Independent Terminal Evaluation

Reduce exposure of mercury to human health and the environment by promoting sound chemical management in Mongolia

UNIDO Project No.: 120097
GEF Project ID: 5323

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

UNIDO INDEPENDENT EVALUATION DIVISION

Independent Terminal Evaluation

Reduce exposure of mercury to human health and the environment by promoting sound chemical management in Mongolia

UNIDO Project No.: 120097
GEF Project ID: 5323

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

Vienna, August 2017

Distr. GENERAL

ODG/EVQ/IEV/16/R.20

August 2017

Original: ENGLISH

This evaluation was managed
by the responsible
UNIDO Project Manager
with quality assurance by the
Independent Evaluation Division

Table of Contents

List of acronyms and abbreviations

GEF	Global Environment Facility
HQ	Head Quarters
ICCT	Institute of Chemistry and Chemical Technology
MAS	Mongolian Academy of Sciences
MEGDT	Ministry of Environment, Green Development and Tourism
MOH	Ministry of Health
MNGD	Ministry of Nature and Green Development
MSP	Medium Size Project
NAP	National Action Plan
NEMA	National Emergency Management Agency
NGO	Non-governmental Organization
NIP	National Implementation Plan
NPD	National Project Director
NPM	National Project Manager
PCB	Polychlorinated biphenyls
PIR	Project Implementation Review
PM	Project Manager
PMT POPs	Project Management Team Persistent Organic Pollutants
ppm	Parts per million
PRF	Project Results Framework
PSC	Project Steering Committee
SDC	Swiss Agency for Development and Cooperation
SSIA	Specialized State Inspection Agency
TE	Terminal evaluation
TOR	Terms of Reference
UNEP	United Nations Environmental Programme
UNIDO	United Nations Industrial Development Organization
UNITAR	United Nations Institute for Training and Research
USEPA	United States Environmental Protection Agency

Glossary of evaluation-related terms

Term	Definition
Baseline	The situation, prior to an intervention, against which progress can be assessed.
Effect	Intended or unintended change due directly or indirectly to an intervention.
Effectiveness	The extent to which the development intervention's objectives were achieved, or are expected to be achieved.
Efficiency	A measure of how economically resources/inputs (funds, expertise, time, etc.) are converted to results.
Impact	Positive and negative, intended and non-intended, directly and indirectly, long term effects produced by a development intervention.
Indicator	Quantitative or qualitative factors that provide a means to measure the changes caused by an intervention.
Lessons learned	Generalizations based on evaluation experiences that abstract from the specific circumstances to broader situations.
Logframe (logical framework approach)	Management tool used to facilitate the planning, implementation and evaluation of an intervention. It involves identifying strategic elements (activities, outputs, outcome, impact) and their causal relationships, indicators, and assumptions that may affect success or failure. Based on RBM (results based management) principles.
Outcome	The likely or achieved (short-term and/or medium-term) effects of an intervention's outputs.
Outputs	The products, capital goods and services which result from an intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.
Relevance	The extent to which the objectives of an intervention are consistent with beneficiaries' requirements, country needs, global priorities and partners' and donor's policies.
Risks	Factors, normally outside the scope of an intervention, which may affect the achievement of an intervention's objectives.
Sustainability	The continuation of benefits from an intervention, after the development assistance has been completed.
Target groups	The specific individuals or organizations for whose benefit an intervention is undertaken.

Executive summary

Introduction

1. The medium size project (MSP) "*Reduce exposure of mercury to human health and the environment by promoting sound chemical management in Mongolia*" funded by the Global Environment Facility (GEF) was implemented from July 2013 to December 2016 by the United Nations Industrial Development Organization (UNIDO). The main national partner of the project was the Ministry of Environment Green Development and Tourism (MEGDT) with the following financing sources: GEF: USD 600,000; co-financing (cash and in kind): USD 1,569,000; Total: USD 2,169,000.

2. The overall objective of the project was to reduce exposure of mercury to human health and the environment in Mongolia. In particular, the project aimed to reduce mercury emissions by strengthening national and local capacity for the effective and sound management mercury containing wastes and contaminated sites.

A. Evaluation findings and conclusions

3. The main purpose of this terminal evaluation was to assess the performance of the project (in terms of relevance, effectiveness, efficiency, impact and sustainability of results) and to propose a set of recommendations for enhancing the design of new and implementation of ongoing UNIDO projects.

4. This project is highly relevant as Mongolia has signed and ratified the Minamata Convention. Building national capacity for sound management of mercury containing wastes would help Mongolia fully implement its zero-mercury policy adopted in 2008. The project is consistent with the GEF 5 Focal Area Strategy that promotes sound management of chemicals in particular Objective 3 related to mercury reduction.

5. Effectiveness of the project is considered satisfactory. Quality outputs have been delivered and national stakeholders (e.g. NEMA and ICCT) are already adopting some of the techniques they were trained on. The materialization of planned co-financing and adoption of cost effective option during procurement contributed to increased efficiency. However, delays due to inappropriate climatic condition to run the training workshops decreased efficiency to some extent.

6. The approach originally agreed upon by stakeholders was adopted for the implementation of the project. Overall project management, supervision and monitoring were satisfactory. At national level, the coordination and supervision of activities was satisfactorily done by a PMT. Active involvement of national stakeholders in all the project activities contributed to high ownership and successful delivery of outputs.

7. No risks that could jeopardize sustainability of project outcomes have been identified, therefore likelihood for continuous sustained impact of the project are considered high.

B. Recommendations
8. The project has successfully been completed and quality products have been delivered. For the sustainability of project outcomes, the evaluation proposes the following recommendations:
i. The project has been successful and has produced tangible results. In particular, a national regulation on mercury added products and mercury containing wastes has been developed but not yet approved and adopted by the government. To ensure impact of the project, it is recommended that MEGDT take necessary actions for this legislation be adopted and enforced.
ii. Although small scale gold mining is not authorized in Mongolia, this activity is still likely contributing to local economies in the rural areas. Proposing alternative mercury free methods to small scale miners would potentially contribute to reduce illegal use of mercury in this sector.
iii. To ensure good visibility and impact of the project, the project outcomes and results could be summarized and disseminated to other provinces, especially those provinces where small-scale mining activities are prevalent.
iv. The results of the monitoring and health assessments carried out at the Boroo site in the Selenge Province have not yet been disclosed to the beneficiaries. The project should rapidly proceed to inform the relevant beneficiaries of the results of these assessments.

C. Lessons learned
9. Valuable lessons, which emerged during the implementation of this project, include:
i. In projects that contain a component to develop or strengthen the legal framework, the design should plan for realistic timeframes. For example, for projects that have duration of less than 4 years, it would be unrealistic to propose such components and expect that the regulations be adopted within the project duration.
ii. The delays encountered in the project were due to inappropriate climatic conditions to undertake the training workshops that required field demonstration. The lesson is that proper planning taking into consideration local conditions would avoid delays in project implementation.
iii. A committed project team coupled with active participation of partners and stakeholders would contribute to achieve effective implementation.

I. Evaluation objectives, methodology and process

10. The evaluation was undertaken from November 2016 to January 2017 by a team of two independent external evaluators[1] based on the terms of reference by the UNIDO Independent Evaluation Division.

11. The main objectives of the evaluation were to:

(i) Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and impact; and

(ii) Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing UNIDO projects.

12. The key question of the evaluation is whether the project has achieved or is likely to achieve its main objective of strengthening the national and local capacity in mercury management.

13. The TE covered the whole duration of the project from its starting date in July 2013 to the completion date in December 2016. It was conducted in accordance with the UNIDO Evaluation Policy[2] and the UNIDO Guidelines for the Technical Cooperation Programme and Project Cycle.[3] In particular, it followed the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations[4] and the GEF Monitoring and Evaluation Policy[5].

14. The field visit to Mongolia took place from 28 November 2016 to 2 December 2016. Different evaluation tools were combined to ensure an evidence-based qualitative and quantitative assessment. The Evaluators cross-validated data and performed an assessment of the plausibility of results obtained. The methodological mix included extensive desk study of relevant documents provided by UNIDO (see Annex 1), semi-structured interviews, focal group discussions and direct observation. Interviews were conducted in the form of open discussions following the guiding questions in the ToR, complemented by additional questions developed by the evaluators based on the desk review and the briefing with the project team. A list of organizations met is included in Annex 3.

15. Evaluation findings, conclusions and recommendations were discussed in details at physical face-to-face de-briefings to the key stakeholders in Mongolia and in Vienna. The purpose of these de-briefings was a factual verification of key findings and an in-depth discussion of evaluation results. The feedback and comments received during these presentations have been considered in this report.

[1] International consultant Dr. Nee Sun CHOONG KWET YIVE and national consultant Mr. Enkhbold SUMIYA.
[2] UNIDO (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1).
[3] UNIDO (2006). Director-General's Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006).
[4] GEF (2008). Guidelines for GEF Agencies in Conducting Terminal Evaluations (Evaluation Office, Evaluation Document No. 3, 2008).
[5] GEF (2010). The GEF Monitoring and Evaluation Policy (Evaluation Office, November 2010).

16. This final version of the report takes all factual corrections and comments received from UNIDO into account.

II. Country and project background

2.1. Brief country context on mercury use and initiatives

17. The use of mercury in Mongolia spans the last century with a long and controversial history. First recorded use of mercury in gold production has been linked with a German-Russian-Mongolian joint venture named Mongolor that began using mercury in 1913 for hard rock gold amalgamation. Mongolor operated in the Boroo river basin, today known as Mandal soum (administrative unit for village), a territory in Selenge province, 150 km north of the capital Ulaanbaatar. A crack in the amalgamating tank in 1956 released a large amount of mercury and formed a significant anthropogenic mercury deposit in the Boroo river basin. In 1993, a geological assessment of gold and mercury reserves in the remaining foundations of Mongolor buildings located at the Boroo site was undertaken by the Ministry of Energy, Geology and Mining. The assessment was funded by Tyre-Sh Co. Ltd, with the intention of mining the anthropogenic mercury and gold deposits, but reportedly no mining was carried out and the results of this inquiry were not officially published until 2000.

18. In November of 2000, a paper entitled "*Environmental hazard in Lake Baikal watershed posed by mercury placer in Mongolia*" presented previously unpublished data from the 1993 assessment as well as fieldwork carried out adjacent to the Boroo river site (Tumenbayar et al., 2000). The activities undertaken in 2000 indicated that the 198.5 kg of mercury found by the 1993 assessment accounted only for a small area of the contaminated site. Based on the 2000 field observations, the authors suggested that upon the extent of mercury panning and mining in the area by informal miners that up to 10 tons of mercury were present in the Boroo area. Further surveys at the Boroo site to assess the level of mercury contamination were carried out in 2003 with support from the Japanese International Cooperation Agency (JICA). Following a detailed assessment in the Boroo river basin area it was revealed that the production's ruins were most exposed to the pollution with mercury concentrations reaching 117 mg/kg or more than 50 times the regulatory limit (2 mg/kg for soil). The highly contaminated or hot spot area was estimated to cover 0.9 km^2, with mercury penetrating at least to a depth of 3 metres. In 45% of the water samples taken from the Boroo river the mercury content also exceeded the permissible level, with the highest concentration measured where the amalgamating tank accident occurred. Contaminated water was detected 10 km downstream from the accident site. In the sediment samples, mercury content was found to be an alarming 10-25,000 times higher than the permissible level. In addition, certain soil samples taken from the agricultural land near the Boroo river, showed mercury concentrations that were double the permissible level. This can potentially be attributed to mercury build up from irrigation with contaminated water from the nearby river. This research concluded that since the accident 50 years ago, the mercury contamination has been spreading over 40 km in the river and 2-3 tons of mercury are estimated to persist in the broader vicinity of the Boroo site.

19. In 2006, another project entitled "*Research of Pollution from Gold Ore Extraction in Selenge River Basin*" was implemented by the Ministry of Environment of the Czech Republic to further investigate mercury contamination in soil and sediment along the Boroo river, the Boroo river being a tributary of the Selenge river, which provides nearly 80% of the inflow for Lake Baikal. This follow up assessment confirmed that the contamination was higher at the tank spill site, with free metal mercury reaching concentrations of 1.8 – 69.5 g/m^3. Samples of vegetables grown along the Boroo basin and fish from the river showed excessive amount of mercury as well, posing direct health threats to local residents. As such, mercury contamination is a serious concern for rural pastoralists and farmers in the region that depend upon agriculture.

20. A baseline assessment published in 2006 by the International Labor Organization (ILO) indicated that the use of mercury was restricted largely to hard rock sites in Selenge and Tuv provinces. Mercury was reported to be used in the amalgamation process to separate the gold from the ore, posing multiple health risks arising from skin exposure to metallic mercury, inhalation of mercury vapor, and severe environmental contamination. At hard rock sites in Bornuur, near Mandal soum, it was found that 60 % of children working at artisanal and small-scale mining camps were directly involved in amalgamation with mercury, woman and children often taking a lead role in the roasting process. An overwhelming percentage of those surveyed were unaware of safety and health measures and standards that are required for mining activities and oblivious to the risks associated with mercury. The two primary sources of mercury used in hard rock operations came from illegal import and mercury collected from the Boroo river basin by the illegal miners.

21. During the years 2008-2009, the Government of Mongolia implemented a decontamination campaign on mercury and cyanide polluted sites at the national level. In the framework of this activity, the former Mongolor site was targeted as one of the mercury contamination hot spots with excessive levels of mercury. From this site, 105 kg of mercury were collected and stored inadequately in the chemicals storage room of the Institute of Chemistry and Chemical Technology in Ulaanbaatar. In addition, 19,868 tons of contaminated soil and sediment were collected and landfilled, and approximately 10,000 m^2 were neutralized by adding polysulfide sodium before some reclamation work was done at the site. This campaign was successful in that it managed to stop the illegal artisanal miners (called ninja miners in Mongolia) from extracting the mercury collected from the river, likely stopping its illegal trade and potentially transboundary movement. However, in spite of these efforts the Boroo river still remains contaminated with scattered mercury hot spots. Furthermore, the cumulative impacts of illegal mining and mercury amalgamation in the Boroo area remain uncertain as the latest assessment was undertaken in 2006, two years prior to the government's zero mercury policy in 2008.

22. After nearly 60 years, the legacy of the Boroo mercury accident remains one of the worst environmental accidents in Mongolian history and poses significant levels of risk to the environment and the public health of communities throughout the Selenge watershed. More specifically, the Boroo river flows through the main agricultural region of the country and drains into the Kharaa river where the most fertile agricultural land exists. Today, large quantities of wheat and vegetables are produced in the area and many farmers continue to use potentially contaminated

water to meet irrigation requirements. Small agricultural systems in this area supply the agricultural products not only for the local residents but also for larger urban centers such as Ulaanbaatar and Darkhan, extending the potential health risks from contaminated crops far beyond the origin of the Boroo site.

23. Recognizing the direct correlation between mercury and the mineral sector (both formal and informal), Mongolian authorities adopted a zero-mercury policy in 2008. The use of mercury in mineral processing was formally banned and a paid information campaign among residents to report illegal chemical (cyanide and mercury) storage and usage was announced. In the same year national authorities mobilized efforts to remediate several contaminated sites polluted by illegal use of hazardous chemicals. Based on a situational analysis in 2011, over 300 kg of mercury were collected under this initiative. Despite the positive effect the 2008 mercury ban had on mercury use, Mongolia lacks a hazardous waste disposal or treatment facility to manage and safely store the mercury collected. Although a feasibility assessment for a hazardous waste management facility was funded by the Ministry of Nature, Environment and Tourism (MNET)[6] in 2006, the first part of the substantial funds for the construction of the facility were only allocated in the national budget in 2012. The facility is still to be constructed. Also, in 2009 "Procedure(s) for Export, Import, Transboundary Movement, Production and Trade of Toxic and Hazardous Chemicals" were approved by the joint order of Ministers of Environment and Foreign Affairs, serving as a mechanism to control the regulation of the export, import, transboundary movement, production and trade of mercury containing compounds but national mercury management remains an ongoing challenge.

24. A national mercury emissions inventory was developed in 2011 by MNET in cooperation with the United Nations Institute for Training and Research (UNITAR) with financial support from the US Environmental Protection Agency (US EPA). The inventory was based on United Nations Environmental Programme (UNEP) toolkit for identification and quantification of mercury releases, which served as a background document for the creation of a national mercury risk management plan prepared by the Ministry also in 2011 in coordination with UNITAR and the United States Environmental Protection Agency (US EPA). Estimated annual mercury releases in Mongolia are 548.4 tons with gold extraction (by methods other than mercury amalgamation) identified as the largest contributor to national mercury emissions. Other significant sources include the production of copper.

2.2. Project summary

Overall objective

25. The overall objective of the project was to assist the Mongolian government in reducing the impacts of mercury on human health and the environment through regulatory, institutional and social reform and strategic demonstration intervention in historical mercury hot-spots.

[6] Previously MEGDT was known as MNET.

26. More specifically the project sought to strengthen national and local capacity to effectively manage and reduce mercury emissions. In that respect, the following three components were planned:

Component 1: Establishing a regulatory framework and national guidelines for environmentally sound management of mercury containing waste.

Component 2: Developing capacity for the implementation of remediation and stabilization techniques in mercury hot-spot areas through demonstration activities at the pilot scale.

Component 3: Disseminating information and raising awareness through campaigns on mercury health and environment risk reduction.

Project duration and costs

27. Table 1 gives all relevant information as regards project costs and co-financing, donors, duration, implementing and executing agencies.

Table 1: Information on project

Implementing agency: Government coordinating agency:		UNIDO Ministry of Environment and Tourism, Mongolia
Planned project duration:		24 months
Planned start date Actual start date		June 2013 July 2013
Planned completion date Actual completion date		July 2015 December 2016
Project costs (in USD)	**GEF grant**:	**600,000 (excluding support costs)**
	Co-funding: UNIDO (cash): Government (cash & in-kind): Mireco **Sub-total**	 50,000 1,439,000 80,000 **1,569,000**
	Total	**2,169,000** (excluding support costs and PPG)

2.3. Project implementation arrangements and implementation modalities

28. UNIDO was the GEF implementing agency. The Ministry of Environment, Green Development and Tourism (MEGDT)) was the national executing partner and a National Project Director (NPD) was nominated within this Ministry. The MEGDT coordinated co-financing agreements with Mine Reclamation Corporation (Mireco), and the Ministry of Health, to provide in-kind contributions for technical expertise, analytical laboratory services and human resources for (i) a verification assessment in identified mercury hot-spot sites in northern Mongolia as well as (ii) awareness raising campaigns. As national executing entity, the MEGDT played a key role in

ensuring all outcomes and outputs were achieved within the project allotted timeframe and budget.

29. A national consultant assisted by an international consultant drafted the national regulation on mercury added products, and wastes and mercury wastes of import, export, cross-border transport, sale, use, storage and disposal (Component 1). A consortium of international contractors (MAYASA, Polyeco and EMGRISA) were hired to provide services for component 2. They implemented monitoring network and pilot remediation activities at the Boroo site and provided related training course on monitoring and remediation techniques of mercury contaminated sites to national stakeholders.

30. The Ministry of Health (MOH) was supposed to be actively involved in activities of component 3. In particular, MOH should have provided human resources and consultation to facilitate mercury health and environment risk reduction through information dissemination. However, due to personnel movement this active involvement did not materialize, and MOH only participated in the awareness raising campaigns[7].

Major changes during project implementation

31. The results obtained from the Mireco comprehensive study indicated low level mercury contamination at the Boroo spill site. The decontamination undertaken by the Government of Mongolia in 2008 – 2009 (see paragraph 24) appears to have been quite successful. As a result, the proposal to use one of the remediation techniques for demonstration at the Boroo site (component 2) was not undertaken. Instead two techniques successfully tested at laboratory scale were demonstrated at the site.

32. Another major change during the project implementation was the construction, not planned in the project document, of an interim facility for the storage of mercury containing wastes. This request from the Government of Mongolia and project stakeholders was discussed and approved at the second project steering committee meeting. The construction of this facility that costed USD30,000 was funded from the project. After the construction of the facility in 2014, the MEGDT, in collaboration with the project, and assisted by the National Emergency Management Authority (NEMA), the State Specialized Inspection Agency (SSIA), the Institute of Chemistry and Chemical Technology (ICCT) and the authorities of the 21 provinces of Mongolia undertook the collection of obsolete chemicals including mercury products in schools, hospitals and other institutions across the country. The wastes are currently being stored at the interim storage facility located within the premises of the NEMA in Ulaanbaatar.

2.4. Positioning of the UNIDO project

33. Considering the past mismanagement of mercury in Mongolia and a strong political will to reduce the impacts of mercury on human health and the environment,

[7] Interview with National Project Manager

this project is sought to establish a legal basis and develop mechanisms to reduce environmental contamination through sound chemical management. This regulatory framework would also prevent potential accidents similar to the Mongolor spill from happening in the future. Nevertheless, if such spills occur, the project was also aiming to build local capacity to soundly manage with such cases (component 2). Additionally, the implementation of the above-mentioned project components and activities directly support the GEF 5 chemicals strategy to initiate work on mercury and mitigate environmental and human health risks through sound chemical management in developing countries such as Mongolia.

2.5. Counterparts

34. The implementation of the project required the involvement of a number of national stakeholders. During the project development, discussions were undertaken mainly with representatives of MEGDT, which was the coordinating agency, and a National Project Coordinator (NPD) was nominated from this Ministry. The Department of Health was involved mainly in activities under component 3 on awareness raising.

35. SSIA, NEMA and ICCT were also involved in the project, they assisted in the collection of obsolete chemicals (see paragraph 33). The interim storage facility is built within the premises of the NEMA in Ulaanbaatar, and after the project completion, the management of this facility would fall under the responsibility of NEMA. Representatives from these three agencies/institutes also participated in the training workshops on remediation provided by the consortium led by MAYASA.

III. Project assessment

3.1. Project design

36. The initial proposal that was developed by UNIDO in collaboration with the Swiss Agency for Development and Cooperation (SDC) was on the management of mercury in the artisanal small-scale gold mining (ASGM) sector. However as small-scale gold mining was declared illegal in 2009, the proposal was changed to the actual project, and SDC was no longer a partner of the project.

37. The situation of mercury use in Mongolia was well documented and the project was developed taking into consideration the gaps, needs and priorities of Mongolia. In particular, it was found that the government of Mongolia neither had the resources nor the capacity to effectively address the country's problem on mercury containing waste resulting from remediation of historical contamination hotspots. In this context, the project was developed to strengthen the regulatory framework for the sound management of mercury and associated wastes and to build national capacity for the proper remediation of these hotspots. Furthermore, one of the hotspots, the Boroo river site, was chosen as pilot site for demonstration purposes.

38. Stakeholder analysis was adequately done. The major stakeholders that included MEGDT, MOH, SSIA, NEMA, ICCT, customs, relevant ministries and NGOs were identified during the preparatory phase and were invited to participate in the development of the proposal.

39. The project document contains relevant, precise, and concise information to achieve the project development objective, which was to reduce exposure of mercury to human health and the environment in Mongolia. The formulation of the overall project objective, which was to assist the Mongolian government in reducing the impacts of mercury on human health and the environment, was not adequate as the planned activities were geared to measure the reduction in mercury emissions but not to measure the impact on human health and environment.

40. The development project objective is clear, realistic and achievable given that UNIDO has been co-leading the ASGM sector of the Global Mercury Partnership and has been implementing similar projects in other regions: West Africa (Burkina Faso, Mali and Senegal), Latin America (Ecuador and Peru) and Asia (China and Philippines). Furthermore, Mongolia that adopted the zero-mercury policy in 2008 invested significantly to remediate several contaminated sites polluted by illegal use of hazardous chemicals including mercury (see paragraph 26).

41. The global as well as local benefits have been clearly described in the project document. In particular, it was highlighted that reducing mercury emissions at the Boroo river (project site) that is a tributary to the Selenge River would definitely have regional benefits as the Selenge River provides 80% of the inflow for the Lake Baikal that drains ultimately into the Artic Sea drainage basin.

42. A comprehensive Project Results Framework (PRF) (annex A of the project document) describes in details the expected outcomes and outputs of the project. In general, the proposed indicators and sources of verification for the project development objective, outputs and outcomes therein are adequate to monitor progress. Most of the proposed indicators are smart and can be easily verified. The proposed assumptions in the PRF are realistic and would allow to achieve success.

43. Low-level potential risks have been identified and described and adequate mitigation measures have been proposed. Whilst the timeframe to deliver most outputs seems adequate, the planned timeframe of 1 year to deliver Output 1.1.1 (*Draft national guidelines and supporting regulatory frameworks developed and adopted for the environmentally sound management of mercury containing waste*) seems too optimistic, as generally it requires much longer time for laws/regulations to be drafted and especially adopted by the national government.

44. Appropriate project implementation arrangements and the roles of key partners have been clearly described for the effective implementation of the project. Similarly, the proposed monitoring and evaluation (M&E) plan and the costs associated with the M&E plan seem appropriate to effectively monitor progress.

45. Despite the inadequate formulation of the overall project objective, the rating on project design is **Satisfactory**.

3.2. Relevance

Relevance to the country and beneficiaries

46. This project is highly relevant as Mongolia signed the Minamata Convention on Mercury on 10 October 2013. Some stakeholders believed that the implementation of the project contributed to an early ratification of the convention on 28 September 2015, and Mongolia was the first Asian country to ratify the convention. Moreover, this project, designed to address current regulatory weakness on mercury management and to build national capacity for remediation of mercury hotspots, is set to assist Mongolia to fully implement its zero-mercury policy that it adopted in 2008. It is also directly relevant to Mongolia's past initiatives of decontamination of mercury hotspots (see paragraph 21).

47. The project was very relevant to the work of the SSIA and NEMA. In particular the training workshop on remediation and immobilization (component 2 of the project) was directly relevant to their duties. For instance, NEMA was responsible to undertake the nationwide decontamination of mercury hotspots in 2008 – 2009 (see paragraph 21). Had the project been implemented before, this would have helped greatly them in their endeavor[8].

48. The project is also highly relevant to ICCT's work. In particular, from the training on characterization and monitoring, ICCT staff learned new techniques on sampling and monitoring, and they are currently applying some of these techniques in the context of a research project.

49. Similarly, the project also useful for the Department of Environment and Natural Resources (DENR) of the Selenge Province, where the project site (Boroo site) is located. Not only it contributed to increased awareness on mercury amongst the local stakeholders, but it also catalyzed the enforcement of the zero-mercury policy in the Selenge Province. As a result, numerous cases illegal use of mercury has been identified and have been referred to police for legal action[9].

Relevance to GEF

50. The project is directly in line with the GEF 5 Focal Area Strategy for the Chemicals focal area "*to promote the sound management of chemicals throughout their lifecycle in ways that lead to the minimization of significant adverse effects on human health and the environment*" and in particular Objective 3 to "*pilot sound chemicals management and mercury reduction*." It also aligns with Outcome 3.1 "*country capacity build to effectively manage mercury in priority sectors*" and Outcome 3.2 to "*contribute to the overall objective of the Strategic Approach to International Chemicals Management (SAICM) of achieving sound chemical management of in ways that lead to the minimization of significant adverse effects on human health and the environment*." This project is sought to support the GEF

[8] Interview data with NEMA
[9] Interview data with DENR of Selenge Province

Chemicals program focal area by strengthening local and national capacity to effectively manage and reduce mercury use, emissions and exposure in Mongolia.

Country ownership

51. The project was hosted at the MEGDT within which a NPD was nominated. The Project Management Team (PMT) was also located at the premises of the MEGDT. Involvement of government officers (e.g. MEGDT, MoH, SSIA, ICCT and NEMA) as well as their active participation in project activities such project steering committee meetings, training and awareness workshops, collection of mercury wastes, development of awareness raising materials and development of standards for construction of interim facility was very satisfactory and contributed to successful implementation of the project.[10] The national counterparts have strong ownership of the project.

52. The rating on relevance and ownership is **Very Satisfactory**.

3.3. Effectiveness

i. Achievement of expected outcomes

53. As stated in the project document, 3 outputs, organized under three components, were expected to be delivered that would contribute to 3 outcomes. The following paragraphs discuss the achievement of outputs and outcomes during implementation.

54. Outcome **1.1**: *Regulatory framework and national guidelines established for environmentally sound management of mercury containing waste*
Delivery of outputs for this outcome have been very satisfactory as discussed in the following paragraphs. However, while the national regulation on mercury added products and wastes have been drafted, it has not yet been adopted. The MEGDT should ensure that it is being adopted to ensure the sound management of mercury containing wastes.

55. Output **1.1.1**: *Draft national guidelines and supporting regulatory frameworks developed and adopted for the environmentally sound management of mercury containing waste*.
In this project, the "*National regulation on mercury added products, and wastes and mercury wastes of import, export, cross-border transport, sale, use, storage and disposal*" was developed and circulated to stakeholders for their comments. The following guidelines translated into Mongolian language were produced:

- Guidelines for Environmentally Sound Management (ESM) of mercury added products and mercury waste
- Guidelines for safe usage and handling of mercury and mercury compounds
- Handouts for safe handling of mercury containing medical devices.

[10] Interview data with all stakeholders during country mission.

56. The national regulation on mercury management is believed to be adopted only when a hazardous treatment facility and hazardous landfill site will be available. The government of Mongolia has already planned of such facilities. It is expected that the first pilot hazardous landfill site will be operational by 2018. However, for the hazardous treatment facility, its construction is being delayed due to high costs.

57. Outcome **2.1**: *Capacity developed for the implementation of remediation and stabilization techniques*
As discussed elsewhere (paragraphs 48 and 69) the capacity of national stakeholders (ICCT, NEMA and SSIA) have been successfully strengthened in the sampling and monitoring methods, and in remediation and stabilization techniques. ICCT are already using some of the sampling techniques, while NEMA are training its officers on the remediation and stabilization techniques learned from the project.

58. Output **2.1.1**: *Pilot demonstration of sound mercury remediation technique at the Boroo river site*
Soil and water samples were collected and analyzed by Mireco and MAYASA. They both found that for except a few samples, most of the soil samples were lowly contaminated by mercury (levels less than 2ppm). As for the water samples, the results revealed that all of them were not contaminated with mercury. Given these low mercury contaminations at the Boroo site, it was decided not to undertake the pilot scale demonstration on remediation using one of the techniques (cf. paragraph 34). Rather, national stakeholders were trained on two remediation and stabilization techniques on site, with the idea that these two techniques could be used on other mercury contaminated sites

59. MAYASA and its partner were contracted to build the capacity of national stakeholders on soil and water monitoring and on remediation techniques for mercury contaminated sites. Quality training workshops, highly appreciated by the participants[11], were successfully undertaken in September 2015 and October 2016 respectively.

60. On the request of the government of Mongolia, an interim facility for the storage of mercury and other hazardous wastes was constructed (cf. paragraph 31). This facility is currently being used to store obsolete stock and confiscated illegal stock of mercury, and also obsolete hazardous chemicals that were identified during an inventory made in 2015 (cf. paragraph 35). On the day of the site visit (2nd December 2016) at this interim facility, 104 kg of confiscated mercury was being brought to this facility by the special rescue unit (SRU) of NEMA. In total, 1 ton of mercury is currently being stored at this facility.

61. Outcome **3.1**: Information disseminated and awareness raised through campaigns on mercury health and environment risk reduction
The outputs have been satisfactorily delivered for this outcome. Whilst the awareness of major stakeholders has been raised, no information could be obtained on the extent to which this awareness campaign has reach the general public.

[11] Interview data with SSIA, NEMA and ICCT.

62. Output **3.1.1**: Publication/training material developed and workshop / campaign conducted.
The activities for this output were supposed to be done in close collaboration with the MOH. But due to movement of personnel at MOH[12], the activities were coordinated by PMT in collaboration with MEGDT and the following have been produced:

(i) 2 awareness raising workshops targeting all relevant government organizations and the local environmental offices of all 21 provinces

(ii) Awareness raising materials in local language (7 booklets and 1 brochure) produced and distributed to the national stakeholders

(iii) Short video on mercury wastes broadcasted on 3 national TV channels during July-August 2015

ii. Quality of outputs and target beneficiary groups

63. The outputs produced were generally of high quality. The drafting of the national legislation on mercury waste management and guidelines was based on the Basel Convention guidelines on hazardous wastes. Additionally, the drafting of this legislation and guidelines benefited from the expertise of an experienced international consultant very knowledgeable on the management of hazardous wastes.

64. The interim storage facility was constructed based on internationally accepted safety regulations and standards for such facilities. And the facility is properly secured within the premises of NEMA in Ulaanbaatar.

65. The participants (e.g. NEMA, SSIA and ICCT) unanimously appreciated the capacity building training workshops undertaken by MAYASA. They found the workshop contents very relevant to their work and learnt new techniques and technologies on monitoring and remediation. They highly appreciated both the contents of the training and their presentations. During an informal assessment made by the evaluation team, all the participants highly rated the workshops and confirmed the relevance of these trainings to their work.

66. As mentioned in the project document, awareness campaigns would be designed to target female audience. Although awareness raising campaigns and material have been produced, there is no evidence that the female audience has been specifically targeted in these activities. However, during the health assessment done by Mireco on 50 residents of the Boroo site whereby the levels of mercury and other heavy metals were determined in their blood and urine, the awareness of the female participants was raised to some extent regarding the hazardous effects of mercury on health.

[12] The representative of MOH in the project changed 3 times during the project.

iii. Longer-term impact

67. The impact of the project is to reduce exposure of mercury to human health and the environment. With the zero-mercury policy adopted in 2008, the government of Mongolia is committed to phase out the use of mercury and to soundly manage mercury wastes and hotspots and has invested significantly to decontaminate historical mercury hotspots (cf. paragraph 24). The institutional framework is in place in Mongolia to manage sites contaminated by hazardous chemicals, and this falls under the responsibility of NEMA. For example, in 2013 NEMA was contacted by the authorities of the Bayankhongor Province for a mercury contamination case. The local SSIA sampled the site, and analysis of these samples confirmed the mercury contamination of the site. NEMA undertook its remediation by excavating and landfilling the contaminated soil at a dedicated landfill[13].

68. Through the project (during training workshop by Mayasa in September 2015), the capacity of NEMA have been strengthened to monitor and remediate mercury contaminated sites. In September 2016, NEMA has already trained 19 officers of its Special Rescue Unit (SRU) on these new sampling techniques. In September 2017, NEMA plans to train additional 20 officers of SRU on the new remediation techniques[14]. Given the commitment seen from the NEMA officers, it is anticipated that exposure to mercury will be considerably reduced in the long term in Mongolia.

69. Given the commitment of NEMA officers, longer-term impact is likely to be achieved.

iv. Catalytic or replication effect

70. According to feedback gathered during the field mission, the stakeholders were generally satisfied with the project performance. In particular, they highly appreciated the training workshops on monitoring and remediation, however they felt that more officers from the provinces should have had their capacity built in the training workshops. This is happening within NEMA. As discussed earlier (paragraph 64), NEMA has already trained its rescue officers (SRU) on the new techniques for monitoring and planning to train them on the remediation techniques in 2017. ICCT also reported that they using the new sampling / monitoring techniques in the context of an on-going research project.

71. Given the quality outputs that have been delivered and that there is indication of longer-term impact, the rating on effectiveness is **Satisfactory**.

3.4. Efficiency

72. The project was originally planned to start in June 2013 (same month as project approval at the GEF). The actual start date was delayed by just one month to July 2013, with the inception workshop being held in November 2013, in Ulaanbaatar. Due to delays that the project encountered, the project was closed in December 2016 instead of July 2015, the official closure date. To allow for completion of project

[13] Interview data from NEMA
[14] See footnote 13

activities a no-cost extension was granted. For instance, the training workshop on remediation was done in October 2016.

73. The delays were mainly due to inappropriate climatic conditions to undertake field demonstration during capacity building training workshops of component 2. As mentioned earlier (paragraph 38) due to extreme continental climate that prevail in Mongolia from November to April, the two-planned capacity building training workshops, one on monitoring and the other on remediation, that required field demonstration were planned to be undertaken during the period May – October of the 1st and 2nd year of the project respectively. However, as the project started in July 2013, and given that it took much time hire the services MAYASA through an international bidding exercise, it was not possible to run the activities of the first training workshop (on monitoring) in 2013 and in 2014. In fact, this first training workshop was undertaken in September 2015 and the second training workshop on remediation techniques took place in October 2016.

74. Despite the delays, the project was quite cost effective and quality outputs were delivered with no additional costs to the project. Moreover, for the selection of service providers, the most cost-efficient option was always chosen provided that the technical requirements were met[15]. For example, for the construction of the interim storage facility, a competitive bidding exercise was undertaken to select a national company with the cheapest bid and in compliance with the technical part.

75. As already discussed earlier, the timeframe to deliver output of component 1 was too optimistic. Whilst the regulation on mercury wastes management has been drafted since 2014, and circulated among national stakeholders, it is yet to be approved and adopted by the government of Mongolia. This would however not likely affect the effectiveness of the project as NEMA, the institution responsible to manage hazardous and obsolete chemicals in Mongolia, is already adopting the new techniques they were trained on in the project (see paragraph 68).

76. Due to delays, annual work plans were revised during PSC meetings and activities of component 2 were rescheduled accordingly. As noted earlier (paragraph 31), the project could accommodate the construction (USD 30,000) of an interim facility, not planned in the project design, for the storage of mercury wastes. This was a request from the government of Mongolia as a significant stock of mercury and obsolete chemicals have been identified and not properly stored. Otherwise, in general the disbursements and project expenditures were in line with the planned budgets.

77. When the project started in 2013, UNIDO was already implementing another GEF project on PCB management. As this project was facing difficulties and implementation was slowed down considerably, UNIDO decided to recruit the NPM to manage the mercury project as well, and the cost for the NPM was shared equally between the two projects (50% each). This mechanism was cost efficient as the project could make savings that mitigated to some extent the additional cost for the extension of the project. At the same time, this mechanism did not affect the performance of the NPM as planning and supervision of activities was satisfactory

[15] Interview data from PM

and quality outputs were produced (see paragraph 63 to 65). The materialization of co-funds (cash and in-kind) from the Mongolian government and from Mireco (USD110,000) also contributed to effective delivery of outputs. The UNIDO PM attended all the PSC meetings, and the guidance and assistance he provided for project implementation was highly appreciated by all the stakeholders[16].

78. Despite the delays encountered, the project has been quite cost effective, and for these reasons efficiency is rated **Satisfactory**.

3.5. Sustainability of project outcomes

Financial risks

79. After adopting the zero-mercury policy, the government of Mongolia invested about USD 2.5 million to decontaminate mercury hotspots in 2008 (cf. paragraph 24). In 2013, NEMA, assisted by the provincial SSIA, remediated a mercury contaminated site in the Bayankhongor Province (cf. paragraph 63). According to NEMA, generally the entity having caused the contamination has to pay for the remediation. Otherwise, if the contamination is located on state owned land then the government of Mongolia would take responsibility for the remediation cost[17]. For these reasons, financial risks are considered low.

Socio-political risks

80. The fact that the Government of Mongolia has adopted a zero-mercury policy and taken measures to address its historical mercury hotspots clearly indicates the existing political will to phase out the use of mercury, and to soundly manage existing contaminated sites and mercury containing wastes. Furthermore, it has signed the Minamata Convention on mercury on 10 October 2013 and, with contribution of the project and assistance of UNITAR, it ratified it on 29 September 2015. To protect human health and the environment from the risks posed by the emissions and releases to the environment of mercury from artisanal and small-scale gold mining and processing, Mongolia is also seeking assistance from GEF to develop a national action plan in compliance with Annex C of the Minamata Convention. For these reasons, the evaluation considers that the socio-political risk that might jeopardize the project outcomes is minimal.

Institutional framework and governance risks

81. The appropriate legal framework exists for the sound management of hazardous chemicals in Mongolia. For instance, the importation of such classes of chemicals requires an import permit from the authorities, and their trade and uses are also strictly controlled and some like heavy metals including mercury are banned[18]. As mentioned earlier (cf. paragraph 67), NEMA is responsible to manage hazardous wastes including obsolete stocks of chemicals and cases of chemical (including mercury) spills and contamination. SSIA is responsible for the enforcement of all

[16] Interview data from national stakeholders including NPM and NPD.
[17] Interview data from NEMA
[18] Interview with NEMA.

environmental legislation including legislation on chemicals. Their duties include inspection of all organizations and entities (private and public) using chemicals. They pay particular attention to releases and emissions from the mining and manufacturing sectors and they have the adequate capacity to analyze chemicals such as heavy metals[19]. The evaluation considers that the institutional framework and governance risks are low.

Environmental risks

82. The project is considered to be ecologically sound and sustainable as it is building national capacity for the sound management of mercury containing wastes and historical mercury hotspots. Moreover, as no environmental risk that can influence or jeopardize the project outcomes and future flow of project benefits has been identified, this risk is considered to be low.

83. Given that all risks are considered low, the rating on sustainability is **Likely**.

3.6. **Project** coordination and management

84. For the implementation of the project, a PM was nominated from the Emerging Compliance Regimes Division, Department of Environment, UNIDO Head Quarters, Vienna, in 2013. The PM was in fact involved in the development of the project proposal and met with the major stakeholders during the preparatory phase in 2011. For the execution of the project the PM was assisted by a full-time supporting staff. The guidance and supervision provided by PM was highly appreciated by the national counterparts[20]. He participated in all the PSC meetings: attending three meetings during field missions and participated to one through Skype. He was involved in the development of technical guidelines for the construction of the interim storage facility and for the recruitment of MAYASA, responsible for the training workshops on monitoring and remediation. Standard UNIDO procedures were applied for the contracting these services through international bidding exercises. During the project implementation phase, he was in constant communication (mainly through emails and sometimes through Skype also) with the NPM providing support and guidance whenever required. Reporting from the NPM was not timely during the early phase of the implementation process, delays of up to several months was noted. However, upon request and recommendation from the PM, reporting became satisfactory with no significant delays, and the quality of the reports also improved. PIRs were timely drafted and submitted to GEF.

85. At the national level, the project management and overall coordination was done by the Project Management Team (PMT) constituted by the NPM, two national consultants and the NPD. In general, the planning and coordination of activities were adequately done, and all the stakeholders unanimously recognized the excellent work of the PMT[21]. Whilst Mireco undertook activities of component 2 for which they were responsible for, on the other hand due to movement of personnel MOH was not involved in the delivery of products for Component 3 (see paragraph 65) as planned

[19] Interview with SSIA
[20] Interview with NPM, NPD and consultants
[21] Interview with national stakeholders: SSIA, NGO, NEMA and ICCT

in the project document. The NPM was responsible to report progress of work to the PSC and to the PM, which was done timely through the NPD.

86. The rating on **project coordination and management** is **Satisfactory**.

3.7. **Assessment** of monitoring and evaluation systems

Monitoring and evaluation design

87. The monitoring & evaluation (M & E) plan proposed in the project document is consistent with UNIDO's standard procedures. The proposed plan is adequate and allows for monitoring progress and results at product level. The proposed objectively verifiable indicators and their sources of verification seem adequate to monitor progress. Realistic assumptions for the project objectives, outcomes, and outputs have also been identified in the PRF.

88. The indicative work plan and budget of the M&E plan given as Annex C appears adequate. This include the costing and planning of the inception workshop, PSC meetings, reporting requirements (progress reports and PIRS) and terminal evaluation as well as entities responsible for each monitoring activity independent terminal evaluation. Moreover, the overall approach to monitor progress and project evaluation in terms of activities and deliverables described in the project document (Part II Section C of project document) is adequate and clearly linked to project reporting, oversight, and governance. The rating on monitoring and evaluation design is **Satisfactory**.

Monitoring and evaluation implementation

89. Through a decree from the Minister of Environment and Green Development and Tourism, the PSC was officially established in 2013 and was constituted by the NPD (chairperson), GEF focal point, Head Environmental Assessment and Auditing Division (MEGDT), MOH, customs, NEMA, SSIA, Mongolian Association of Conservation of Nature and Environment (NGO) and UNIDO PM. As mentioned earlier, the inception workshop was held in August 2013 and was attended by 52 participants that included major national stakeholders involved in mercury management and included MEGBT, customs, MOH, academia, SSIA, NEMA, authorities of Selenge Province and NGOs. The purpose of the mercury project as well as planned activities and outcomes were presented to the participants.

90. The planned PSC meetings were organized during which progress made, work plan and budgets, deadlines for delivery of outputs as well as parties responsible to coordinate activities and monitor progress was discussed and agreed upon. For example, during the 2nd PSC meeting held in March 2014, MIRECO was invited to present the main findings for activities undertaken for component 2. It was also during this meeting, that decision was taken to construct the interim facility for storage of mercury and mercury containing wastes from the project funds, and the necessary adjustments to the project work plan were made accordingly.

91. Annual progress reports as well as PIRs, copies of which were made available to the evaluation, were timely submitted (see paragraph 89). The M&E implementation is considered satisfactory.

Budgeting and funding for M&E activities

92. The budgets allocated for the monitoring and evaluation activities (annex C of project document) of the project were in general adequate. However, as an international consultant and a national consultant were recruited to undertake the independent terminal evaluation, the allocated budget (USD10,000) was not appropriate and it was complemented by additional UNIDO cash co-financing. Budgeting and funding for M&E activities is rated moderately satisfactory.

93. The overall rating for **monitoring & evaluation** is **Satisfactory**.

3.8. **Monitoring** of long-term changes

94. The project design did not include a long-term monitoring system. However, given the existing national framework for the management of obsolete stocks of hazardous and banned chemicals and wastes, and contaminated sites (cf. paragraphs 67 and 70), it is anticipated that long term impact of the project would somehow be monitored to some extent. Furthermore, as the country is seeking financial assistance to develop a NAP in compliance with the Minamata Convention to protect human health and the environment from the risks posed by the emissions and releases of mercury from artisanal and small-scale gold mining (cf. paragraph 80), this would provide more opportunities for such monitoring.

3.9. **Assessment** of processes affecting achievement of project results

Preparation and readiness / Quality at entry

95. Although the formulation of the overall project objective was not adequate (cf. paragraph 43), the development project objective was clear, realistic and achievable (paragraph 44), and the project document contained relevant, precise, and concise information to achieve success (paragraph 43). However, the timeframe to develop and adopt the regulations for mercy wastes management was too optimistic (see paragraph 47). A participatory approach was adopted to develop the project proposal (paragraph 89). The major partners (MEGDT, Mireco and MOH) were identified during preparatory phase and their roles and responsibilities are adequately described in the project document.

96. Quality at entry was satisfactory. For example, the project benefitted from an experienced NPM who was already managing another UNIDO implemented project on PCBs (cf. paragraph 82). The draft regulations and guidelines for mercury waste management were developed by a consultant who had previously developed the PCB regulations for Mongolia. Moreover, the national entities responsible for the management of hazardous chemicals (NEMA and SSIA) and the most prestigious academic institutions (ICCT – MAS) were actively involved in the project. Finally, the national stakeholders highly appreciated the training workshops delivered by MAYASA, an international consortium contracted by UNIDO.

97. Given the inadequate formulation of the overall project objective and the unrealistic timeframe planned for component 1, preparation and readiness is considered moderately satisfactory.

Country ownership / driven-ness

98. National ownership of the project is high. This project is in line with the country's zero mercury policy that was adopted in 2008. Moreover, Mongolia signed the Minamata Convention, which it ratified on 28 September 2015 (cf. paragraph 46). Furthermore, as mentioned earlier, involvement of country representatives and government officers in the development of the project and active participation in project activities during the implementation phase was very satisfactory. This contributed to successful completion of project activities and delivery of high quality outputs. Ownership / driven-ness seen during project implementation is satisfactory.

Stakeholder involvement and consultation

99. As discussed in depth previously stakeholder involvement in project activities has been very satisfactory. In particular, the relevant government and provincial entities (e.g. MEGDT, MOH, SSIA, NEMA and Selenge Province authorities) have been identified and engaged in all the phases of the project from development to implementation. For these reasons, stakeholder involvement and consultation is considered highly satisfactory.

Financial planning

100. A full agency mode of execution was applied for the implementation of the project. UNIDO managed all the GEF funds and applied standard procedures for the disbursement of funds, sub-contracting, procurement of services or equipment, and for payment. All the consultants, both national and international, as well as service providers were directly contracted by UNIDO HQ, and payment was done upon submission of planned deliverables and/or report according to the terms of agreement of the respective contract. For expenses at national level, for example for workshops, either funds were transferred to the PMT through UNDP, Mongolia then payment done, or the service provider was directly paid by UNIDO HQ. The selection of the service provider was made based on the quotations submitted by three different service providers.

101. It was difficult to include a breakdown of final actual project costs by activities compared to budget as in the project document the costing was done per component, and the costing in the project financial reports submitted to the evaluation was per item (budget line). As such it was difficult for the evaluation to reconcile item costs with component costs. Table 2 below gives a breakdown of cost per item for GEF grant. For the item, national consultants / staff for which a total amount of USD193,896.57 was disbursed, reconciliation with documents submitted to the evaluation indicate USD 60,000 of this amount was disbursed for project management costs corresponding to 10% of total GEF grant. The evaluation considers that financial planning was satisfactory.

Table 2: GEF-grant disbursement breakdown at August 2016

Item	**Disbursement in 2013**	**Disbursement in 2014**	**Disbursement in 2015**	**Disbursement in 2016**	**Total disbursement** (in USD)
Staff & International Consultants		3,840.00	5,488.23	9,511.77	**9,328.23**
Local travel		1,790.58	5,375.88	1,852.74	**7,133.45**
Staff Travel	19.2	-19.20	-	-	**0.00**
National Consultants ./ Staff	8907.59	70,925.72	73,258.07	57,178.36	**193,896.57**
Contractual Services		46,890.26	269,551.78	448.22	**316,620.61**
Training/meetings/events	4299.04	5,836.01	6,229.45	5,635.50	**16,364.50**
Other Direct Costs	3467.16	-354.24	20423.83	-555.95	**25,776.65**
Total (in USD)	**16,692.99**	**128,909.13**	**380,327.24**	**74,070.64**	**569,120.01**

(Source: Budget as of September 2016 included in the Terms of Reference for this evaluation)

UNIDO supervision and backstopping

102. The PM provided quality and timely support and guidance to the PMT and national counterparts, which was highly appreciated (see paragraph 84). He attended the inception workshop, participated to all the PSC meetings and was involved in the design of the interim storage facility. Despite managing 16 projects in parallel, the PM provided adequate and timely supervision and backstopping to the project implementation, both in terms of technical guidance and administrative actions. UNIDO supervision and backstopping is considered satisfactory.

Co-financing and project outcomes

103. As reported in Table 1, the planned co-financing was as follows: Government of Mongolia: USD 1,439,000 (cash + in-kind), Mireco: USD80,000 and UNIDO: USD50,000. Besides the in-kind contribution of the national partners, such involvement of a number of government officers both at central and provincial level (e.g. MEGDT, MOH, NEMA, SSIA and Selenge Province) in project activities, and provision of office space, it was not possible to verify if the planned co-financing from the Mongolian Government indeed materialize. On the other hand, the co-financing

from Mireco contributed to the successful completion of activities of component 2. The UNIDO contribution also materialized (e.g. full time administrative support at UNIDO HQ and country visits) and contributed for a proper management and supervision of the project. Overall the materialization of co-financing is considered satisfactory, which contributed to project outcomes.

Delays of project outcomes and sustainability

104. As discussed previously, the delays were mainly due to inappropriate climatic conditions to undertake the training workshops that included field demonstration. However, these delays did not impact on effectiveness of the project as quality outputs have been delivered. The delays are also not likely to impact on the sustainability of project outcomes. For instance, in the context of their duties, NEMA, SSIA, and ICCT are already adopting some of the new techniques they were trained on in the project. And the interim storage facility is being effectively used by NEMA to store stocks of mercury and other hazardous obsolete chemicals identified during the inventory made during the project (cf. paragraph 60).

Implementation and execution approach

105. The approach originally agreed upon by stakeholders and described in the project document was adopted for project implementation and execution. UNIDO was the implementing agency and was responsible for overall project supervision, monitoring and evaluation. At national level, the execution was under the responsibility of the MEGDT. The coordination and supervision of activities was done by a PMT constituted by the NPM, two consultants and the NPD.

106. This approach was in compliance with the Paris declaration. By involving the major stakeholders in all the phases of project from development to implementation, the approach contributed to high national and local ownership. Finally, the project is in line with the country's zero mercury policy, and is set to strengthen the national legal framework and has built national capacity for the sound management of mercury containing wastes and contaminated sites.

Environmental and social safeguards

107. The project did not incorporate relevant environmental and social risk considerations into the project design. However, the project did recognize that by reducing exposure risks associated with mercury would directly benefit local agribusiness owners and communities living near mercury contaminated sites.

3.10. Gender mainstreaming

108. The project recognized that due to cultural norms that exist in Mongolia where women take on the bulk of food preparation, house-hold chores, crop cultivation, waste management, and water collection, place women at a greater exposure risk to mercury of contamination. Accordingly, the project design planned information and awareness campaigns targeting female audience to provide specific information to increase women's awareness of the health risks associated with mercury exposure.

However, the awareness campaigns undertaken under component 3 did not specifically target women.

109. The involvement of women in the project was satisfactory. For instance, the four members of the PMT were all women. Participation and attendance of women in the training and awareness workshops was also satisfactory. Finally, in the health assessment undertaken by Mireco at the Boroo site, out of the 41 persons that participated in the assessment, 24 were females.

110. Rating on gender mainstreaming is **Moderately Satisfactory**

3.11. Overall Assessment

111. Table 3 below summarizes the evaluators' assessment of the project

Table 3: Summary assessment and ratings

Criterion	Evaluator's summary comments	Evaluator's rating
Attainment of project objectives and results (overall rating), sub criteria (below)	All project objectives have been achieved and quality outputs have been delivered.	**S**
Project implementation		**S**
Effectiveness	All outputs have been satisfactorily delivered and planned outcomes are occurring. The capacity of national stakeholders has been successfully strengthened, some have already adopted some of the techniques they were trained on	**S**
Relevance	The project is highly consistent with Mongolia's zero mercury policy adopted in 2008	**HS**
Efficiency	Despite delays, quality outputs have effectively been delivered. The sharing of the NPM between two UNIDO projects contributed to mitigate management costs due to extension. Overall, the management costs were 10% of the total GEF funds.	**S**
Sustainability of project outcomes (overall rating), sub criteria (below)	All risks are low, therefore the sustainability of project outcomes is likely	**L**
Financial risks	Given that the government of Mongolia have invested significantly to decontaminate mercury hotspots, the financial risks are considered low.	**L**
Sociopolitical risks	Since the adoption of the Zero mercury policy by Mongolian government, all the major stakeholders are sensitized on the need to manage mercury wastes soundly. The project has further raised the awareness amongst stakeholders, in particular at the provincial level.	**L**

Criterion	Evaluator's summary comments	Evaluator's rating
Institutional framework and governance risks	The appropriate infrastructure for managing hazardous wastes (including mercury) and contaminated sites, which falls under the responsibly of NEMA, already exist in Mongolia	**L**
Environmental risks	No environmental risk that may jeopardize the project outcome has been identified	**L**
Monitoring and evaluation (overall rating), sub criteria (below)		**S**
M&E Design	The proposed M&E plan is consistent with UNIDO's standard procedures for monitoring implementation of projects	**S**
M&E Plan implementation (use for adaptive management)	The planned monitoring and evaluation activities were effectively undertaken	**S**
Budgeting and Funding for M&E activities	The budgets allocated for the terminal evaluation did not seem to be adequate	**MS**
Project management - UNIDO specific ratings		
Quality at entry / Preparation and readiness	The formulation of development objective was inappropriate, and the time frame planned for the development and adoption of the national legislation on mercury containing products and waste was unrealistic. However, the project benefitted from experienced consultants and partners coming from prestigious national institutions.	**MS**
Implementation approach	The agreed approach planned in the project document was adopted	**S**
UNIDO Supervision and backstopping	Despite managing 16 projects in parallel, the UNIDO PM provided adequate and timely supervision and backstopping to the project implementation, both in terms of technical guidance and administrative actions.	**S**
Gender Mainstreaming	While in the project document women were recognized as particularly at risk, the awareness raising campaigns that were undertaken were not specifically designed for them.	**MS**
Overall rating	The project was effectively executed and implemented	**S**

RATING OF PROJECT OBJECTIVES AND RESULTS

- Highly satisfactory (HS): The project had no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

- Satisfactory (S): The project had minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Moderately satisfactory (MS): The project had moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Moderately unsatisfactory (MU): The project had significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Unsatisfactory (U) The project had major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Highly unsatisfactory (HU): The project had severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Likely (L): There are no risks affecting this dimension of sustainability.
- Moderately likely (ML). There are moderate risks that affect this dimension of sustainability.
- Moderately unlikely (MU): There are significant risks that affect this dimension of sustainability.
- Unlikely (U): There are severe risks that affect this dimension of sustainability.

IV. Conclusions, recommendations and lessons learned

4.1. Conclusions

112. This project is highly relevant as Mongolia has signed and ratified the Minamata Convention. By building national capacity for sound management of mercury containing wastes is set to assist Mongolia to fully implement its zero-mercury policy adopted in 2008. The project is consistent with the GEF 5 Focal Area Strategy for the Chemicals focal area that promote the sound management of chemicals in particular to Objective 3 related to mercury reduction.

113. Effectiveness of the project is considered satisfactory. Quality outputs have been delivered and national stakeholders (e.g. NEMA and ICCT) are already adopting some of the techniques they were trained on. The materialization of planned co-financing and adoption of cost effective option during procurement contributed to increased efficiency. However, delays due to inappropriate climatic condition to run the training workshops decreased efficiency to some extent.

114. The approach originally agreed upon by stakeholders was adopted for the implementation of the project. Overall project management, supervision and monitoring were satisfactorily provided by UNIDO HQ with adequate staffing. At national level, the coordination and supervision of activities was satisfactorily done by a PMT. Active involvement of national stakeholders in all the project activities contributed to high ownership and successful delivery of outputs.

115. No risks that could jeopardize sustainability of project outcomes have been identified, therefore likelihood for continuous sustained impact of the project are considered high.

4.2. Recommendations

116. The project has successfully been completed and quality products have been delivered. For continued relevance and sustainability of project outcomes, the evaluation proposes the following recommendations:

i. The project has been successful and has produced tangible results. In particular, a national regulation on mercury added products and mercury containing wastes has been developed but not yet approved and adopted by the government. To ensure impact of the project, it is recommended that MEGDT take necessary actions for this legislation be adopted and enforced.

ii. Although small scale gold mining is not authorized in Mongolia, this activity is still likely contributing to local economies in the rural areas. Proposing alternative mercury free methods to small scale miners would potentially contribute to reduce illegal use of mercury in this sector.

iii. To ensure good visibility and impact of the project, the project outcomes and results could be summarized and disseminated to other provinces, especially those provinces where small-scale mining activities are prevalent.

iv. The results of the monitoring and health assessments carried out at the Boroo site in the Selenge Province have not yet been disclosed to the beneficiaries. The project should rapidly proceed to inform the relevant beneficiaries of the results of these assessments.

4.3. Lessons Learned

117. Valuable lessons, which emerged during the implementation of this project, include:

i. In projects that contain a component to develop or strengthen the legal framework, the design should plan for realistic timeframes. For example, for projects that have duration of less than 4 years, it would be unrealistic to propose such components and expect that the regulations be adopted within the project duration.

ii. The delays encountered in the project were due to inappropriate climatic conditions to undertake the training workshops that required field demonstration. The lesson is that proper planning taking into consideration local conditions would avoid delays in project implementation.

iii. A committed project team coupled with active participation of partners and stakeholders would contribute to achieve effective implementation.

ANNEXES

Annex 1: Terms of reference

Annex 2: List of documents reviewed

Annex 3: List of persons interviewed

ANNEX 1: Terms of reference

Terms of reference

Independent terminal evaluation of the UNIDO project:

Reduce exposure of mercury to human health and the environment by promoting sound chemical management in Mongolia

UNIDO SAP ID: 120097
GEF ID: 5323

SEPTEMBER 2016

1. Project background and overview

I. Project factsheet

Project Title	**Reduce exposure of mercury to human health and the environment by promoting sound chemical management in Mongolia**
UNIDO project No.	**120097**
GEF project ID	**5323**
Region	**Asia**
Country(ies)	**Mongolia**
GEF focal area(s) **and operational programme**	**GEF-5: POPs**
GEF implementing agency(ies)	**UNIDO**
GEF executing partner(s)	**Ministry of Environment, Green Development and Tourism**
Project size (FSP, MSP, EA)	**MSP**
Project CEO endorsement / Approval date	**20 June 2013**
Project implementation start date (First PAD issuance date)	**31 July 2013**
Original expected implementation end date (indicated in CEO endorsement/Approval document)	**31 July 2015**
Revised expected implementation end date (if applicable)	**31 December 2016**
Actual implementation end date	**31 December 2016**
GEF project grant (excluding PPG, in USD)	**600,000**
GEF PPG (if applicable, in USD)	**Not applicable**
UNIDO co-financing (in USD)	**50,000 (grant)**
Total co-financing at CEO endorsement (in USD)	**1,569,000 (grant+in-kind)**
Materialized co-financing at project completion (in USD)	**1,569,000**
Total project cost (excluding PPG and agency support cost, in USD; i.e., GEF project grant + total co-financing at CEO endorsement)	**2,169,000**
Mid-term review date	**Not applicable**
Planned terminal evaluation date	**September-November 2016**

(Source: Project document)[22]

II. Project background and context

Mongolia is currently experiencing rapid economic growth with one of the fastest emerging mineral based resource markets in the world. Immense gold, copper and

coal reserves have attracted waves of foreign direct investment since 1990 following the transition period from a centralized to market economy. Although mining has the potential to underpin broad based economic and social development, such intense growth in the extractive mineral sector coupled with rapid urbanization, poor environmental performance and low levels of public awareness, have placed increasing pressure on local and national capacities to manage growing reserves of hazardous chemicals and industrial wastes. In response, hazardous waste and chemical management have become central components of the Mongolian governments' platform on sustainable development over the last decade.

In recent years the use, transport and public health risks associated with mercury and mercury containing wastes have become increasingly controversial and are highly political issues on the national hazardous and chemical management agenda in Mongolia. As mercury is a common by product of mineral extraction and ore processing, national mercury emissions are anticipated to increase in coming decades as the mineral sector continues to expand. Unfortunately, mercury has been characterized by poor rather than good management practices in Mongolia, dating back to gold prospecting in the early 1900s. In response to patterns of unregulated and irresponsible mercury use in mining and mounting concerns with the numerous risks to human and environmental health associated with mercury exposure, the government revised the list of banned and limited use toxic and hazardous chemicals through Resolution 95 in 2007, to include mercury and its organic and inorganic compounds as chemicals with limited use. "Procedures for Storage, Transportation, Use and Disposal" was approved by the joint order 151/126/52 of Ministers of Environment, Health and Emergency in 2007, regulating the storage, transportation, use and disposal of mercury and its compounds. However, this legal order does not provide technical and pragmatic guidelines for the storage, transportation, use and disposal of mercury and its compounds.

While the Mongolian government has demonstrated political will to strengthen existing commitments to sound chemical management through remediation of mercury hot-spot areas and intends to build institutional capacities for mercury management, this remains a daunting task as no legally binding instruments, management systems, or containment facilities currently exist. In its mercury risk management plan, the Ministry of Environment, Green Development and Tourism aims at removing institutional limitations and overcoming barriers to manage mercury in a safe and efficient manner. However, practical guidelines for the management and control of mercury containing waste are not clearly delineated in existing laws and regulations on hazardous and chemical management. Therefore, the overarching goal of the project is to assist the Mongolian government in reducing the impacts of mercury on human health and the environment through regulatory, institutional and social reform and strategic demonstration intervention in historical mercury hot-spots.

Therefore, the project was designed to improve the regulatory framework on sound management of mercury containing waste, to develop capacity towards remediation and stabilization techniques in mercury hot spot areas through pilot demonstrations and to raise awareness on mercury health and environmental risks.

Project implementation started in July 2013 and the initial project end date was in July 2015.

III. Project objective and structure

The project's overall objective is to strengthen national and local capacity to effectively manage and reduce mercury emissions.

The following **3 project components** have been developed, in addition to monitoring and evaluation, to achieve the project objectives:

1. Establishing a regulatory framework and national guidelines for environmentally sound management of mercury containing waste;
2. Developing capacity for the implementation of remediation and stabilization techniques in mercury hot-spot areas through demonstration activities at the pilot scale; and
3. Disseminating information and raising awareness through campaigns on mercury health and environment risk reduction.

The main achievements so far include the construction of an interim storage site for mercury and mercury containing waste, an awareness campaign that combined TV advertisement with workshops and meetings, capacity building on contaminated site monitoring and remediation, and the development of regulatory documents on mercury managements. A total of close to 300kg of mercury was collected during the project.

IV. Project implementation and execution arrangements

UNIDO: is the implementing agency for the project and responsible for overall project implementation, monitoring and reporting

Ministry of Environment, Green Development and Tourism: is the main national executing partner, and together with UNIDO responsible for overall project implementation, coordination of stakeholders and management of pilot remediation projects

Mine Reclamation Corporation (Mireco): is a governmental agency of the Republic of Korea that validated the previous investigations carried out at the former Mongolor plant along the Boroo River.

Ministry of Health: provided technical expertise and guidance on the development of health education and technology training programs

The project was executed by a project management unit (PMU) hosted by the Ministry of Environment, Green Development and Tourism. The PMU was led by a national project manager supported by a legal consultant and an administrative consultant. The PMU's office was shared with the Secretary of the National Chemical Management Council of Mongolia that was also the main governmental counterpart of the project.

V. Relevant project reports/documents:

Access to the OpenText filing system will be granted to the evaluator during the desk study. All progress reports, contracts and project related documents will thus be made available.

VI. Budget information

The project is funded through a GEF grant, amounting to USD 600,000; a UNIDO contribution of USD 50,000 (grant); and the counterparts' co-financing of USD 1,519,000 (cash and in kind), which amount to total project budget of USD 2,169,000.

Some financial details are shown below:

Project outputs	**GEF (USD)**	**Co-Financing (USD)**	**Total (USD)**
1. Draft national guidelines and supporting regulatory frameworks developed and adopted for the environmentally sound management of mercury containing waste	50,000	166,364	**216,364**
2. Pilot demonstration of sound mercury remediation technique at the Boroo river site	425,455	1,000,000	**1,425,455**
3. Publication/training material developed and workshop/campaign conducted	50,000	240,000	**290,000**
Monitoring and evaluation	20,000	20,000	**40,000**
Project Management	54,545	142,636	**295,000**
Total	**600,000**	**1,569,000**	**2,169,000**

(Source: CEO endorsement document)

Co-financing Source Breakdown is as follows:

Name of Co-financier (source)	**Classification**	**Type**	**Project**
UNIDO	GEF Agency	Grant	50,000
Ministry of Environment, Green Development and Tourism	National government	In-kind	1,200,000
Ministry of Health	National government	In-kind	239,000
MIRECO	Private sector	In-kind	80,000
Total Co-Financing			**1,569,000**

(Source: CEO endorsement document)

UNIDO GEF-grant disbursement breakdown:

Item	**Disbursement in 2013**	**Disbursement in 2014**	**Disbursement in 2015**	**Disbursement in 2016**	**Total disbursement** (in USD) (2013-present) (19 Sept. 2016)
Staff & Intern Consult.		3,840.00	5,488.23		**9,328.23**
Local travel		1,790.58	5,375.88	-33.01	**7,133.45**
Staff Travel	19.2	-19.20			**0.00**
Nat.Consult./Staff	8907.59	70,925.72	73,258.07	41,011.60	**194,102.98**
Contractual Services		46,890.26	269,551.78	178.57	**316,620.61**
Training/meetings/events	4299.04	5,836.01	6,229.45	924.67	**17,289.17**
Other Direct Costs	3467.16	-354.24	20406.82	2,302.54	**25,822.28**
Total (in USD)	**16,692.99**	**128,909.13**	**380,310.23**	**44,384.37**	**570,296.72**

(Source: SAP database, 19 Sept. 2016)

2. Scope and purpose of the evaluation

The terminal evaluation (TE) will cover the whole duration of the project from its starting date in July 2013 to the estimated completion date in December 2016. The main objectives of the evaluation are to:

(iii) Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability and impact; and
(iv) Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing UNIDO projects.

To facilitate learning, the terminal evaluation report should include examples of good practices for other projects in the focal area, country, or region.

The terminal evaluation will provide an analysis of the attainment of the project expected results and the corresponding technical components. It will assess the achievement of global environmental objectives, project objectives, delivery of project outputs, outcomes and impacts based on indicators and against target, and management of risks; and re-examine the relevance of the project objectives and other elements of project design according to the project evaluation parameters defined in chapter VI. Through its assessments, the terminal evaluation will enable the Government, the national GEF Operational Focal Point (OFP), counterparts, the GEF, UNIDO and other stakeholders and donors to verify prospects for development impact and sustainability.

The key question of the terminal evaluation is whether the project has achieved or is likely to achieve its main objective of strengthening the national and local capacity in mercury management.

3. Evaluation approach and methodology

The terminal evaluation will be conducted in accordance with the UNIDO Evaluation Policy[23], the UNIDO Guidelines for the Technical Cooperation Programme and Project Cycle[24], the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations[25], the GEF Monitoring and Evaluation Policy[26] and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies[27].

It will be carried out by an independent evaluation team, as an independent in-depth evaluation using a participatory approach whereby all key parties associated with the project are kept informed and regularly consulted throughout the evaluation. The evaluation team will liaise with the UNIDO Independent Evaluation Division (ODG/EVQ/IEV) on the conduct of the evaluation and methodological issues.

The evaluation team will be required to use different methods to ensure that data gathering and analysis deliver evidence-based qualitative and quantitative information, based on diverse sources, as necessary: desk studies and literature review, statistical analysis, individual interviews, focus group meetings, surveys and direct observation. This approach will not only enable the evaluation to assess causality through quantitative means but also to

[23] UNIDO. (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)
[24] UNIDO. (2006). Director-General's Administrative Instruction No. 17/Rev.1: Guidelines for the Technical Cooperation Programme and Project Cycle (DGAI.17/Rev.1, 24 August 2006)
[25] GEF. (2008). Guidelines for GEF Agencies in Conducting Terminal Evaluations (Evaluation Office, Evaluation Document No. 3, 2008)
[26] GEF. (2010) The GEF Monitoring and Evaluation Policy (Evaluation Office, November 2010)
[27] GEF. (2011). GEF Minimum Fiduciary Standards: Separation of Implementation and Execution Functions in GEF Partner Agencies (GEF/C.41/06/Rev.01, 3 November 2011, prepared by the Trustee)

provide reasons for why certain results were achieved or not and to triangulate information for higher reliability of findings. The specific mixed methodological approach will be described in the inception report.

The evaluation team will develop interview guidelines. Field interviews can take place either in the form of focus-group discussions or one-to-one consultations.

The methodology will be based on the following:

- A desk review of project documents, including, but not limited to:
    - The original project document, monitoring reports (such as progress and financial reports to UNIDO and UNIDO-GEF annual Project Implementation Reports (PIRs)), output reports (case studies, action plans, sub-regional strategies, etc.), back-to-office mission report(s), end-of-contract report(s) and relevant correspondence.
    - If applicable, notes from the meetings of committees involved in the project (e.g. approval and steering committees).
- Other project-related material produced by the project.
    - The evaluation team will use available models of (or reconstruct if necessary) theory of change for the different types of intervention (enabling, capacity, investment, demonstration). The validity of the theory of change will be examined through specific questions in interviews and possibly through a survey of stakeholders.
    - Counterfactual information: In those cases where baseline information for relevant indicators is not available, the evaluation team will aim at establishing a proxy-baseline through recall and secondary information.
    - Interviews with project management and technical support including staff and management at UNIDO HQ and in the field and – if necessary - staff associated with the project's financial administration and procurement.
    - Interviews with project partners and stakeholders, including, among others, government counterparts, GEF OFP, project stakeholders, and co-financing partners as shown in the corresponding sections of the project documents.
    - On-site observation of results achieved by demonstration projects, including interviews of actual and potential beneficiaries of improved technologies.
    - Interviews and telephone interviews with intended users for the project outputs and other stakeholders involved in the project. The evaluation team shall determine whether to seek additional information and opinions from representatives of any donor agency(ies) or other organizations.
    - Interviews with the relevant UNIDO Field/Regional Offices (in China – includes Mongolia), to the extent that it was involved in the project, and members of the project management team and the various national and sub-regional authorities dealing with project activities as necessary. If deemed necessary, the evaluation team shall also gain broader perspectives from discussions with relevant GEF Secretariat staff.
    - Other interviews, surveys or document reviews as deemed necessary by the evaluation team and/or UNIDO, ODG/EVQ/IEV for triangulation purposes.
    - The inception report will provide details on the methodology used by the evaluation team and include an evaluation matrix.

4. Evaluation team composition

The evaluation team will be composed of one international evaluation consultant acting as the team leader and one national consultant. The consultants will be contracted by UNIDO. The tasks of each team member are specified in the job descriptions annexed to these terms of reference.

The evaluation team might be required to provide information relevant for follow-up studies, including terminal evaluation verification upon request from the GEF up to three years after completion of the terminal evaluation.

Members of the evaluation team must not have been directly involved in the design and/or implementation of the projects/programme under evaluation.

The UNIDO project manager and the project teams in Mongolia will support the evaluation team. The UNIDO GEF Coordinator and the GEF OFP will be briefed on the evaluation and provide support to its conduct. GEF OFP will, where applicable and feasible, also be briefed and debriefed at the start and end of the evaluation mission.

5. Time schedule and deliverables

The evaluation is scheduled to take place from 1 October 2016 to 31 December 2016. The evaluation mission is planned for the 2nd half of November or December 2016. At the end of the field mission, there will be a presentation of the preliminary findings for all stakeholders involved in this project/programme in the participating country.

At the end of the evaluation field mission, a debriefing should also be conducted inviting local stakeholders (incl. government and parties involved in the evaluation). After the evaluation mission, the international evaluation consultant will come to UNIDO HQ for debriefing and presentation of the preliminary findings of the terminal evaluation.

The draft TE report will be submitted 4 to 6 weeks after the end of the mission. The draft TE report is to be shared with the UNIDO PM, ODG/EVQ/IEV, the UNIDO GEF Coordinator and the GEF OFP and other relevant stakeholders for receipt of comments. The ET is expected to revise the draft TE report based on the comments received, edit the language and form and submit the final version of the TE report in accordance with UNIDO ODG/EVQ/IEV standards.

6. Project evaluation parameters

The evaluation team will assess the project performance guided by the parameters and evaluations questions provided in this section. In addition to the qualitative assessment based on the evidence gathered in the evaluation, the evaluation team will rate the project on the basis of the **rating criteria for the parameters described in the following sub-chapters, A to I.**

Ratings will be presented in the form of tables with each of the criteria / aspects rated separately and with **brief justifications for the rating** based on the findings and the main analyses (see Table 1 to Table 3) in Annex 2. Table 4 in Annex 2 presents the template for summarizing the overall ratings.

As per the GEF's requirements, the evaluation report should also provide information on project identification, time frame, actual expenditures, and co-financing in the format in Annex 6, which is modelled after the GEF's project identification form (PIF).

1. Project identification and design

Project identification assessment criteria derived from the logical framework approach (LFA) methodology, establishing the process and set up of steps and analyses required to design a project in a systematic and structured way, e.g. situation, stakeholder, problem and objective analyses.

The aspects to be addressed by the evaluation include inter alia the extent to which:

(a) The situation, problem, need / gap was clearly identified, analysed and documented (evidence, references). The project design was based on a needs assessment

(b) Stakeholder analysis was adequate (e.g. clear identification of end-users, beneficiaries, sponsors, partners, and clearly defined roles and responsibilities in the project(s)).

(c) The project took into account and reflects national and local priorities and strategies

(d) ISID-related issues and priorities were considered when designing the project

(e) Relevant country representatives (from government, industries, gender groups, custom officers and civil society - including the GEF OFP for GEF projects), were appropriately involved and participated in the identification of critical problem areas and the development of technical cooperation strategies.

Project design quality assessment criteria derive from the logical framework approach (LFA) methodology, leading to the establishment of Logframe Matrix (LFM) and the main elements of the project, i.e. overall objective, outcomes, outputs, to defining their causal relationship, as well as indicators, their means of verification and the assumptions. The evaluation will examine the extent to which:

(a) The project's design was adequate to address the problems at hand;

(b) The project had a clear thematically focused development objective;

(c) The project outcome was clear, realistic, relevant, addressed the problem identified and provided a clear description of the benefit or improvement that will be achieved after project completion;

(d) Outputs were clear, realistic, adequately leading to the achievement of the outcome;

(e) The attainment of overall development objective, outcome and outputs can be determined by a set of SMART verifiable indicators;

(f) The results hierarchy in the LFM, from activities to outputs, outcome and overall objective, is logical and consistent.

(g) Verification and Assumptions were adequate, identifying important external factors and risks;

(h) All GEF-4 and GEF-5 projects have incorporated relevant environmental and social considerations into the project design / GEF-6 projects have followed the provisions specified in UNIDO/DGAI.23: UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP).

2. Implementation Performance

Implementation assessment criteria to be applied are shown below and correspond to DAC criteria, as well as to good programme/project management practices.

- **Relevance and ownership**

The evaluation will examine the extent to which the project is relevant to the:

I. National development and environmental priorities and strategies of the Government and the population, and regional and international agreements. See possible evaluation questions under "Country ownership/drivenness" below.

II. Target groups: relevance of the project's objectives, outcomes and outputs to the different target groups of the interventions (e.g. companies, civil society, beneficiaries of capacity building and training, etc.).

III. GEF's focal areas/operational programme strategies: In retrospect, were the project's outcomes consistent with the GEF focal area(s)/operational program strategies? Ascertain the likely nature and significance of the contribution of the project outcomes to the wider portfolio of POPs.

IV. Does the project remain relevant taking into account the changing environment?

- **Effectiveness**

i. Achievement of expected outcomes:
   a. What outputs and outcomes has the project achieved so far (both qualitative and quantitative results)?
   b. To what extent have the expected outcomes, outputs and long-term objectives been achieved or are likely to be achieved?
   c. Has the project generated any results that could lead to changes of the assisted institutions?
   d. Have there been any unplanned effects?
   e. Are the project outcomes commensurate with the original or modified project objectives?
   f. If the original or modified expected results were described as merely outputs/inputs, were there any real outcomes of the project and, if so, were these commensurate with realistic expectations from the project?
   g. If there was a need to reformulate the project design and the project results framework given changes in the country and operational context, were such modifications properly documented?

ii. How do the stakeholders perceive the quality of outputs? Were the targeted beneficiary groups actually reached?

iii. Longer-term impact: Identify actual and/or potential longer-term impacts or at least indicate the steps taken to assess these (see also below "monitoring of long term changes"). Wherever possible, evaluators should indicate how findings on impacts will be reported in future.

iv. Catalytic or replication effects: Describe any catalytic or replication effects: the evaluation will describe any catalytic or replication effect both within and outside the project. If no effects are identified, the evaluation will describe the catalytic or replication actions that the project carried out. No ratings are requested for the project's catalytic role.

- **Efficiency**

The extent to which:

i. The project cost was effective? Was the project using the most cost-efficient options?
ii. Has the project produced results (outputs and outcomes) within the expected time frame? Was project implementation delayed, and, if it was, did that affect cost effectiveness or results? Wherever possible, the evaluator should also compare the costs incurred and the time taken to achieve outcomes with that for similar projects. Are the project's activities in line with the schedule of activities as defined by the project team and annual work plans? Are the disbursements and project expenditures in line with budgets?
iii. Have the inputs from the donor, UNIDO and Government/counterpart been provided as planned, and were they adequate to meet the requirements? Was the quality of UNIDO inputs and services as planned and timely?
iv. Was there coordination with other UNIDO and other donors' projects, and did possible synergy effects happen?
v. Were there delays in project implementation and if so, what were their causes?

- **Assessment of risks to sustainability of project outcomes**

Sustainability is understood as the likelihood of continued benefits after the GEF project ends. Assessment of sustainability of outcomes will be given special attention but also technical, financial and organization sustainability will be reviewed. This assessment should explain how the risks to project outcomes will affect continuation of benefits after the GEF project ends. It will include both exogenous and endogenous risks. The following four dimensions or aspects of risks to sustainability will be addressed:

i. **Financial risks**. Are there any financial risks that may jeopardize sustainability of project outcomes? What is the likelihood of financial and economic resources not being available once GEF assistance ends? (Such resources can be from multiple sources, such as the public and private sectors or income-generating activities; these can also include trends that indicate the likelihood that, in future, there will be adequate financial resources for sustaining project outcomes.) Was the project successful in identifying and leveraging co-financing?
ii. **Sociopolitical risks**. Are there any social or political risks that may jeopardize sustainability of project outcomes? What is the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained? Do the various key stakeholders see that it is in their interest that project benefits continue to flow? Is there sufficient public/stakeholder awareness in support of the project's long-term objectives?
iii. **Institutional framework and governance risks.** Do the legal frameworks, policies, and governance structures and processes within which the project operates pose risks that may jeopardize sustainability of project benefits? Are requisite systems for accountability and transparency and required technical know-how in place?
iv. **Environmental risks.** Are there any environmental risks that may jeopardize sustainability of project outcomes? 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 have adverse environmental impacts, which, in turn, might affect sustainability of project benefits? The evaluation should assess whether certain activities will pose a threat to the sustainability of the project outcomes.

- **Assessment of monitoring and evaluation (M&E) systems**

  i. **M&E design.** Did the project have an M&E plan to monitor results and track progress towards achieving project objectives? The evaluation will assess whether the project met the minimum requirements for the application of the Project M&E plan (see annex 3).

  ii. **M&E plan implementation.** The evaluation should verify that an M&E system was in place and facilitated timely tracking of progress toward project objectives by collecting information on chosen indicators continually throughout the project implementation period; annual project reports were complete and accurate, with well-justified ratings; the information provided by the M&E system was used during the project to improve performance and to adapt to changing needs; and the project had an M&E system in place with proper training for parties responsible for M&E activities to ensure that data will continue to be collected and used after project closure. Was monitoring and self-evaluation carried out effectively, based on indicators for outputs, outcomes and impacts? Are there any annual work plans? Was any steering or advisory mechanism put in place? Did reporting and performance reviews take place regularly?

  iii. **Budgeting and Funding for M&E activities.** In addition to incorporating information on funding for M&E while assessing M&E design, the evaluators will determine whether M&E was sufficiently budgeted for at the project planning stage and whether M&E was adequately funded and in a timely manner during implementation.

- **Monitoring of long-term changes**

The M&E of long-term changes is often incorporated in GEF-supported projects as a separate component and may include determination of environmental baselines; specification of indicators; and provisioning of equipment and capacity building for data gathering, analysis, and use. This section of the evaluation report will describe project actions and accomplishments towards establishing a long-term monitoring system. The evaluation will address the following questions:

i. Did the project contribute to the establishment of a long-term monitoring system? If it did not, should the project have included such a component?

ii. What were the accomplishments and shortcomings in establishment of this system?

iii. Is the system sustainable — that is, is it embedded in a proper institutional structure and does it have financing? How likely is it that this system continues operating upon project completion?

iv. Is the information generated by this system being used as originally intended?

- **Assessment of processes affecting achievement of project results**

Among other factors, when relevant, the evaluation will consider a number of issues affecting project implementation and attainment of project results. The assessment of these issues can be integrated into the analyses of project design, relevance, effectiveness, efficiency, sustainability and management as the evaluators deem them appropriate (it is not necessary, however it is possible to have a separate chapter on these aspects in the evaluation report). The evaluation will consider, but need not be limited to, the following issues that may have affected project implementation and achievement of project results:

i. **Preparation and readiness / Quality at entry.** Were the project's objectives and components clear, practicable, and feasible within its time frame? Were counterpart resources (funding, staff, and facilities), and adequate project management arrangements in place at project entry? Were the capacities of executing institution and counterparts properly considered when the project was designed? Were lessons from other relevant projects properly incorporated in the project design? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project approval?

ii. **Country ownership/drivenness.** Was the project concept in line with the sectoral and development priorities and plans of the country—or of participating countries, in the case of multi-country projects? Are project outcomes contributing to national development priorities and plans? Were relevant country representatives from government and civil society involved in the project? Was the GEF OFP involved in the project design and implementation? Did the recipient government maintain its financial commitment to the project? Has the government—or governments in the case of multi-country projects—approved policies or regulatory frameworks in line with the project's objectives?

iii. **Stakeholder involvement and consultation.** Did the project involve the relevant stakeholders through continuous information sharing and consultation? Did the project implement appropriate outreach and public awareness campaigns? Were the relevant vulnerable groups and powerful supporters and opponents of the processes involved in a participatory and consultative manner? Which stakeholders were involved in the project (e.g., NGOs, private sector, other UN Agencies) and what were their immediate tasks? Did the project consult with and make use of the skills, experience, and knowledge of the appropriate government entities, nongovernmental organizations, community groups, private sector entities, local governments, and academic institutions in the design, implementation, and evaluation of project activities? Were perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process taken into account while taking decisions?

iv. **Financial planning.** Did the project have appropriate financial controls, including reporting and planning, that allowed management to make informed decisions regarding the budget and allowed for timely flow of funds? Was there due diligence in the management of funds and financial audits? Did promised co-financing materialize? Specifically, the evaluation should also include a breakdown of final actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co-financing.

v. **UNIDO's supervision and backstopping.** Did UNIDO staff identify problems in a timely fashion and accurately estimate their seriousness? Did UNIDO staff provide quality support and advice to the project, approve modifications in time, and restructure the project when needed? Did UNIDO provide the right staffing levels, continuity, skill mix, and frequency of field visits for the project?

vi. **Co-financing and project outcomes and sustainability.** Did the project manage to mobilize the co-financing amount expected at the time of CEO Endorsement? If there was a difference in the level of expected co-financing and the co-financing actually mobilized, what were the reasons for the variance? Did the extent of materialization of co-financing affect project outcomes and/or sustainability, and, if so, in what ways and through what causal linkages?

vii. **Delays and project outcomes and sustainability.** If there were delays in project implementation and completion, what were the reasons? Did the delays affect project

outcomes and/or sustainability, and, if so, in what ways and through what causal linkages?

viii. **Implementation and execution approach.** Is the implementation and execution approach chosen different from other implementation approaches applied by UNIDO and other agencies? Does the approach comply with the principles of the Paris Declaration? Is the implementation and execution approach in line with the GEF Minimum Fiduciary Standards: Separation of Implementation and Execution Functions in GEF Partner Agencies (GEF/C.41/06/Rev.01) and the relevant UNIDO regulations (DGAI.20 and Procurement Manual)? Does the approach promote local ownership and capacity building? Does the approach involve significant risks? In cases where Execution was done by third parties, i.e. Executing Partners, based on a contractual arrangement with UNIDO was this done in accordance with the contractual arrangement concluded with UNIDO in an effective and efficient manner?

ix. **Environmental and Social Safeguards.** If a GEF-5 project, has the project incorporated relevant environmental and social risk considerations into the project design? What impact did these risks have on the achievement of project results?

- **Project coordination and management**

The extent to which:

i. The national management and overall coordination mechanisms have been efficient and effective? Did each partner have assigned roles and responsibilities from the beginning? Did each partner fulfil its role and responsibilities (e.g. providing strategic support, monitoring and reviewing performance, allocating funds, providing technical support, following up agreed/corrective actions)?

ii. The UNIDO HQ-based management, coordination, monitoring, quality control and technical inputs have been efficient, timely and effective (e.g. problems identified timely and accurately; quality support provided timely and effectively; right staffing levels, continuity, skill mix and frequency of field visits)?

- **Assessment of gender mainstreaming**

Gender mainstreaming assessment criteria are provided in the table below. Guidance on integrating gender is included in Annex 4.

The evaluation will consider, but need not be limited to, the following issues that may have affected gender mainstreaming in the project:

a. Did the project/programme design adequately consider the gender dimensions in its interventions? If so, how (at the level of project outcome, output or activity)?

b. Was a gender analysis included in a baseline study or needs assessment (if any)?

c. How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries?

d. Have women and men benefited equally from the project's interventions? Do the results affect women and men differently? If so, why and how? How are the results likely to affect gender relations (e.g., division of labour, decision-making authority)?

e. Are women/gender-focused groups, associations or gender units in partner organizations consulted/included in the project?

f. To what extent were socioeconomic benefits delivered by the project at the national and local levels, including consideration of gender dimensions?

7. Deliverables and Reporting

Inception report

These terms of reference (TOR) provide some information on the evaluation methodology, but this should not be regarded as exhaustive. After reviewing the project documentation and initial interviews with the project manager, the evaluation team will prepare a short inception report that will operationalize the TOR relating to the evaluation questions and provide information on what type of and how the evidence will be collected (methodology). It will be discussed with and approved by the responsible in the UNIDO Independent Evaluation Division.

The inception report will focus on the following elements: preliminary project theory model(s); elaboration of evaluation methodology including quantitative and qualitative approaches through an evaluation framework ("evaluation matrix"); division of work between the international evaluation consultants; mission plan, including places to be visited, people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable[28].

Evaluation report format and review procedures

The draft report will be delivered to UNIDO Independent Evaluation Division (the suggested report outline is in annex 1) and circulated to UNIDO staff, the GEF OFP, and national stakeholders associated with the project for factual validation and comments. Any comments or responses, or feedback on any errors of fact to the draft report provided by the stakeholders will be sent to UNIDO ODG/EVQ/IEV for collation and onward transmission to the project evaluation team who will be advised of any necessary revisions. On the basis of this feedback, and taking into consideration the comments received, the evaluation team will prepare the final version of the terminal evaluation report.

The evaluation team will present its preliminary findings to the national stakeholders at the end of the field visit and take into account their feed-back in preparing the evaluation report. A presentation of preliminary findings will take place at UNIDO HQ after the field mission.

The terminal evaluation report should be brief, to the point and easy to understand. It must explain the purpose of the evaluation, exactly what was evaluated, and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should provide information on when the evaluation took place, the places visited, who was involved and be presented in a way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

Findings, conclusions and recommendations should be presented in a complete, logical and balanced manner. The evaluation report shall be written in English and follow the outline given in annex 1.

[28] The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by the UNIDO Independent Evaluation Division.

Evaluation work plan and deliverables

The "Evaluation Work Plan" includes the following main products/deliverables:

INCEPTION PHASE:

- Desk review, briefing by project manager and development of methodology: Following the receipt of all relevant documents, and consultation with the Project Manager about the documentation, including reaching an agreement on the methodology, the desk review could be completed.
- Inception report: At the time of departure to the field mission, all the received material has been reviewed and consolidated into the Inception report.

FIELD MISSION:

- Field mission: The principal responsibility for managing this evaluation lies with UNIDO. It will be responsible for liaising with the project team to set up the stakeholder interviews, arrange the field missions, coordinate with the Government. At the end of the field mission, there will be a presentation of preliminary findings to the key stakeholders in the country where the project was implemented.
- Preliminary findings from the field mission: Following the field mission, the main findings, conclusions and recommendations would be prepared and presented in the field and at UNIDO Headquarters.

REPORTING:

- Data analysis/collation of the data/information collected
- A draft terminal evaluation report will be forwarded electronically to the UNIDO Independent Evaluation Division and circulated to main stakeholders.
- Final terminal evaluation report will incorporate comments received.

8. Quality assurance

All UNIDO terminal evaluations are subject to quality assessments by the UNIDO Independent Evaluation Division. Quality assurance and control is exercised in different ways throughout the evaluation process (briefing of consultants on methodology and process by the UNIDO, ODG/EVQ/IEV, providing inputs regarding findings, lessons learned and recommendations from other UNIDO evaluations, review of inception report and evaluation report by UNIDO, ODG/EVQ/IEV). The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality, attached as Annex 4. The applied evaluation quality assessment criteria are used as a tool to provide structured feedback. UNIDO, ODG/EVQ/IEV should ensure that the evaluation report is useful for UNIDO in terms of organizational learning (recommendations and lessons learned) and is compliant with UNIDO's evaluation policy and these terms of reference. The draft and final terminal evaluation report are reviewed by the UNIDO Independent Evaluation Division, which will submit the final report to the GEF Evaluation Office and circulate it within UNIDO together with a management response sheet.

Annex 1 - Outline of an in-depth project evaluation report

Executive summary

- Must provide a synopsis of the storyline which includes the main evaluation findings and recommendations
- Must present strengths and weaknesses of the project
- Must be self-explanatory and should be maximum 3-4 pages in length

I. Evaluation objectives, methodology and process

- Information on the evaluation: why, when, by whom, etc.
- Scope and objectives of the evaluation, main questions to be addressed
- Information sources and availability of information
- Methodological remarks, limitations encountered and validity of the findings

II. Country and project background

- Brief country context: an overview of the economy, the environment, institutional development, demographic and other data of relevance to the project
- Sector-specific issues of concern to the project[29] and important developments during the project implementation period
- Project summary:
  - Fact sheet of the project: including project objectives and structure, donors and counterparts, project timing and duration, project costs and co-financing
  - Brief description including history and previous cooperation
  - Project implementation arrangements and implementation modalities, institutions involved, major changes to project implementation
  - Positioning of the UNIDO project (other initiatives of Government, other donors, private sector, etc.)
  - Counterpart organization(s)

III. Project assessment

This is the key chapter of the report and should address all evaluation criteria and questions outlined in the TOR (see section VI - Project evaluation parameters). Assessment must be based on factual evidence collected and analyzed from different sources. The evaluators' assessment can be broken into the following sections:

Project identification and formulation

1 Project design

Implementation performance

2 Relevance and ownership (report on the relevance of project towards countries and beneficiaries, country ownership, stakeholder involvement)

3 Effectiveness (the extent to which the development intervention's objectives and deliverables were achieved, or are expected to be achieved, taking into account their relative importance)

4 Efficiency (report on the overall cost-benefit of the project and partner countries' contribution to the achievement of project objectives)

5 Likelihood of sustainability of project outcomes (report on the risks and vulnerability of the project, considering the likely effects of sociopolitical and institutional changes in partner countries, and its impact on continuation of benefits after the GEF project ends, specifically the financial, sociopolitical, institutional framework and governance, and environmental risks)

6 Project coordination and management (Report on the project management conditions and achievements, and partner countries' commitment)

[29] Explicit and implicit assumptions in the logical framework of the project can provide insights into key-issues of concern (e.g., relevant legislation, enforcement capacities, government initiatives)

7 Assessment of monitoring and evaluation systems (report on M&E design, M&E plan implementation, and budgeting and funding for M&E activities)
8 Monitoring of long-term changes
9 Assessment of processes affecting achievement of project results (report on preparation and readiness / quality at entry, country ownership, stakeholder involvement, financial planning, UNIDO support, co-financing and project outcomes and sustainability, delays of project outcomes and sustainability, and implementation approach)
10 Gender mainstreaming

At the end of this chapter, an overall project achievement rating should be developed as required in annex 2. The overall rating table required by the GEF should be presented here.

IV. Conclusions, recommendations and lessons learned

This chapter can be divided into three sections:

Conclusions

This section should include a storyline of the main evaluation conclusions related to the project's achievements and shortfalls. It is important to avoid providing a summary based on each and every evaluation criterion. The main conclusions should be cross-referenced to relevant sections of the evaluation report.

Recommendations

This section should be succinct and contain few key recommendations. They should be:
- Based on evaluation findings
- Realistic and feasible within a project context
- Indicating institution(s) responsible for implementation (addressed to a specific officer, group or entity who can act on it) and have a proposed timeline for implementation if possible
- Commensurate with the available capacities of project team and partners
- Taking resource requirements into account.

Recommendations should be structured by addressees:
- UNIDO
- Government and/or counterpart organizations
- Donor

Lessons learned
- Lessons learned must be of wider applicability beyond the evaluated project but must be based on findings and conclusions of the evaluation
- For each lesson, the context from which they are derived should be briefly stated

Annexes should include the evaluation TOR, list of interviewees, documents reviewed, a summary of project identification and financial data, including an updated table of expenditures to date, and other detailed quantitative information. Dissident views or management responses to the evaluation findings may later be appended in an annex.

Annex 2 - Rating tables

Ratings will be presented in the form of tables with each of the criteria / aspects rated separately and with **brief justifications for the rating** based on the findings and the main analyses (see Table 1 to Table 3) below. Table 4 presents the template for summarizing the overall ratings.

Table 1. Rating criteria for Quality of project identification and formulation process (LFA Process)

Evaluation issue	Evaluator's comments	Ratings
• Extent to which the situation, problem, need / gap is clearly identified, analysed and documented (evidence, references).		
• Adequacy and clarity of the stakeholder analysis (clear identification of end-users, beneficiaries, sponsors, partners, and clearly defined roles and responsibilities in the project(s)).		
• Adequacy of project monitoring and evaluation (M&E) design.		
• Overall LFA design process.		

Table 2. Quality of project design (LFM)

Evaluation issue	Evaluator's comments	Rating
a) Clarity and adequacy of **outcome** (clear, realistic, relevant, addressing the problem identified). Does it provide a clear description of the benefit or improvement that will be achieved after project completion?		
b) Clarity and adequacy of **outputs** (realistic, measurable, adequate for leading to the achievement of the **outcome**).		
c) Clarity, consistency and logic of the **objective tree**, and its reflexion in the LFM results hierarchy from **activities** to **outputs**, to **outcome** and to **overall objective**.		
d) **Indicators** are SMART for Outcome and Output levels.		
e) Adequacy of **Means of Verification and Assumptions** (including important external factors and risks).		
f) Overall LFM design quality.		

Table 3. Quality of project implementation performance

Evaluation criteria	Rating	
g) **Ownership and relevance**		
h) **Effectiveness**		
i) **Efficiency**		
j) **Impact**		
k) **Likelihood of/ risks to sustainability**		
l) **Project management**		
m) **M&E**		

Table 4. Template for summarizing the overall ratings

Criterion	Evaluator's summary comments	Evaluator's rating
Attainment of project objectives and results (overall rating), sub criteria (below)		
Project implementation		
Effectiveness		
Relevance		
Efficiency		
Sustainability of project outcomes (overall rating), sub criteria (below)		
Financial risks		
Sociopolitical risks		
Institutional framework and governance risks		
Environmental risks		
Monitoring and evaluation (overall rating), sub criteria (below)		
M&E Design		
M&E Plan implementation (use for adaptive management)		
Budgeting and Funding for M&E activities		
Project management - UNIDO specific ratings		
Quality at entry / Preparation and readiness		
Implementation approach		
UNIDO Supervision and backstopping		
Gender Mainstreaming		
Overall rating		

RATING OF PROJECT OBJECTIVES AND RESULTS

- Highly satisfactory (HS): The project had no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Satisfactory (S): The project had minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Moderately satisfactory (MS): The project had moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Moderately unsatisfactory (MU): The project had significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Unsatisfactory (U) The project had major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.
- Highly unsatisfactory (HU): The project had severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Please note: Relevance and effectiveness will be considered as critical criteria. The overall rating of the project for achievement of objectives and results **may not be higher** than the lowest rating on

either of these two criteria. Thus, to have an overall satisfactory rating for outcomes a project must have at least satisfactory ratings on both relevance and effectiveness.

RATINGS ON SUSTAINABILITY

Sustainability will be understood as the probability of continued long-term outcomes and impacts after the GEF project funding ends. The evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits beyond project completion. Some of these factors might be outcomes of the project, i.e. stronger institutional capacities, legal frameworks, socio-economic incentives /or public awareness. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes.

Rating system for sustainability sub-criteria

On each of the dimensions of sustainability of the project outcomes will be rated as follows.

- Likely (L): There are no risks affecting this dimension of sustainability.
- Moderately likely (ML). There are moderate risks that affect this dimension of sustainability.
- Moderately unlikely (MU): There are significant risks that affect this dimension of sustainability.
- Unlikely (U): There are severe risks that affect this dimension of sustainability.

All the risk dimensions of sustainability are critical. Therefore, overall rating for sustainability will not be higher than the rating of the dimension with lowest ratings. For example, if a project has an Unlikely rating in either of the dimensions then its overall rating cannot be higher than Unlikely, regardless of whether higher ratings in other dimensions of sustainability produce a higher average.

RATINGS OF PROJECT M&E

Monitoring is a continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing project with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds. Evaluation is the systematic and objective assessment of an on-going or completed project, its design, implementation and results. Project evaluation may involve the definition of appropriate standards, the examination of performance against those standards, and an assessment of actual and expected results.

The Project M&E system will be rated on M&E design, M&E plan implementation and budgeting and funding for M&E activities as follows:

- Highly satisfactory (HS): There were no shortcomings in the project M&E system.
- Satisfactory(S): There were minor shortcomings in the project M&E system.
- Moderately satisfactory (MS): There were moderate shortcomings in the project M&E system.
- Moderately unsatisfactory (MU): There were significant shortcomings in the project M&E system.
- Unsatisfactory (U): There were major shortcomings in the project M&E system.
- Highly unsatisfactory (HU): The Project had no M&E system.

M&E plan implementation will be considered a critical parameter for the overall assessment of the M&E system. The overall rating for the M&E systems will not be higher than the rating on M&E plan implementation.

All other ratings will be on the GEF six-point scale:

HS	= Highly satisfactory	Excellent
S	= Satisfactory	Well above average
MS	= Moderately satisfactory	Average
MU	= Moderately unsatisfactory	Below average
U	= Unsatisfactory	Poor
HU	= Highly unsatisfactory	Very poor (appalling)

Annex 3 - GEF Minimum requirements for M&E[30]

Minimum requirement 1: Project design of M&E

All projects will include a concrete and fully budgeted M&E plan by the time of work program entry for full-sized projects (FSP) and CEO approval for medium-sized projects (MSP). This M&E plan will contain as a minimum:

A. SMART indicators for project implementation, or, if no indicators are identified, an alternative plan for monitoring that will deliver reliable and valid information to management;

B. SMART indicators for results (outcomes and, if applicable, impacts), and, where appropriate, indicators identified at the corporate level;

C. Baseline for the project, with a description of the problem to be addressed, with indicator data, or, if major baseline indicators are not identified, an alternative plan for addressing this within one year of implementation;

D. Identification of reviews and evaluations that will be undertaken, such as mid-term reviews or evaluations of activities; and

E. Organizational set-up and budgets for monitoring and evaluation.

Minimum requirement 2: Application of project M&E

Project monitoring and supervision will include implementation of the M&E plan, comprising:

1. SMART indicators for implementation are actively used, or if not, a reasonable explanation is provided;
2. SMART indicators for results are actively used, or if not, a reasonable explanation is provided;
3. The baseline for the project is fully established and data compiled to review progress reviews, and evaluations are undertaken as planned; and
4. The organizational set-up for M&E is operational and budgets are spent as planned.

[30] http://www.thegef.org/gef/sites/thegef.org/files/documents/ME_Policy_2010.pdf

Annex 4 - Guidance on integrating gender in evaluations of UNIDO projects

A. Introduction

Gender equality is internationally recognized as a goal of development and is fundamental to sustainable growth and poverty reduction. The UNIDO Policy on gender equality and the empowerment of women and its addendum, issued respectively in April 2009 and May 2010 (UNIDO/DGB(M).110 and UNIDO/DGB(M).110/Add.1), provides the overall guidelines for establishing a gender mainstreaming strategy and action plans to guide the process of addressing gender issues in the Organization's industrial development interventions.

According to the UNIDO Policy on gender equality and the empowerment of women:

Gender equality refers to the equal rights, responsibilities and opportunities of women and men and girls and boys. Equality does not suggest that women and men become 'the same' but that women's and men's rights, responsibilities and opportunities do not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. It is therefore not a 'women's issues'. On the contrary, it concerns and should fully engage both men and women and is a precondition for, and an indicator of sustainable people-centered development.

Empowerment of women signifies women gaining power and control over their own lives. It involves awareness-raising, building of self-confidence, expansion of choices, increased access to and control over resources and actions to transform the structures and institutions which reinforce and perpetuate gender discriminations and inequality.

Gender parity signifies equal numbers of men and women at all levels of an institution or organization, particularly at senior and decision-making levels.

The UNIDO projects/programmes can be divided into two categories: 1) those where promotion of gender equality is one of the key aspects of the project/programme; and 2) those where there is limited or no attempted integration of gender. Evaluation managers/evaluators should select relevant questions depending on the type of interventions.

B. Gender responsive evaluation questions

The questions below will help evaluation managers/evaluators to mainstream gender issues in their evaluations.

B.1 Design

a) Is the project/programme in line with the UNIDO and national policies on gender equality and the empowerment of women?
b) Were gender issues identified at the design stage?
c) Did the project/programme design adequately consider the gender dimensions in its interventions? If so, how?
d) Were adequate resources (e.g., funds, staff time, methodology, experts) allocated to address gender concerns?
e) To what extent were the needs and priorities of women, girls, boys and men reflected in the design?
f) Was a gender analysis included in a baseline study or needs assessment (if any)?
g) If the project/programme is people-centered, were target beneficiaries clearly identified and disaggregated by sex, age, race, ethnicity and socio-economic group?

h) If the project/programme promotes gender equality and/or women's empowerment, was gender equality reflected in its objective/s? To what extent are output/outcome indicators gender disaggregated?

B.2 Implementation management

- Did project monitoring and self-evaluation collect and analyze gender disaggregated data?
- Were decisions and recommendations based on the analyses? If so, how?
- Were gender concerns reflected in the criteria to select beneficiaries? If so, how?
- How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries?
- If the project/programme promotes gender equality and/or women's empowerment, did the project/programme monitor, assess and report on its gender related objective/s?

B.3 Results

- Have women and men benefited equally from the project's interventions? Do the results affect women and men differently? If so, why and how? How are the results likely to affect gender relations (e.g., division of labour, decision making authority)?
- In the case of a project/programme with gender related objective/s, to what extent has the project/programme achieved the objective/s? To what extent has the project/programme reduced gender disparities and enhanced women's empowerment?

Annex 5 - Checklist on terminal evaluation report quality

Independent terminal evaluation of UNIDO-GEF project:
Project Title:
UNIDO SAP ID:

GEF ID:

Evaluation team leader:

Quality review done by:

Date:

CHECKLIST ON EVALUATION REPORT QUALITY

Report quality criteria	UNIDO ODG/EVQ/IEV assessment notes	Rating
a. Was the report well-structured and properly written? (Clear language, correct grammar, clear and logical structure)		
b. Was the evaluation objective clearly stated and the methodology appropriately defined?		
c. Did the report present an assessment of relevant outcomes and achievement of project objectives?		
d. Was the report consistent with the ToR and was the evidence complete and convincing?		
e. Did the report present a sound assessment of sustainability of outcomes or did it explain why this is not (yet) possible? (Including assessment of assumptions, risks and impact drivers)		
f. Did the evidence presented support the lessons and recommendations? Are these directly based on findings?		
g. Did the report include the actual project costs (total, per activity, per source)?		
h. Did the report include an assessment of the quality of both the M&E plan at entry and the system used during the implementation? Was the M&E sufficiently budgeted for during preparation and properly funded during implementation?		
i. Quality of the lessons: were lessons readily applicable in other contexts? Did they suggest prescriptive action?		

Report quality criteria	UNIDO ODG/EVQ/IEV assessment notes	Rating
j. Quality of the recommendations: did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?'). Can these be immediately implemented with current resources?		
k. Are the main cross-cutting issues, such as gender, human rights and environment, appropriately covered?		
l. Was the report delivered in a timely manner? (Observance of deadlines)		

Rating system for quality of evaluation reports

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, and unable to assess = 0.

Annex 6 – Required project identification and financial data

The evaluation report should provide information on project identification, time frame, actual expenditures, and co-financing in the following format, which is modeled after the project identification form (PIF).

I. Dates

Milestone	Expected date	Actual date
Project CEO endorsement/approval date		
Project implementation start date (PAD issuance date)		
Original expected implementation end date (indicated in CEO endorsement/approval document)		
Revised expected implementation end date (if any)		
Terminal evaluation completion		
Planned tracking tool date		

II. Project framework

Project component	Activity type	GEF financing (in USD)		Co-financing (in USD)	
		Approved	Actual	Promised	Actual
1.					
2.					
3.					
4.					
5.					
6. Project management					
Total (in USD)					

Activity types are:

b) Experts, researches hired
c) technical assistance, Workshop, Meetings or expert's consultation scientific and technical analysis, expert's researches hired
d) Promised co-financing refers to the amount indicated on endorsement/approval.

III. Co-financing

Source of co-financing (name of specific co-financiers)	**Type of co-financier** (e.g. government, GEF agency(ies), Bilateral and aid agency (ies), multilateral agency(ies), private sector, NGO/CSOs, other)	**Type of co-financing**	**Project preparation – CEO endorsement/ approval stage** (in USD)		**Project implementation stage** (in USD)		**Total** (in USD)	
			Expected	Actual	Expected	Actual	Expected	Actual
	…							
Total co-financing (in USD)								

Expected amounts are those submitted by the GEF agencies in the original project appraisal document. Co-financing types are grant, soft loan, hard loan, guarantee, in kind, or cash.

Annex 7 – Job descriptions

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	International evaluation consultant, team leader
Main Duty Station and Location:	Home-based
Missions:	Missions to Vienna, Austria and Mongolia
Start of Contract (EOD):	01 October 2016
End of Contract (COB):	31 December 2016
Number of Working Days:	25 working days spread over 3 months

1. ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division (ODG/EVQ/IEV) is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides factual information about result and practices that feed into the programmatic and strategic decision-making processes. Evaluation is an assessment, as systematic and impartial as possible, of a programme, a project or a theme. Independent evaluations provide evidence-based information that is credible, reliable and useful, enabling the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. ODG/EVQ/IEV is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

2. PROJECT CONTEXT

The project's overall objective is to strengthen national and local capacity to effectively manage and reduce mercury emissions. Detailed background information of the project can be found the Terms of Reference (TORs) for the terminal evaluation.

3. DUTIES AND RESPONSIBILITIES

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
1. Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data); determine key data to collect in the field and adjust the key data collection instrument of 3A accordingly (if needed); Assess the adequacy of	• Adjust table of evaluation questions, depending on country specific context; • Draft list of stakeholders to interview during the field missions; • Brief assessment of the adequacy of the country's legislative and regulatory framework.	4 days	Home-based

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
legislative and regulatory framework relevant to the project's activities and analyze other background info.			
2. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders at UNIDO HQ. Preparation of the Inception Report	• Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to interview and site visits); mission planning; • Division of evaluation tasks with the National Consultant. • Inception Report	2 days	Vienna, Austria
3. Conduct field mission to Mongolia in November or December 2016[31].	• Conduct meetings with relevant project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications; • Agreement with the National Consultant on the structure and content of the evaluation report and the distribution of writing tasks; • Evaluation presentation of the evaluation's initial findings prepared, draft conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the mission.	7 days	Mongolia
4. Present overall findings and recommendations to the stakeholders at UNIDO HQ	• After field mission(s): Presentation slides, feedback from stakeholders obtained and discussed	2 days	Vienna, Austria
5. Prepare the evaluation report, with inputs from the National Consultant, according to the TOR; Coordinate the inputs from the National Consultant and combine with her/his own inputs into the draft evaluation report. Share the evaluation report with UNIDO HQ and national stakeholders for feedback and comments.	• Draft evaluation report.	7 days	Home-based

[31] The exact mission dates will be decided in agreement with the Consultant, UNIDO HQ, and the country counterparts.

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
6. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and edit the language and form of the final version according to UNIDO standards.	• Final evaluation report.	3 days	Home-based
	TOTAL	**25 days**	

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education:
Advanced degree in environment, energy, engineering, development studies or related areas

Technical and functional experience:
- Minimum of 10 years' experience in environmental/energy project management and/or evaluation (of development projects)
- Strong experience on environmental/energy and knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards
- Experience in the evaluation of GEF projects and knowledge of UNIDO activities an asset
- Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks
- Working experience in developing countries

Languages:
Fluency in written and spoken English is required.

Reporting and deliverables
1) At the beginning of the assignment the Consultant will submit a concise Inception Report that will outline the general methodology and presents a concept Table of Contents;
2) The country assignment will have the following deliverables:
    - Presentation of initial findings of the mission to key national stakeholders;
    - Draft report;
    - Final report, comprising of executive summary, findings regarding design, implementation and results, conclusions and recommendations.
3) Debriefing at UNIDO HQ:
    - Presentation and discussion of findings;
    - Concise summary and comparative analysis of the main results of the evaluation report.

All reports and related documents must be in English and presented in electronic format.

Absence of conflict of interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the UNIDO Independent Evaluation Division.

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	National evaluation consultant
Main Duty Station and Location:	Home-based
Mission/s to:	Travel to potential sites within Mongolia
Start of Contract:	01 October 2016
End of Contract:	31 December 2016
Number of Working Days:	25 days spread over 3.5 months

ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides factual information about result and practices that feed into the programmatic and strategic decision-making processes. Evaluation is an assessment, as systematic and impartial as possible, of a programme, a project or a theme. Independent evaluations provide evidence-based information that is credible, reliable and useful, enabling the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. The UNIDO Independent Evaluation Division is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

PROJECT CONTEXT

The national evaluation consultant will evaluate the projects according to the terms of reference (TOR) under the leadership of the team leader (international evaluation consultant). S/he will perform the following tasks:

MAIN DUTIES	**Concrete/measurable outputs to be achieved**	**Expected duration**	**Location**
Review and analyze project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data); in cooperation with the Team Leader: determine key data to collect in the field and prepare key instruments in both English and local language (questionnaires, logic models) to collect these data through	1. List of detailed evaluation questions to be clarified; questionnaires/interview guide; logic models; list of key data to collect, draft list of stakeholders to interview during the field missions 2. Drafting and presentation of brief assessment of the	6 days	Home-based

MAIN DUTIES	**Concrete/measurable outputs to be achieved**	**Expected duration**	**Location**
interviews and/or surveys during and prior to the field missions; Coordinate and lead interviews/ surveys in local language and assist the team leader with translation where necessary; Analyze and assess the adequacy of legislative and regulatory framework, specifically in the context of the project's objectives and targets; provide analysis and advice to the team leader on existing and appropriate policies for input to the team leader.	adequacy of the country's legislative and regulatory framework in the context of the project.		
Review all project outputs/ publications/feedback; Briefing with the evaluation team leader, UNIDO project managers and other key stakeholders. Coordinate the evaluation mission agenda, ensuring and setting up the required meetings with project partners and government counterparts, and organize and lead site visits, in close cooperation with the Project Management Unit. Assist and provide detailed analysis and inputs to the team leader in the preparation of the inception report.	• Interview notes, detailed evaluation schedule and list of stakeholders to interview during the field missions. • Division of evaluation tasks with the Team Leader. • Inception Report.	6 days	Home-based (telephone interviews)
Coordinate and conduct the field mission with the team leader in cooperation with the Project Management Unit, where required; Consult with the team leader on the structure and content of the evaluation report and the distribution of writing tasks.	• Presentations of the evaluation's initial findings, draft conclusions and recommendations to stakeholders in the country at the end of the mission. • Agreement with the Team Leader on the structure and content of	7 days (including travel days)	Mongolia

MAIN DUTIES	Concrete/measurable outputs to be achieved	Expected duration	Location
	the evaluation report and the distribution of writing tasks.		
Prepare inputs and analysis to the evaluation report according to TOR and as agreed with the Team Leader.	Draft evaluation report prepared.	4 days	Home-based
Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and edit the language and form of the final version according to UNIDO standards.	Final evaluation report prepared.	2 days	Home-based
TOTAL		**25 days**	

REQUIRED COMPETENCIES

Core values:
1. Integrity
2. Professionalism
3. Respect for diversity

Core competencies:
1. Results orientation and accountability
2. Planning and organizing
3. Communication and trust
4. Team orientation
5. Client orientation
6. Organizational development and innovation

Managerial competencies (as applicable):
1. Strategy and direction
2. Managing people and performance
3. Judgement and decision making
4. Conflict resolution

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education: Advanced university degree in environmental science, engineering or other relevant discipline like developmental studies with a specialization in industrial energy efficiency and/or climate change.

Technical and functional experience:

- Exposure to the needs, conditions and problems in developing countries.
- Familiarity with the institutional context of the project is desirable.

- Experience in the field of environment and energy, including evaluation of development cooperation in developing countries is an asset

Languages: Fluency in written and spoken English is required.

Absence of conflict of interest:

According to UNIDO rules, the consultant must not have been involved in the design and/or implementation, supervision and coordination of and/or have benefited from the programme/project (or theme) under evaluation. The consultant will be requested to sign a declaration that none of the above situations exists and that the consultants will not seek assignments with the manager/s in charge of the project before the completion of her/his contract with the UNIDO Independent Evaluation Division.

Annex 8 – Project results framework

HIERARCHY OF OBJECTIVES	Indicators	Sources of verification	Assumptions
Project Development Objective: **Reduce exposure of mercury to human health and the envrionment in Mongolia**	- # kg of mercury safely stored - # kg of mercury recovered and stabilized from the Boroo hot spot area	Final evaluation report	
REGULATORY FRAMEWORK			
Outcome 1.1 Regulatory framework and national guidelines established for environmentally sound management of mercury containing waste	Extent to which mercury regulations/policy /strategies adopted or implemented (score 0 to 4)	Public records	Stakeholders are able and willing to adopt and learn new procedures and/or techniques to manage mercury containing waste
Output 1.1.1 Draft national guidelines and supporting regulatory frameworks developed and adopted for the environmentally sound management of mercury containing waste	Availability of draft document? (Yes/No)	Public records	
PILOT DEMONSTRATION			
Outcome 2.1 Capacity developed for the implementation of remediation and stabilization techniques in mercury hot-spot areas through demonstration activities at the pilot scale	Adoption level of new technologies (score 0 to 4)	- Progress reports - Survey of target groups	Stakeholders are willing to learn and change behavior to reduce mercury related health risks

HIERARCHY OF OBJECTIVES	Indicators	Sources of verification	Assumptions
Output 2.1.1 Pilot demonstration of sound mercury remediation technique at the Boroo river site	- Availability of validation assessment? (Yes/No) - # and types of technologies tested at the Borooriver site	Project progress and self-evaluation report	
AWARENESS RAISING			
Outcome 3.1 Information disseminated and awareness raised through campaigns on mercury health and environment risk reduction	- Increased media coverage on the prevention of mercury risks - % of target group having obtained new knowledge as a result of the project awareness raising campaigns (gender ratio)	- Surveys of target groups - Observations by project experts or stakeholders	Stakeholders are willing to learn and change behavior to reduce mercury related health risks
Output 3.1.1 Publication/training material developed and workshop/campaignconducted	- Availability and number of materials (Yes/No) - # participants sensitized (gender ratio)	- Project progress and self-evaluation report	

ANNEX 2: List of documents reviewed

1.	Project document
2.	Progress reports (7 in total)
3.	PIR reports for 2014, 2015 and 2016
4.	Reports of MAYASA including annexes (e.g. laboratory results, field results, analytical reports, etc.)
5.	Reports of MIRECO
6.	PowerPoint presentation of MIRECO
7.	Minutes of PSC meetings
8.	Inception report
9.	Report of workshops (awareness raising and training)
10.	Copies of brochures and other awareness raising materials
11.	Copies of training materials prepared by MAYASA
12.	Financial reports

ANNEX 3: List of persons interviewed

DATE	TIME	ACTIVITY / MEETING	VENUE
Tuesday 4 October 2016	10.00 – 12.00	Jerome Stucki, UNIDO Project Manager	UNIDO HQ, Vienna
Monday, 28 November 2016	11.15 - 13.00	Mrs. R. Ariunbileg, National Project Manager	Ministry of Environment and Tourism
	14.10 - 17.00	Mrs. L.Jargalsaikhan, National Project Director, Head of Steering Committee, Secretary of National Chemicals Management Council	Ministry of Environment and Tourism
Tuesday, 29 November 2016	09:05-11.00	Mrs. U.Ulziitsetseg, Member of Steering Committee, State environmental inspector, State Specialized Inspection Agency Mr. B.Gan-Uul, State environmental inspector, Specialized Inspection Agency, Ulaanbaatar City	State Specialized Inspection Agency
	13.10-12.30	6 Researchers from ICCT	Institute of Chemistry and Chemical Technology, Mongolian Academy of Science
Wednesday, 30 November 2016	10.30-11.30	Mrs. T.Badamkhand, President of Mongolian Association of Conservation of Nature and Environment, Member of Steering Committee	Ministry of Environment and Tourism
	11:30 – 12:30	Phone call with Mrs. A.Azzaya, Specialist on environmental impact assessment, pollution and chemicals, Agency of Environment and Tourism of Selenge Province	-
	14:10-15.00	Mrs. Munkhtuya, Training officer	Ministry of Environment and Tourism
Thursday, 01 December 2016	10:55 - 14.00	Meeting with Mr. G.Buyantogtokh, Lecturer, University of Law Enforcement, Member of Steering Committee	University of Law Enforcement

DATE	TIME	ACTIVITY / MEETING	VENUE
Friday, 02 December 2016	10:00-11.30	Site visit to the Mercury storage	Special Rescue Unit, NEMA
	11:30-12:30	Mr. Dambadarjaa, Emergency Management Agency, Ulaanbaatar City Mr. D.Altan-Ochir, Special Rescue Unit, National Emergency Management Authority	Special Rescue Unit, NEMA
	13:00-16:00	Presentation on Preliminary Results and Comment, Project staff and stakeholders	“Oak” Restaurant