were available to the project and its partners;

(ii) Assess other administrative processes such as recruitment of staff, procurement of goods and services (including consultants), preparation and negotiation of cooperation agreements etc. to the extent that these might have influenced project performance;

(jj) Present the extent to which co-financing has materialized as expected at project approval (see Table 1). Report country co-financing to the project overall, and to support project activities at the national level in particular. The evaluation will provide a breakdown of final actual costs and co-financing for the different project components (see tables in Annex 4).

(kk) Describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective. Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, local governments, communities or the private sector.

Analyse the effects on project performance of any irregularities in procurement, use of financial resources and human resource management, and the measures taken UNEP to prevent such irregularities in the future. Determine whether the measures taken were adequate.

Supervision, guidance and technical backstopping. The purpose of supervision is to verify the quality and timeliness of project execution in terms of finances, administration and achievement of outputs and outcomes, in order to identify and recommend ways to deal with problems which arise during project execution. Such problems may be related to project management but may also involve technical/institutional substantive issues in which UNEP has a major contribution to make.

The evaluators should assess the effectiveness of supervision, guidance and technical support provided by the different supervising/supporting bodies including:

(ll) The adequacy of project supervision plans, inputs and processes;

(mm) The realism and candour of project reporting and the emphasis given to outcome monitoring (results-based project management);

(nn) How well did the different guidance and backstopping bodies play their role and how well did the guidance and backstopping mechanisms work? What were the strengths in guidance and backstopping and what were the limiting factors?

Monitoring and evaluation. The evaluation will include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The evaluation will assess how information generated by the M&E system during project implementation was used to adapt and improve project execution, achievement of outcomes and ensuring sustainability. M&E is assessed on three levels:

(oo) *M&E Design*. The evaluators should use the following questions to help assess the M&E design aspects:

- Arrangements for monitoring: Did the project have a sound M&E plan to monitor results and track progress towards achieving project objectives? Have the responsibilities for M&E activities been clearly defined? Were the data sources and data collection instruments appropriate? Was the time frame for various M&E activities specified? Was the frequency of various monitoring activities specified and adequate?
- How well was the project logical framework (original and possible updates) designed as a planning and monitoring instrument?
- SMART-ness of indicators: Are there specific indicators in the logframe for each of the project objectives? Are the indicators measurable, attainable (realistic) and relevant to the objectives? Are the indicators time-bound?
- Adequacy of baseline information: To what extent has baseline information on performance indicators been collected and presented in a clear manner? Was the methodology for the baseline data collection explicit and reliable? For instance, was there adequate baseline information on pre-existing accessible information on global and regional environmental status and trends, and on the costs and benefits of different policy options for the different target audiences? Was there sufficient information about the assessment capacity of collaborating institutions and experts etc. to determine their training and technical support needs?
- To what extent did the project engage key stakeholders in the design and implementation of monitoring? Which stakeholders (from groups identified in the inception report) were involved? If any stakeholders were excluded, what was the reason for this? Was sufficient information collected on specific indicators to measure progress on HR and GE (including sex-disaggregated data)?
- Did the project appropriately plan to monitor risks associated with Environmental Economic and Social Safeguards?
- Arrangements for evaluation: Have specific targets been specified for project outputs? Has the desired level of achievement been specified for all indicators of objectives and outcomes? Were there adequate provisions in the legal instruments binding project partners to fully collaborate in evaluations?
- Budgeting and funding for M&E activities: Determine whether support for M&E was budgeted adequately and was funded in a timely fashion during implementation.

(pp) *M&E Plan Implementation*. The evaluation will verify that:

- the M&E system was operational and facilitated timely tracking of results and progress towards projects objectives throughout the project implementation period;
- PIR reports were prepared (the realism of the Task Manager's assessments will be reviewed)
- Half-yearly Progress & Financial Reports were complete and accurate;
- Risk monitoring (including safeguard issues) was regularly documented
- the information provided by the M&E system was used during the project to improve project performance and to adapt to changing needs.

The Consultants' Team

1. For this evaluation, the evaluation team will consist of one independent Consultant. Details about the specific roles and responsibilities of the consultant are presented in Annex 1 of these TORs. The Consultant should have extensive evaluation experience, including of large, regional or global programmes and using a Theory of Change approach; and a broad understanding of large-scale,

consultative assessment processes and factors influencing use of assessments and/or scientific research for decision-making. The Consultant will have a solid environmental education and professional experience; adequate monitoring and evaluation experience; and experience in chemicals and hazardous waste management.

2. The Consultant will coordinate data collection and analysis, and the preparation of the main report for the evaluation. S/He will ensure that all evaluation criteria and questions are adequately covered.

3. By undersigning the service contract with UNEP/UNON, the consultant certifies that s/he has not been associated with the design and implementation of the project in any way which may jeopardize their independence and impartiality towards project achievements and project partner performance. In addition, s/he will not have any future interests (within six months after completion of the contract) with the project's executing or implementing units.

Evaluation Deliverables and Review Procedures

The evaluation team will prepare an **inception report** (see Annex 2(a) of TORs for Inception Report outline) containing: a thorough review of the project context; project design quality; a draft reconstructed Theory of Change of the project; the evaluation framework; and a tentative evaluation schedule.

It is expected that a large portion of the desk review will be conducted during the inception phase. It will be important to acquire a good understanding of the project context, design and process at this stage. The review of design quality will cover the following aspects (see Annex 7 for the detailed project design assessment matrix):

- Strategic relevance of the project
- Preparation and readiness;
- Financial planning;
- M&E design;
- Complementarity with UNEP strategies and programmes;
- Sustainability considerations and measures planned to promote replication and up-scaling.

The inception report will present a draft, desk-based reconstructed Theory of Change of the project. It is vital to reconstruct the ToC *before* most of the data collection (review of progress reports, in-depth interviews, surveys etc.) is done, because the ToC will define which direct outcomes, drivers and assumptions of the project need to be assessed and measured – based on which indicators – to allow adequate data collection for the evaluation of project effectiveness, likelihood of impact and sustainability.

The inception report will also include a stakeholder analysis identifying key stakeholders, networks and channels of communication. This information should be gathered from the Project document and discussion with the project team. See annex 2 for template.

The evaluation framework will present in further detail the overall evaluation approach. It will specify for each evaluation question under the various criteria what the respective indicators and data sources will be. The evaluation framework should summarize the information available from project documentation against each of the main evaluation parameters. Any gaps in information should be identified and methods for additional data collection, verification and analysis should be specified. Evaluations/reviews of other large assessments can provide ideas about the most appropriate evaluation methods to be used.

Effective communication strategies help stakeholders understand the results and use the information for organisational learning and improvement. While the evaluation is expected to result in a comprehensive document, content is not always best shared in a long and detailed report; this is best presented in a synthesised form using any of a variety of creative and innovative methods. The evaluator is encouraged to make use of multimedia formats in the gathering of information e.g. video, photos, sound recordings. Together with the full report, the evaluator will be expected to produce a 2-page summary of key findings and lessons. A template for this has been provided in Annex?.

The inception report will also present a tentative schedule for the overall evaluation process, including a draft programme for the country visit and tentative list of people/institutions to be interviewed.

The inception report will be submitted for review and approval by the Evaluation Office before the any further data collection and analysis is undertaken.

The main evaluation report should be brief (no longer than 40 pages – excluding the executive summary and annexes), to the point and written in plain English. The report will follow the annotated Table of Contents outlined in Annex 2. It must explain the purpose of the evaluation, exactly what was evaluated and the methods used (with their limitations). The report will present evidence-based and balanced findings, consequent conclusions, lessons and recommendations, which will be cross-referenced to each other. The report should be presented in a way that makes the information accessible and comprehensible. Any dissident views in response to evaluation findings will be appended in footnote or annex as appropriate. To avoid repetitions in the report, the authors will use numbered paragraphs and make cross-references where possible.

Review of the draft evaluation report. The evaluation team will submit a zero draft report to the UNEP EO and revise the draft following the comments and suggestions made by the EO. Once a draft of adequate quality has been accepted, the EO will share this first draft report with the Task Manager, who will alert the EO in case the report would contain any blatant factual errors. The Evaluation Office will then forward the first draft report to the other project stakeholders, in particular MEP-FECO for their review and comments. Stakeholders may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. It is also very important that stakeholders provide feedback on the proposed recommendations and lessons. Comments would be expected within two weeks after the draft report has been shared. Any comments or responses to the draft report will be sent to the UNEP EO for collation. The EO will provide the comments to the evaluation team for consideration in preparing the final draft report, along with its own views.

The evaluation team will submit the final draft report no later than 2 weeks after reception of stakeholder comments. The team will prepare a **response to comments**, listing those comments not or only partially accepted by them that could therefore not or only partially be accommodated in the final report. They will explain why those comments have not or only partially been accepted, providing evidence as required. This response to comments will be shared by the EO with the interested stakeholders to ensure full transparency.

Submission of the final evaluation report. The final report shall be submitted by Email to the Head of the Evaluation Office. The Evaluation Office will finalize the report and share it with the interested Divisions and Sub-programme Coordinators in UNEP. The final evaluation report will be published on the UNEP Evaluation Office web-site www.unep.org/eou.

As per usual practice, the UNEP EO will prepare a **quality assessment** of the zero draft and final draft report, which is a tool for providing structured feedback to the evaluation consultants. The quality of the report will be assessed and rated against the criteria specified in Annex 3.

The UNEP Evaluation Office will assess the ratings in the final evaluation report based on a careful review of the evidence collated by the evaluation consultants and the internal consistency of the report. Where there are differences of opinion between the evaluator and UNEP Evaluation Office on project ratings, both viewpoints will be clearly presented in the final report. The UNEP Evaluation Office ratings will be considered the final ratings for the project.

At the end of the evaluation process, the Evaluation Office will prepare a Recommendations Implementation Plan in the format of a table to be completed and updated at regular intervals by the Task Manager. After reception of the Recommendations Implementation Plan, the Task Manager is expected to complete it and return it to the EO within one month. (S)he is expected to update the plan every six month until the end of the tracking period. As this is a Terminal Evaluation, the tracking period for implementation of recommendations will be 18 months, unless it is agreed to make this period shorter or longer as required for realistic implementation of all evaluation recommendations. Tracking points will be every six months after completion of the implementation plan.

Logistical arrangements

This Terminal Evaluation will be undertaken by two independent evaluation consultants contracted by the UNEP Evaluation Office. The consultants will work under the overall responsibility of the UNEP Evaluation Office and will consult with the EO on any procedural and methodological matters related to the evaluation. It is, however, the consultants' individual responsibility to arrange for their travel, visa, obtain documentary evidence, plan meetings with stakeholders, organize online surveys, and any other logistical matters related to the assignment. The UNEP Task Manager and project team will, where possible, provide logistical support (introductions, meetings etc.) allowing the consultants to conduct the evaluation as efficiently and independently as possible.

Schedule of the evaluation

Table 7 below presents the tentative schedule for the evaluation.

Table 7. Tentative schedule for the evaluation

Milestone	Tentative date
Kick-off meeting with Task Manager and Project Team	October 2016
Inception Report	October 2016
Evaluation Mission to China	November 2016
Telephone interviews, surveys etc.	October -December
Zero draft report	November/December 2016
Draft Report shared with UNEP Task Manager	December 2016
Draft Report shared with project team	December 2016
Draft Report shared with stakeholders	January 2017
Final Report	February 2017

Annex 3: Evaluation program: locations visited and persons contacted

DATE	TIME	Activity / person interviewed	Location	Contact
6/03/2017	9.30 – 12.00	Cheng Tianjin, Division Director, FECO, Project Manager Ling Xi, FECO, Project Coordinator Wang Zuguang, FECO, Project team Zheng Jing, Project team	FECO office, Beijing	cheng.tianjin@mepfeco.org.cn ling.xi@mepfeco.org.cn wang.zuguang@mepfeco.org.cn
	13.00 -14.10	Prof Wang Shuxiao, Tsinghua University Subcontractor for inventory coal power sector	FECO office, Beijing	
	14.20 - 15.20	Ye Jing, SCC-MEP Jian Xiaodong, SCC-MEP, team leader and member of PET	FECO office, Beijing	yejing@mepscc.cn jianxiaodong@mepscc.cn
	15.20 – 16.15	Xinhui Liu, Beijing Normal University Gong Wenwen, (now working at Tsinghua University), subcontractors	FECO office, Beijing	xhliu@bnu.edu.cn gongwenwen@tsinghua.edu.cn
	16.15 – 17.25	Wang Junfeng, IHEP-CES, subcontractor for inventory in pilot provinces	FECO office, Beijing	wangjf@basic.cas.cn
	17.30 – 18.20	Zhao JT, IHEP-CAS, sub-contractor for health and risk assessment	FECO office, Beijing	zhaojt@ihep.ac.cn
7/03/2017	8.15 – 11.35	Travel: Beijing to Guiyang, Guizhou province		Flight CZ 8448
	14.30 – 16.30	HU Jun, Guizhou International Cooperation Center for Environmental Protection Wu Yang, Legal Representative, Engineering Application Researcher, both from local project team	EPB office Guiyang, Guizhou province	fox11382@163.com wuyang2000@qq.com
8/03/2017	11.25 – 12.50	Travel: Guiyang to Changsha, Hunan province		Flight HO1042
	15.00 – 16.30	Tang Yu Deputy Director of air division, EPB Liu Yu International Cooperation Division,	Changsha, Hunan province	17584598@99.com 1517529493@99.com

		EPB		
9//03/2017	8.00 – 10.55	Travel: Changsha to Xi'an, Shaanxi province		Flight CZ3709
	2.00 – 4.00	Cheng Liang, Chief of Convention Implementation Division Wang Kun, Officer of Convention Implementation Division Song Dong Gang, Director Solid Waste Management Centre Chang Xiao Ying, Chief, enforcement division	Solid Waste Management Centre, local EPB Xi'an, Shaanxi province	
	21.00 – 23.10	Travel from Xi'an back to Beijing		Flight MU2117
10/03/2017	10.00 – 12.00	Zhao Ziying, Deputy Director of Mercury Convention Implementation Division, FECO, Project Manager of MIA and NAP projects Ling Xi, Project Coordinator	FECO Office, Beijing	zhao.ziying@mepfeco.org.cn ling.xi@mepfeco.org.cn
	Evening	Flight back to Mauritius		

Skype Interviews

Date	Time	Person interviewed	Contact
1/12/2016	18.00 – 19.00	Ludovic Bernaudat, UNEP Task Manager	Ludovic.Bernaudat@unep.org
6/12/2016	12.30 – 13.30	Kevin Helps, UNEP Portfolio Manager	kevin.helps@unep.org

Annex 4: Bibliography

1. Project document
2. Signed MoU FECO-UNIDO, December 2012
3. Request for CEO endorsement PIF
4. Summary of Inception Report
5. Project Final report – December 2016
6. Progress report: January - June 2013
7. Progress report: Jan – June 2014
8. Progress report: July – December 2014
9. Progress report: Jan – June 2015
10. Progress report: July – Sept 2015
11. Progress report: Sept – December 2015
12. Progress report: Jan – March 2016
13. PIR report FY 2015
14. Summary of first PET meeting – April 2013
15. Summary of Minutes PSC meeting July 2014
16. Minutes PSC meeting January 2016
17. Financial progress report and cash advance: July - December 2013
18. Financial progress report and cash advance: Jan – June 2014
19. Financial progress report and cash advance: Jan – December 2014
20. Financial progress report and cash advance: July – December 2014
21. Financial progress report and cash advance: Jan – June 2015
22. Financial progress report and cash advance: July – December 2016
23. 2014 Extension Request
24. Reallocation budget (a)
25. Reallocation budget (b)
26. Letter of extension, budget & work plan (2nd extension)

27. Training Program and Materials for Utilization of UNEP Tool Kit for Identification and Quantification of Mercury Release, *Solid Waste and Chemicals Management Center, Ministry of Environmental Protection*, March, 2014

28. Questionnaire on MCC production, CCP PVC production and waste MCC recycling and treatment, *Solid Waste and Chemicals Management Center, Ministry of Environmental Protection*, June, 2014

29. Detailed Mercury Release Inventory of VCM Industry in Guizhou Province and Hunan Province & Semi-Quantitative National Mercury Release Inventory of VCM Industry, *Solid Waste and Chemicals Management Center, Ministry of Environmental Protection*, June, 2014

30. Pilot Project on Mercury Emission Inventory Compilation in Typical Provinces of China, *Tsinghua University*, September 2016

31. China's Mercury Environmental Monitoring Technology Application, Management Status and Policy Suggestions, *China National Environmental Monitoring Centre*, May 2016

32. Development of Mercury Inventory of Guizhou Province, *Institute of High Energy Physics of Chinese Academy of Sciences*, March of 2016

33. Development of Mercury Inventory of Hunan Province, *Institute of High Energy Physics of Chinese Academy of Sciences*, March of 2016

34. Executive Abstract of Preliminary Mid-long term Strategy on Reducing Mercury Releases in China, *Beijing Normal University*, May, 2016

35. Priority Assessment of Key Sources to Reduce Mercury Releases in China, *Beijing Normal University*, May 2016

36. Research on action Plans to Reduce Mercury Releases from key sources (Coal-fired power plants and Vinyl chloride monomer production) in China, *Beijing Normal University*, May 2016

37. Study Report on Mercury Release of VCM Industry of China, *Solid Waste and Chemicals Management Center, Ministry of Environmental Protection*, December 2014

38. UNEP《Quantification of mercury emissions identification toolkit》usage training, *Institute of High Energy Physics*, *Chinese Academy of Sciences*, April 2004

Annex 5: Summary co-finance information

Co financing (Type/Source)	UNEP own Financing (US$1,000)		Government (US$1,000)		Other* (US$1,000)		Total (US$1,000)		Total Disbursed (US$1,000)
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
– Grants			450		800		1,250		
– Loans									
– Credits									
– Equity investments									
– In-kind support	1,146		750				1,896		
– Other									
Totals							3,146		

* Bilateral aid from Norway

Annex 6: Evaluation findings and lessons

Project Title: Pilot project on the Development of Mercury Inventory in China

About the Project

129. The objective of the project was to strengthen China's capacity for identification of mercury sources and priority actions to address under the Minamata Convention in a view to protect human health and the environment from the toxic exposure of mercury by phasing out mercury

130. Implementation dates:

- Planned: July 2012 – June 2014 (24 months)
- Actual : January 2013 – May 2017 (53 Months)

131. Lead division: UNEP-DTIE

Sub-programme: Harmful substances and hazardous wastes

132. Country: China

133. Budget:

GEF: $ 1,000,000;

Co-financing: $ 3,146,265 (China: 1,200,000; UNEP: 1,146,265, Norway: 800,000)

Total: $ 4,146,265

134. Date of Evaluation: December 2016 – May 2017

Relevance

135. The project is in line with GEF Focal Area Strategy CHEM-3 Pilot sound chemicals management and mercury reduction. The project is complementary to UNEP's Subprogram 5 (Harmful Substances and Hazardous Waste), executed by UNEP DTIE OzonAction and Chemicals Branches. It is also relevant to China's program of Comprehensive Heavy Metal (including mercury) Pollution Treatment. China has signed and ratified the Minamata Convention

Performance

136. Despite a slow start, the project's intended outcomes were satisfactorily delivered on the basis that the planned activities were successfully completed, the corresponding outputs delivered, and that all the key performance indicators can be tracked. Measures designed to move towards the intermediate states have started, but have not produced results yet. However, according to the mid-long term strategy developed, it was understood that the results would be seen well after the project. Given that follow up projects are currently being implemented, it is likely that the intended impact will occur in the long term.

Factors Effecting Performance

137. It took more than double the time to complete the project activities to deliver the planned outputs. Slow administrative procedures and reporting in English by national stakeholders (executing agency and consultants) were seen as the main reasons for the delays.

Key Lessons Learned

138. Some lessons that could be learned are:

- Committed executing agency, active participation of stakeholders, and appropriate technical guidance are the basis to achieve success
- In project requiring surveys to gather information, early identification and engaging communication with major potential respondents would ensure high response rates and would avoid delays in project implementation
- Better planning by informing relevant department early in the project would avoid administrative delays during project implementation

Annex 7: Brief CV of consultant

Dr. Nee Sun CHOONG KWET holds a PhD in Chemistry, obtained from Montpellier University, France. He is currently associate professor at the University of Mauritius where he is lecturing in Physical and Analytical Chemistry at both undergraduate and post graduate levels since more than 20 years.

Dr Choong Kwet Yive was a member (2006 – 2013) of the Toolkit Expert Working Group of the Stockholm Convention. And since 2007, he is a member of the Chemicals Technical Options Committee of the Montreal Protocol.

Dr. Choong Kwet Yive has undertaken numerous consultancy assignments in the context of the Stockholm and Minamata Conventions in more than 30 countries for UN agencies (e.g. UNIDO, UNEP and UNDP), and these include project development and project evaluation. He is currently leading a team from the University of Mauritius to execute the Mercury Initial Assessment project (GEF-UNDP) on behalf of the Ministry of Environment, Republic of Mauritius.

Quality Assessment of the Evaluation Report

Evaluation Title: Pilot Project on the Development of Mercury Inventory in China

All UN Environment evaluations are subject to a quality assessment by the Evaluation Office. This is an assessment of the quality of the evaluation product (i.e. evaluation report) and is dependent on more than just the consultant's efforts and skills. Nevertheless, the quality assessment is used as a tool for providing structured feedback to the evaluation consultants, especially at draft report stage. This guidance is provided to support consistency in assessment across different Evaluation Managers and to make the assessment process as transparent as possible.

	UN Environment Evaluation Office Comments	**Draft Report Rating**	**Final Report Rating**
Substantive Report Quality Criteria			
Quality of the Executive Summary: The Summary should be able to stand alone as an accurate summary of the main evaluation product. It should include a concise overview of the evaluation object; clear summary of the evaluation objectives and scope; overall evaluation rating of the project and key features of performance (strengths and weaknesses) against exceptional criteria (plus reference to where the evaluation ratings table can be found within the report); summary of the main findings of the exercise, including a synthesis of main conclusions (which include a summary response to key strategic evaluation questions), lessons learned and recommendations.	Draft report: *(Exec Summaries are not always provided at draft stage)* Final report: It is adequately summarised and captures the main highlights of the evaluation		5
I. Introduction A brief introduction should be given identifying, where possible and relevant, the following: institutional context of the project (sub-programme, Division, regions/countries where implemented) and coverage of the evaluation; date of PRC approval and project document signature); results frameworks to which it contributes (e.g. Expected Accomplishment in POW); project duration and start/end dates; number of project phases (where appropriate); implementing partners; total secured budget and whether the project has been evaluated in the past (e.g. mid-term, part of a synthesis evaluation, evaluated by another agency etc.) Consider the extent to which the introduction includes a concise statement of the purpose of the evaluation and the key intended audience for the findings?	Draft report: The introduction is satisfactory; all the criteria required are covered. Some minor suggestions for improvement in content have been provided. Final report: Improvement noted form the initial draft	4.5	5

II. Evaluation Methods This section should include a description of how the *TOC at Evaluation*[43] was designed (who was involved etc.) and applied to the context of the project? A data collection section should include: a description of evaluation methods and information sources used, including the number and type of respondents; justification for methods used (e.g. qualitative/quantitative; electronic/face-to-face); any selection criteria used to identify respondents, case studies or sites/countries visited; strategies used to increase stakeholder engagement and consultation; details of how data were verified (e.g. triangulation, review by stakeholders etc.). The methods used to analyse data (e.g. scoring; coding; thematic analysis etc.) should be described. It should also address evaluation limitations such as: low or imbalanced response rates across different groups; extent to which findings can be either generalised to wider evaluation questions or constraints on aggregation/disaggregation; any potential or apparent biases; language barriers and ways they were overcome. Ethics and human rights issues should be highlighted including: how anonymity and confidentiality were protected and strategies used to include the views of marginalised or potentially disadvantaged groups and/or divergent views.	Draft report: The section is satisfactorily done, except for issues such as human rights and ethical considerations. Final report: Requested changes have been made satisfactorily	5	5
III. The Project This section should include: • *Context:* Overview of the main issue that the project is trying to address, its root causes and consequences on the environment and human well-being (i.e. synopsis of the problem and situational analyses). • *Objectives and components*: Summary of the project's results hierarchy as stated in the ProDoc (or as officially revised) • *Stakeholders:* Description of groups of targeted stakeholders organised according to relevant common characteristics • *Project implementation structure and partners:* A description of the implementation structure with diagram and a list of key project partners • *Changes in design during implementation:* Any key events that affected the project's scope or	Draft report: The section is almost complete. Consultant has been requested to include two tables to be satisfactory. Final report: Requested changes have been made	4.5	5

43 During the Inception Phase of the evaluation process a *TOC at Design* is created based on the information contained in the approved project documents (these may include either logical framework or a TOC or narrative descriptions). During the evaluation process this TOC is revised based on changes made during project intervention and becomes the *TOC at Evaluation*.

parameters should be described in brief in chronological order • *Project financing:* Completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing			
IV. Theory of Change A summary of the project's results hierarchy should be presented for: a) the results as stated in the approved/revised Prodoc logframe/TOC and b) as formulated in the TOC at Evaluation. *The two results hierarchies should be presented as a two column table to show clearly that, although wording and placement may have changed, the results 'goal posts' have not been 'moved'.* The TOC at Evaluation should be presented clearly in both diagrammatic and narrative forms. Clear articulation of each major causal pathway is expected, (starting from outputs to long term impact), including explanations of all drivers and assumptions as well as the expected roles of key actors.	Draft report: The diagram is easily understood, clear, causality is clear as well. The narrative fails somewhat to provide an in-depth description of the TOC. Some improvements have been recommended to the consultant Final report: The TOC diagram is clear, logical and it sufficiently depicts the project's causal pathways. Enhancements requested to better reflect the findings have been made	4.5	5
V. Key Findings **A. Strategic relevance:** This section should include an assessment of the project's relevance in relation to UN Environment's mandate and its alignment with UN Environment's policies and strategies at the time of project appro*val. An assessment of the complementarity of the project with other interventions addressing the needs of the same target groups should be included. Consider the extent to which all four elements have been addressed: 1. Alignment to the UN Environment Medium Term Strategy (MTS) and Programme of Work (POW) 2. Alignment to UN Environment/GEF/Donor Strategic Priorities 3. Relevance to Regional, Sub-regional and National Environmental Priorities 4. Complementarity with Existing Interventions	Draft report: The section covers the main relevant areas required by the TOR. Final report: Same comment	6	6
B. Quality of Project Design To what extent are the strength and weaknesses of the project design effectively <u>summarized</u>?	Draft report: Covered under 'Preparation and Readiness' – the section sufficiently covers the issues required by the TOR Final report: Same comment	5	5

C. Nature of the External Context For projects where this is appropriate, key external features of the project's implementing context that may have been reasonably expected to limit the project's performance (e.g. conflict, natural disaster, political upheaval) should be described.	Draft report: N/A Final report: N/A		
D. Effectiveness **(i) Outputs and Direct Outcomes:** How well does the report present a well-reasoned, complete and evidence-based assessment of the achievement of a) outputs, and b) direct outcomes? How convincing is the discussion of attribution and contribution, as well as the limitations to attributing effects to the intervention.	Draft report: Effectiveness section is discussed only peripherally, with focus being primarily on output achievement. Assessment of outcomes lacks depth and verifiability. Ratings of immediate outcomes in not sufficiently supported Final report: Section has been substantially improved in the final draft following the incorporation of the review comments submitted	2	5
(ii) Likelihood of Impact: How well does the report present an integrated analysis, guided by the causal pathways represented by the TOC, of all evidence relating to likelihood of impact? How well are change processes explained and the roles of key actors, as well as drivers and assumptions, explicitly discussed?	Draft report: Likelihood of impact is barely discussed in this section except for a table presented that indicates the ROtI method was used. Final report: Section has been substantially improved in the final draft following the incorporation of the review comments submitted	3	5
E. Financial Management This section should contain an integrated analysis of all dimensions evaluated under financial management. And include a completed 'financial management' table. Consider how well the report addresses the following: • *completeness* of financial information, including the actual project costs (total and per activity) and actual co-financing used • *communication* between financial and project management staff and • *compliance* with relevant UN financial management standards and procedures.	Draft report: Final report:		

F. Efficiency To what extent, and how well, does the report present a well-reasoned, complete and evidence-based assessment of efficiency under the primary categories of cost-effectiveness and timeliness including: • Implications of delays and no cost extensions • Time-saving measures put in place to maximise results within the secured budget and agreed project timeframe • Discussion of making use of/building on pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc.	Draft report: Required content is there except for the assessment of project efforts in overcoming efficiency challenges. Final report: The requested changes have been made. Section is covered adequately	4	5
G. Monitoring and Reporting How well does the report assess: • Monitoring design and budgeting *(including SMART indicators, resources for MTE/R etc.)* • Monitoring implementation *(including use of monitoring data for adaptive management)* • Project reporting *(e.g. PIMS and donor report)*	Draft report: The section covers the issues required by the TOR although the ratings given need further substantiation Final report: Distinction between reporting and monitoring is not clearly made. Otherwise the section covers the main issue sas required by the TOR	4	4.5
H. Sustainability How well does the evaluation identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of achieved direct outcomes including: • Socio-political Sustainability • Financial Sustainability • Institutional Sustainability *(including issues of partnerships)*	Draft report: All the sub-criteria have been adequately assessed Final report: Same comment	5	5
I. Factors Affecting Performance To what extent, and how well, does the evaluation report cover the following cross-cutting themes: • Preparation and readiness • Quality of project management and supervision[44] • Stakeholder participation and co-operation	All the required factors affecting performance have been covered in the report in a satisfactory manner	5	5

[44] In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UN Environment.

• Responsiveness to human rights and gender equity • Country ownership and driven-ness • Communication and public awareness			
VI. Conclusions and Recommendations **i. Quality of the conclusions:** The key strategic questions should be clearly and succinctly addressed within the conclusions section? It is expected that the conclusions will highlight the main strengths and weaknesses of the project, and connect them in a compelling story line. Conclusions, as well as lessons and recommendations, should be consistent with the evidence presented in the main body of the report.	Draft report: Conclusions section can be improved further to include an overall view of the results achieved, successes and challenges. Focus on outcome level results is minimal Final report: The conclusions will highlight the main strengths and weaknesses of the project, and connect them in a compelling story line	4	5
ii) Quality and utility of the lessons: Both positive and negative lessons are expected and duplication with recommendations should be avoided. Based on explicit evaluation findings lessons should be rooted in real project experiences or derived from problems encountered and mistakes made that should be avoided in the future. Lessons must have the potential for wider application and use and should briefly describe the context from which they are derived and those contexts in which they may be useful.	Draft report: The lessons are based on actual findings and are derived from both positive and negative experiences. They can be further improved to make the lesson statement more robust Final report: Requested changes have been effected	4.5	5
iii) Quality and utility of the recommendations: To what extent are the recommendations proposals for specific actions to be taken by identified people/position-holders to resolve concrete problems affecting the project or the sustainability of its results. They should be feasible to implement within the timeframe and resources available (including local capacities) and specific in terms of who would do what and when. Recommendations should represent a measurable performance target in order that the Evaluation Office can monitor and assess compliance with the recommendations.	Draft report: Recommendations are anchored on findings and indicate who they are directed at. The actions proposed appear realistic although they are mostly directed at FECO where UNEP has no manadate. Minor amendments requested Final report: Same comment	5	5
VII. Report Structure and Presentation Quality			
i) Structure and completeness of the report: To what extent does the report follow the Evaluation Office guidelines? Are all requested Annexes included and complete?	Draft report: Final report: Report follows guidelines provided	6	6

ii) **Quality of writing and formatting:** Consider whether the report is well written (clear English language and grammar) with language that is adequate in quality and tone for an official document? Do visual aids, such as maps and graphs convey key information? Does the report follow Evaluation Office formatting guidelines?	Draft report: The report is generally well written and easy to comprehend. It follows the guidelines given in the TOR. The tone is professional. Final report: Improvements have been made on the final draft	5	**6**
OVERALL REPORT QUALITY RATING		**S**	**S**

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1. The overall quality of the evaluation report is calculated by taking the mean score of all rated quality criteria.