



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

TERMS OF REFERENCE

Independent terminal evaluation of the project:

**Greening of Scrap Metal Value Chain through the Promotion of
BAT/BEP to Reduce U-POPs Releases from Recycling Facilities**

UNIDO ID: 150186

GEF Project ID: 9222

06/2024

Contents

I.	PROJECT BACKGROUND AND CONTEXT	3
1.	Project factsheet	3
2.	Project context	4
3.	Project objective and expected outcomes	4
4.	Project implementation arrangements	5
5.	Main findings of the Mid-term review (MTR)	Error! Bookmark not defined.
6.	Budget information	7
II.	SCOPE AND PURPOSE OF THE EVALUATION	9
III.	EVALUATION APPROACH AND METHODOLOGY	9
1.	Data collection methods	9
2.	Key evaluation questions and criteria	10
3.	Rating system	12
IV.	EVALUATION PROCESS	12
V.	TIME SCHEDULE AND DELIVERABLES	13
VI.	EVALUATION TEAM COMPOSITION	13
VII.	REPORTING	14
VIII.	QUALITY ASSURANCE	15
	Annex 1: Project Logical Framework	16
	Annex 2: Job descriptions	21
	Annex 3: Outline of an in-depth project evaluation report	25
	Annex 4: Quality checklist	26

I. PROJECT BACKGROUND AND CONTEXT

1. Project factsheet¹

Project title	Greening of Scrap Metal Value Chain through the Promotion of BAT/BEP to Reduce U-POPs Releases from Recycling Facilities
UNIDO ID	150186
GEF Project ID	9222
Country(ies)	Thailand
Project donor(s)	GEF
Project approval date/GEF CEO endorsement date	22.08.2017
Planned project start date (as indicated in project document/or GEF CEO endorsement document)	01.02.2018
Actual project start date (First PAD issuance date)	01.06.2018
Planned project completion date (as indicated in project document/or GEF CEO endorsement document)	30.06.2022
Actual project completion date (as indicated in UNIDO ERP system)	30.11.2024
Project duration (year): Planned: Actual:	5ys 7ys
GEF Focal Areas and Operational Programme	Chemicals and Wastes
Implementing agency(ies)	UNIDO
Executing Partners	Department of Primary Industries and Mines, Ministry of Industry (DPIM-Moi), Pollution Control Department (PCD) and Department of Environmental Quality Promotion (DEQP) under the Ministry of Natural Resources and Environment (MoNRE), Iron and Steel Institute of Thailand (ISIT)
Donor funding	USD 4,500,000
UNIDO input (in kind, USD)	USD 135,000
Co-financing at CEO Endorsement, as applicable	USD 33,714,786
Total project cost (USD), excluding support costs	USD 38,214,786
Planned terminal evaluation date	July-August 2024

(Source: Project document, UNIDO ERP system)

¹ Data to be validated by the Consultant

2. Project context

The metallurgical sector is an important part of Thailand's economy. This sector produces ferrous and non-ferrous metals such as steel, copper alloys and aluminum, which are needed for the development of the country's infrastructure. While accounting for only to 4.7% of the manufacturing industry and about 1.4% of the country's GDP, the metal industry is important to Thailand's economy as it supports many downstream industries such as the automotive, construction, electrical and electronic industry, etc.

The most recent polychlorinated dibenzo-para-dioxins (PCDDs)/ polychlorinated dibenzofurans (PCDFs) emission inventory for Thailand was carried out in 2005. Potential national releases of PCDDs/PCDFs emission to air, water, land, product and residue were estimated at 1075.88 g I-TEQ/year (toxic equivalent) as reported in the National Indicative Plan (NIP). The total release from the ferrous and non-ferrous metal production was estimated at 119.84 g I-TEQ(toxic equivalent)/year, accounting for 11.14 % of the total national release.

The project "Greening the scrap metal value chain through Promotion of BAT/BEP to Reduce U-POPs Releases from Recycling Facilities" was designed in order for Thailand to meet its obligations under the Stockholm Convention (SC) and for the implementation of the identified priority action plans in its NIP that need urgent actions. The project, in general, seeks to abate serious environmental threats caused by Unintentionally Produced Persistent Organic Pollutants (U-POPs) releases from the metallurgical sector. It aims to assess in-depth the scrap metal value chain from generators, collectors and users and provide measures that would make the processes involved in each link more environmentally-compliant and sustainable.

As core activity, the proposed project aims to identify, implement and demonstrate state-of-the-art technologies for reducing U-POPs releases from scrap metal recycling in the metallurgical industry according to the obligations of the SC and to promote and introduce Best Available Technologies / Best Environmental Practices (BAT/BEP) measures to reduce U-POPs emissions in Small and Medium Enterprises (SMEs) and large enterprises involved in metallurgical processes. The guiding principles for the selection of the demonstration facilities as well as the techniques/technologies to be deployed during the demonstration project will be the technical viability, the economic sustainability, the replicability of the demo results; cost-effectiveness in terms of reduction of U-POPs releases; and, of course, the level of support from the industry sector. Business models will be elaborated and evaluated, including the possibility of formation of consortia between secondary metals producers and scrap dealers.

3. Project objective and expected outcomes

The main objective of the proposed project is to promote and introduce BAT/BEP measures in scrap metal recycling facilities in order to reduce or eliminate unintentional POPs releases

The following **project components** have been developed, in addition to project management, to achieve the project objectives:

Component 1: Policy and regulatory framework - this component will focus on filling in the gaps in the policy and regulatory framework with the aim to strengthen the country capacity to achieve an effective enforcement of laws and regulations in the field of U-POPs releases from the secondary metals producing industry.

Component 2: Information dissemination and capacity building - this component will support the strengthening of the technical capacity and expertise of human resources in the management of the lifecycle of scrap metal from its collection to the transformation into secondary metals in order to promote

resource conservation and resource efficiency in a manner compatible with the requirements of the Stockholm Convention. For this purpose, it will seek to identify and fill information gaps, to disseminate as widely as possible the knowledge for a sustainable management of the scrap metal value chain and to establish a technical basis within key stakeholders for identifying and implementing the most appropriate BAT/BEP measures. At the same time, this component will attempt to raise awareness of the workers and the general public on environmental and health issues related to POPs exposure.

Component 3: Pilot project for the demonstration of BAT/BEP in selected metal recycling facilities - The scope of this component is to address and demonstrate the technical feasibility of BAT/BEP implementation in order to minimize or in some cases even eliminate the potential formation and release to the environment of U-POPs and other harmful pollutants of local and global concern during thermal processes in the metallurgical industry.

Component 4: Monitoring and evaluation; knowledge management and dissemination - the purpose of this component is to generate and ensure systematic support for managing all activities related to monitoring, evaluation and reporting on progresses and results of the project in order to guarantee the achievement of project objectives, as well as to promote the internal circulation of knowledge and the external dissemination of the results of the project.

The following are, in brief, some of the expected results of the project/programme:

- Demonstration projects developed and completed in four (4) pilot facilities with reduction of U-POPs measured for each pilot facility.
- Emission standards for UPOPs emission for ferrous and non-ferrous secondary metal production formulated and enforced.
- Estimated 23 g-TEQ/year of PCDD/F releases prevented from the four pilot demonstration sites and projected over the 15 year lifetime of installed equipment
- BAT/BEP measures demonstrated and available.

4. Project implementation arrangements

The institutional arrangement for project implementation is provided in **Figure 10** below. UNIDO is the GEF Implementing Agency (IA) for the project. A project officer was appointed in UNIDO HQ to oversee the implementation of the project, assisted by a support staff and supervised by a senior professional staff engaged in the management and coordination of UNIDO's Stockholm Convention Programme. The UNIDO Regional Office in Thailand played a significant role in the supervision and monitoring of the project. UNIDO country-level monitoring was provided as part of the in-kind contribution of the organization to the project.

UNIDO provided both implementation and limited execution functions. It provided full oversight of the project and was responsible in the recruitment of international experts and some national experts, including the PMU. Procurement of major equipment/services was undertaken by UNIDO in accordance with its procurement rules and procedures.

The Department of Primary Industries and Mines is the lead executing agency for the project. Co-executing institutions will include the:

- Pollution Control Division of the Ministry of Natural Resources and the Environment to work on NIP-POPs and emission standards in the metallurgical sector
- Department of Environmental Quality Promotion (DEQP), to conduct dioxin monitoring and public awareness raising and capacity building on U-POPs management

- Iron and Steel Institute of Thailand will provide coordination and technical services to the pilot facilities. It may also be engaged in the execution of some awareness raising and capacity building activities.

The Project Management Unit was established within the premises of the DPIM. A National Project Director (NPD) from DPIM was appointed and chaired the Project Steering Committee. A National Project Coordinator (NPC), also from the Ministry, was assigned by the NPD to oversee the activities of the project. A National Project Manager (NPM) was recruited by UNIDO to manage and execute the day-to-day tasks required by the project and a Project Assistant who was in charge of the administrative functions required. UNIDO provided execution support by recruiting international and national experts based on specific required tasks. The NPM was responsible for drafting the reportorial requirements of the project including progress reports, annual work plans, GEF project implementation report (PIRs) and country reporting requirements based on the prescribed formats. The PMU is responsible for informing UNIDO of any delays or difficulties during the implementation so that appropriate support or corrective measures can be adopted in a timely and remedial fashion.

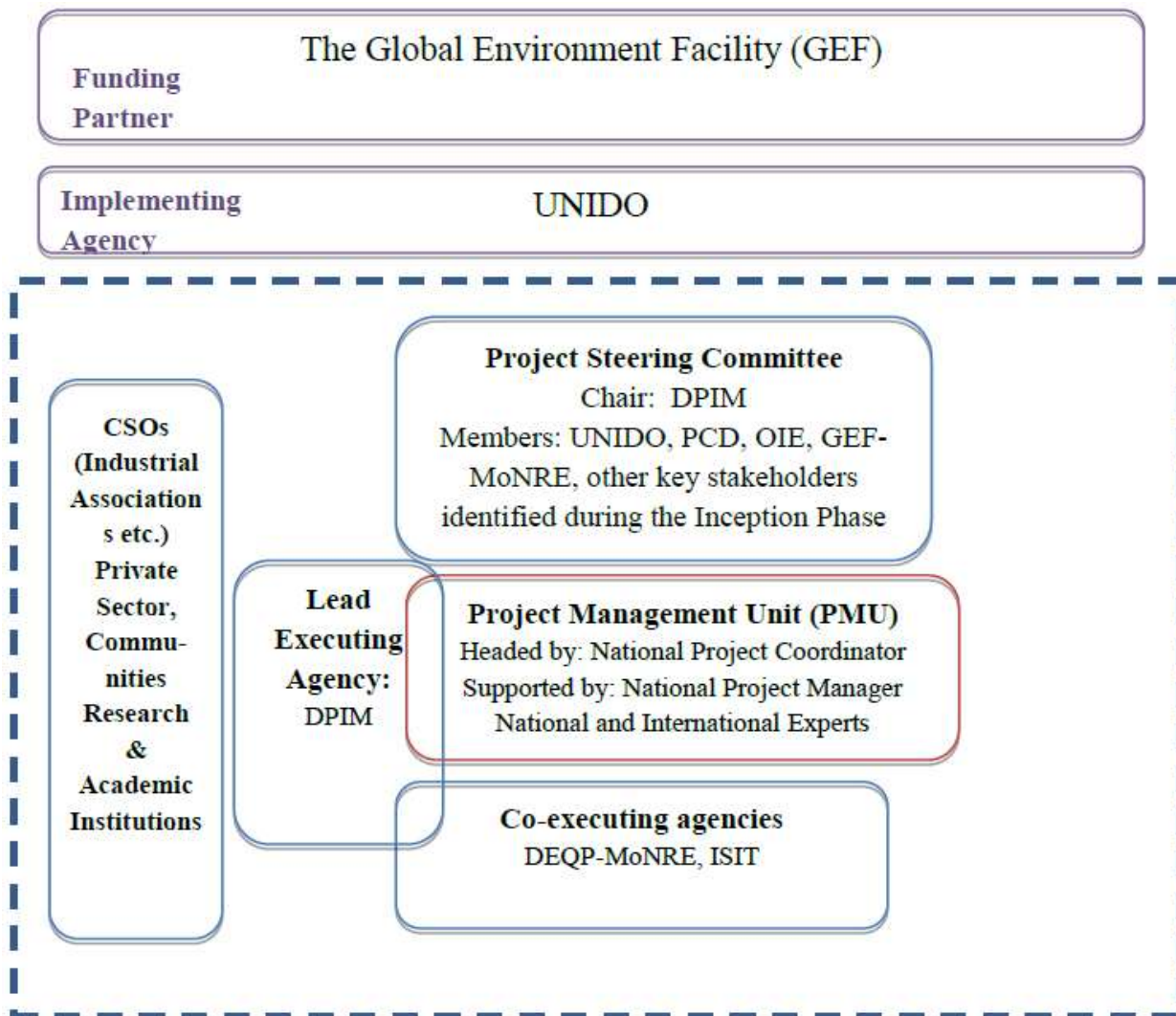


Figure 10: Project implementation structure

5. Budget information

Table 1. Financing plan summary - Outcome breakdown

Project outcomes/components	Donor (GEF/other) (\$)	Co-Financing (\$)	Total (\$)
Component 1. Policy and regulatory framework	275,000	1,460,144	1,735,144
Component 2. Information dissemination and capacity building	625,000	5,507,200	6,132,200
Component 3. Pilot project for the demonstration of BAT/BEP in selected metal recycling facilities	3,150,000	24,247,442	27,397,442
Component 4. Monitoring and evaluation	250,000	1,500,000	1,750,000
Total (\$)	4,300,000	32,714,786	37,014,786

Source: Project document

Table 2. Co-Financing source breakdown

Name of Co-financier (source)	In-kind	Cash	Total Amount (\$)
Department of Primary Industries and Mines, Ministry of Industry (National Government)	2,000,000		2,000,000
Pollution Control Department (PCD), Ministry of Natural Resources and Environment (National Government)	503,000		503,000
Department of Environment Quality Promotion (National Government)	5,578,629	57,144	5,635,773
Iron and Steel Institute of Thailand (National Government)	1,428,571		1,428,571
The Bangkok Iron and Steel Works Co. Ltd (private sector)	4,340,000	8,750,000	13,090,000
NTSC Steel Group Public Co. Ltd (private sector)	2,140,000	3,100,000	5,240,000
Thai Metal Aluminum Co., Ltd	853,555	2,133,887	2,987,442
Daiki Aluminum Industry (Thailand) Co., Ltd	610,000	2,000,000	2,610,000
Total Co-financing (\$)	17,453,755	15,983,887	33,494,786

Source : Project document

Table 3. UNIDO budget allocation and expenditure by budget line

Budget line	Items by budget line	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Total expenditure (at completion)		Total allocation (at approval)	
									(USD)	%	(USD)	%
2100	Contractual Services		132,830.11	655,008.05	1,483,661.07	96,342.52	231,386.61	95,286.63	2,694,514.99	82.84%	332,000	7.38%
4500	Equipment	4,470.92	1,564.6	37.53	29.69				6,072.74	0.19%	2,644,000	58.76%
1500	Local travel	6,974.99	89,016.03		659.44	185.29		3,125.77	99,961.52	3.07%	148,000	3.29%
1700	Nat. Consult./ Staff	12,560.78	56,667.41	70,215.92	68,376.15	61,622.69	73,415.99	26,881.92	369,740.86	11.37%	746,000	16.58%
5100	Other Direct Costs	3,671.76	8,126.36	6,468.57	6,444.84	5,091.67	6,722.72	1,629.46	38,155.38	1.17%	35,000	0.78%
4300	Premises		6,645.04						6,645.04	0.20%	0	0.00%
1100	Staff & Intern Consultants				12,665.07				12,665.07	0.39%	296,000	6.58%
3000	Train/ Fellowship/ Study	14,716.55			7,247.5	2,587.34	431.7		24,983.09	0.77%	299,000	6.64%
Total		42,395.01	294,819.55	731,730.07	1,579,083.76	165,829.51	311,957.02	126,923.78	3,252,738.70	100%	100.00%	100%

Source: Project document and UNIDO Project Management ERP database as of 24/05/2024

Table 4. UNIDO budget allocation and expenditure by component

#	Project components	Total allocation (at approval)		Total expenditure (at completion)	
		USD	%	USD	%
1	Component 1. Policy and regulatory framework	275,000	6.11%	241,834.60	7.43%
2	Component 2. Information dissemination and capacity building	625,000	13.89%	603,654.04	18.56%
3	Component 3. Pilot project for the demonstration of BAT/BEP in selected metal recycling facilities	3,150,000	70.00%	2,055,344.88	63.19%
4	Component 4. Project management and Monitoring*	360,000	8.00%	335,131.49	10.30%
5	Evaluation**	90,000	2.00%	16,773.69	0.52%
	Total	4,500,000	100.00%	3,252,738.70	100.00%

Source: Project document and UNIDO Project Management ERP database as of 24/05/2024

*Project management cost is 200,000 USD, Monitoring is 160,000 USD

** Evaluation (MTE and FE) is allocated only a budget of USD 90,000.00 (p. 59-60 of project document)

II. SCOPE AND PURPOSE OF THE EVALUATION

The purpose of the evaluation is to independently assess the project to help UNIDO improve performance and results of ongoing and future programmes and projects. The terminal evaluation (TE) will cover the whole duration of the project from its starting date in February 2018 to the estimated completion date in November 2024.

The evaluation has two specific objectives:

- (i) Assess the project performance in terms of relevance, effectiveness, efficiency, sustainability, coherence, and progress to impact; and
- (ii) Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by UNIDO.

III. EVALUATION APPROACH AND METHODOLOGY

The TE will be conducted in accordance with the UNIDO Evaluation Policy², the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle³, and UNIDO [Evaluation Manual](#). In addition, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies will be applied.

The evaluation will be carried out as an independent in-depth exercise using a participatory approach whereby all key parties associated with the project will be informed and consulted throughout the process. The evaluation team leader will liaise with the UNIDO Independent Evaluation Unit (EIO/IEU) on the conduct of the evaluation and methodological issues.

The evaluation will use a theory of change approach⁴ and mixed methods to collect data and information from a range of sources and informants. It will pay attention to triangulating the data and information collected before forming its assessment. This is essential to ensure an evidence-based and credible evaluation, with robust analytical underpinning.

The theory of change will depict the causal and transformational pathways from project outputs to outcomes and longer-term impacts. It also identifies the drivers and barriers to achieving results. Learning from this analysis will be useful for the design of future projects so that the management team can effectively use the theory of change to manage the project based on results.

1. Data collection methods

Following are the main instruments for data collection:

- (a) **Desk and literature review** of documents related to the project, including but not limited to:
 - The original project document, monitoring reports (such as progress and financial reports, mid-term review report, technical reports, back-to-office mission report(s), end-of-contract report(s) and relevant correspondence.
 - Notes from the meetings of committees involved in the project.

² UNIDO. (2021). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/2021/11)

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 For more information on Theory of Change, please see chapter 3.4 of UNIDO [Evaluation Manual](#).

- (b) **Stakeholder consultations** will be conducted through structured and semi-structured interviews and focus group discussions. Key stakeholders to be interviewed include:
- UNIDO Management and staff involved in the project; and
 - Representatives of donors, counterparts, and other stakeholders.
- (c) **Field visit** to project sites in Thailand.
- On-site observation of results achieved by the project, including interviews of actual and potential project beneficiaries.
 - Interviews with the relevant UN Resident Coordinator and UNIDO Country offices' representative to the extent that he/she was involved in the project and the project's management members and the various national [and sub-regional] authorities dealing with project activities as necessary.
- (d) **Online data collection** methods will be used to the extent possible.

2. Key evaluation questions and criteria

The key evaluation questions (corresponding to the six OECD/DAC criteria) are the following:

- 1) **Relevance:** Is the intervention doing the right things? To what extent do the project/programme's objectives respond to beneficiaries, global, country, and partner/institution needs, policies, and priorities, and continue to do so if circumstances change?
- 2) **Coherence:** How well does the intervention fit? How compatible is the project/programme with other interventions in the country, sector or institution?
- 3) **Effectiveness:** Is the project/programme achieving its objectives?
- 4) **Efficiency:** How well are resources being used? Has the project/programme delivered results in an economic and timely manner?
- 5) **Impact:** What difference does the intervention make? To what extent has the project/programme generated significant positive or negative, intended or unintended, higher-level effects? Has the project/programme had transformative effects?
- 6) **Sustainability:** Will the benefits last? To what extent will the net benefits of the project/programme continue, or are likely to continue?

The table below provides the key evaluation criteria to be assessed by the evaluation. The detailed questions to assess each evaluation criterion are in Annex 2 of UNIDO [Evaluation Manual](#).

Table 5. Project evaluation criteria

#	<u>Evaluation criteria</u>	<u>Mandatory rating</u>
A	Progress to Impact	Yes
B	Project design	Yes
1	• Overall design	Yes
2	• Project results framework/log frame	Yes
C	Project performance and progress towards results	Yes
1	• Relevance	Yes
2	• Coherence	Yes
3	• Effectiveness	Yes
4	• Efficiency	Yes
5	• Sustainability of benefits	Yes

D	Gender mainstreaming	Yes
E	Project implementation management	Yes
1	• Results-based management (RBM)	Yes
2	• Monitoring and Evaluation, Reporting	Yes
F	Performance of partners	
1	• UNIDO	Yes
2	• National counterparts	Yes
3	• Implementing partner (if applicable)	Yes
4	• Donor	Yes
G	Environmental and Social Safeguards (ESS), Disability and Human Rights	Yes
1	• Environmental Safeguards	Yes
2	• Social Safeguards, Disability and Human Rights	Yes
H	Overall Assessment	Yes

Performance of partners

The assessment of performance of partners will ***include*** the quality of implementation and execution of the GEF Agencies and project executing entities in discharging their expected roles and responsibilities. The assessment will take into account the following:

- Quality of Implementation, e.g. the extent to which the agency delivered effectively, with focus on elements that were controllable from the given implementing agency's perspective and how well risks were identified and managed.
- Quality of Execution, e.g. the appropriate use of funds, procurement and contracting of goods and services.

Other assessments required by the GEF for GEF-funded projects, for non GEF projects these topics should be covered as applicable:

The terminal evaluation will assess the following topics, for which ***ratings are not required***:

- Need for follow-up:** e.g. in instances of financial mismanagement, unintended negative impacts or risks.
- Materialization of co-financing:** e.g. the extent to which the expected co-financing materialized, whether co-financing was administered by the project management or by some other organization; whether and how shortfall or excess in co-financing affected project results. At the terminal evaluation point, the Project Manager will update table 3 on co-financing and add two more columns to submit to the evaluation team: 1) Amount of co-financing materialized at mid-term review (MTR); and 2) Amount of co-financing materialized at terminal evaluation (TE). The evaluation team has the responsibility to validate and verify the co-financing amount materialized during the evaluation process. This table MUST BE included in the terminal evaluation report, as per requirement by the GEF.
- Environmental and Social Safeguards⁵:** appropriate environmental and social safeguards were addressed in the project's design and implementation, e.g. preventive or mitigation measures for any foreseeable adverse effects and/or harm to environment or to any stakeholder.

⁵ Refer to GEF/C.41/10/Rev.1 available at: http://www.thegef.org/sites/default/files/council-meetingdocuments/C.41.10.Rev_1.Policy_on_Environmental_and_Social_Safeguards.Final%20of%20Nov%202018.pdf

- d. **Updated Monitoring and Assessment tool of core-indicators:** The project management team will submit to the evaluation team the up-to-date core-indicators or tracking tool (for older projects) whereby all the information on the project results and benefits promised at approval and actually achieved at completion point must be presented. The evaluation team has the responsibility to validate and verify updated core-indicators during the evaluation process. This table MUST BE included in the terminal evaluation report, as per requirement by the GEF.
- e. **Knowledge Management Approach:** Information on the project’s completed Knowledge Management Approach that was approved at CEO Endorsement/Approval.

3. Rating system

In line with the practice adopted by many development agencies, the UNIDO Independent Evaluation Unit uses a six-point rating system, where 6 is the highest score (highly satisfactory) and 1 is the lowest (highly unsatisfactory) as per the table below.

Table 6. Project rating criteria

Score		Definition
6	Highly satisfactory	Level of achievement presents no shortcomings (90% - 100% achievement rate of planned expectations and targets).
5	Satisfactory	Level of achievement presents minor shortcomings (70% - 89% achievement rate of planned expectations and targets).
4	Moderately satisfactory	Level of achievement presents moderate shortcomings (50% - 69% achievement rate of planned expectations and targets).
3	Moderately unsatisfactory	Level of achievement presents some significant shortcomings (30% - 49% achievement rate of planned expectations and targets).
2	Unsatisfactory	Level of achievement presents major shortcomings (10% - 29% achievement rate of planned expectations and targets).
1	Highly unsatisfactory	Level of achievement presents severe shortcomings (0% - 9% achievement rate of planned expectations and targets).

IV. EVALUATION PROCESS

The evaluation will be conducted from July to August 2024. The evaluation will be implemented in five phases, which are not strictly sequential, but in many cases iterative, conducted in parallel and partly overlapping:

- 1) Inception phase: The evaluation team will prepare the inception report providing details on the evaluation methodology and include an evaluation matrix with specific issues for the evaluation to

address; the specific site visits will be determined during the inception phase, taking into consideration the findings and recommendations of the mid-term review.

- 2) Desk review and data analysis;
- 3) Interviews, survey and literature review;
- 4) Country visits (whenever possible) and debriefing to key relevant stakeholders in the field;
- 5) Data analysis, report writing and debriefing to UNIDO staff at the Headquarters; and
- 6) Final report issuance and distribution with management response sheet, and publication of the final evaluation report in UNIDO website.

V. TIME SCHEDULE AND DELIVERABLES

The evaluation is scheduled to take place from July to August 2024. The evaluation field mission is tentatively planned in July 2024. At the end of the field mission, the evaluation team will present the preliminary findings for key relevant stakeholders involved in this project in the country. The tentative timelines are provided in the table below.

After the evaluation field mission, the evaluation team leader will arrange a virtual debriefing and presentation of the preliminary findings of the terminal evaluation with UNIDO Headquarters. The draft TE report will be submitted 1 to 3 weeks after the end of the mission. The draft TE report is to be shared with the UNIDO Project Manager (PM), UNIDO Independent Evaluation Unit, the UNIDO GEF Coordinator and GEF OFP and other stakeholders for comments. The Evaluation team leader is expected to revise the draft TE report based on the comments received, edit the language and submit the final version of the TE report in accordance with UNIDO EIO/IEU standards.

Table 7. Tentative timelines

Timelines	Tasks
July 2024	Desk review and writing of inception report
July 2024	Online briefing with UNIDO project manager and the project team based in Vienna.
July 2024	Field visit to Thailand
August 2024	Online ebriefing Preparation of first draft evaluation report
August 2024	Internal peer review of the report by UNIDO’s Independent Evaluation Unit and other stakeholder comments to draft evaluation report
August 2024	Final evaluation report

VI. EVALUATION TEAM COMPOSITION

The evaluation team will be composed of one international evaluation consultant acting as the team leader. The evaluation team members will possess a mixed skill set and experience including evaluation, relevant technical expertise, social and environmental safeguards and gender. 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 is required to provide information relevant for follow-up studies, including terminal evaluation verification on request to the GEF partnership up to three years after completion of the terminal evaluation.

According to UNIDO Evaluation Policy, members of the evaluation team must not have been directly involved in the design and/or implementation of the project under evaluation.

The UNIDO Project Manager and the project management team in Thailand will support the evaluation team. The UNIDO GEF Coordinator and GEF Operational Focal Point (OFP) will be briefed on the evaluation and provide support to its conduct. GEF OFP(s) will, where applicable and feasible, also be briefed and debriefed at the start and end of the evaluation mission.

An evaluation manager from UNIDO Independent Evaluation Unit will provide technical backstopping to the evaluation team and ensure the quality of the evaluation. The UNIDO Project Manager and national project teams will act as resource persons and provide support to the evaluation team and the evaluation manager.

VII. 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 Team Leader will prepare, in collaboration with the team member, a short inception report that will operationalize the TOR relating to the evaluation questions and provide information on what type and how the evidence will be collected (methodology). It will be discussed with and approved by the responsible UNIDO Evaluation Manager.

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”); Unit of work between the evaluation team members; field mission plan, including places to be visited, people to be interviewed and possible surveys to be conducted; and a debriefing and reporting timetable⁶.

Evaluation report format and review procedures

The draft report will be delivered to UNIDO Independent Evaluation Unit (with a suggested report outline) and circulated to UNIDO staff and key 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 will be sent to UNIDO’s Independent Evaluation Unit for collation and onward transmission to the 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 local stakeholders at the end of the field visit and take into account their feedback in preparing the evaluation report. A presentation of preliminary findings will take place at UNIDO HQ afterwards.

The evaluation report should be brief, to the point and easy to understand. It must explain the purpose of the evaluation, 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

⁶ The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by UNIDO Independent Evaluation Unit.

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 by UNIDO Independent Evaluation Unit.

VIII. QUALITY ASSURANCE

All UNIDO evaluations are subject to quality assessments by UNIDO Independent Evaluation Unit. Quality assurance and control is exercised in different ways throughout the evaluation process (briefing of consultants on methodology and process of UNIDO Independent Evaluation Unit, providing inputs regarding findings, lessons learned and recommendations from other UNIDO evaluations, review of inception report and evaluation report by UNIDO's Independent Evaluation Unit).

The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality. The applied evaluation quality assessment criteria are used as a tool to provide structured feedback. UNIDO Independent Evaluation Unit 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 evaluation report are reviewed by UNIDO Independent Evaluation Unit, which will submit the final report to the GEF Evaluation Office and circulate it within UNIDO together with a management response sheet.

Annex 1: Project Logical Framework

Component 1. Policy and regulatory framework					
Outcome 1: Policy and regulatory framework strengthened and enhanced for the implementation of a sound management of metal recycling in compliance with the Stockholm Convention requirements.	Number of regulatory instruments, national guidelines and technical manuals based on BAT/BEP adopted and/or enforced national authorities.	Insufficient policy and regulatory framework to encourage the diffusion of BAT/BEP for the reduction of U-POPs emissions from the scrap metal recycling chain.	One (1) new set of revised laws and regulations adopted promoting the diffusion of BAT/BEP to reduce U-POPs releases from the secondary metals producing industry drafted.	Plan of the proposed revision of strategies and national legislation for the reduction of U-POPs releases.	The establishment of a regulatory environment for the implementation of BAT/BEP in the management of the scrap metal value chain remains a top priority for the national government.
Output 1.1: One (1) database capturing various aspects of the metal recycling chain, as a new tool for policy makers, compiled.	Number of facilities identified/surveyed. Number of main industrial stakeholders interviewed/consulted. Survey data entered and validated in the database. Availability of the database as a new tool for policy makers. Number of beneficiary institutional stakeholders.	There is no comprehensive picture of the facilities involved in the scrap metal value chain. Data are scattered among different ministries/departments and industry associations There is no comprehensive database for the scrap metal value chain available in the country at the present time.	At least 50% of the firms in the national scrap metal value chain fully assessed. At least 2 representative companies in the steel and aluminium value chain interviewed/ consulted. A comprehensive database developed and functional.	Specific report on the assessment. Specific report on database development. Project's annual reports. Project mid-term and terminal evaluation reports.	Continuous cooperation between Government entities and private sector. Strong cooperation between all interested stakeholders. Scrap producers, scrap recyclers and scrap consumers are willing to share information related to their businesses.
Output 1.2: Specific guidelines on environment, health and safety measures in the metal recycling chain value developed.	Number of available national guidelines and technical manuals on BAT/BEP. Number of training programmes developed for staff authorities	There is insufficient knowledge about U-POPs and BAT/BEP in the metal recycling chain. There is insufficient information system which provide insight to operators for the management of scrap metal.	National guidelines and technical manuals drafted in coordination between governmental and industrial stakeholders and adopted. 50 national authority staff trained on measures and technologies to reduce U-POPs releases from the metallurgical industry.	Guidelines and technical manuals finalized and available for consultations.	All stakeholders are interested to define the technical aspects to be considered for scrap metal management and to know how BAT/BEP implementation in the metal scrap value chain could be applied.

			Equal access to training for men and women ensured.		
Output 1.3: Improved and harmonized national policies and regulations for environmental and health protection from metal recovery activities.	Number of regulatory instruments, national guidelines and technical manuals based on BAT/BEP submitted and/or undergoing adoption by national authorities.	Insufficient policy and regulatory framework to encourage the diffusion of BAT/BEP for the reduction of U-POPs emissions from the scrap metal recycling chain.	New set of revised laws and regulations promoting the diffusion of BAT/BEP to reduce U-POPs releases from the secondary metals producing industry.	Plan of the proposed revision of strategies and national legislation for the reduction of U-POPs releases.	The establishment of a regulatory environment for the implementation of BAT/BEP in the management of the scrap metal value chain remains a top priority for the national government.
Component 2. Information dissemination and capacity building					
Outcome 2.1: Increased awareness on U-POPs and BAT/BEP concepts by relevant stakeholders	Institutionalized awareness programs within relevant ministries/institutions, campaigns.	Awareness programs on U-POPs and scrap metal recycling related issues (environmental impacts, sound management, etc.) not included in regular programs.	Number of institutions adopting/institutionalizing awareness programs that include U-POPs and BAT/BEP as topics.	Awareness raising materials and awareness raising report including feedback assessment.	Cooperation of training institutions in participating to the awareness raising activities.
Outcome 2.2: Improved national capacity in the sound management of the recycling chain of pre-consumer and post-consumer scrap metal	Number of people (male/female) trained on the sound management of the recycling chain of scrap metal and on BAT/BEP. Availability of training reports.	Insufficient knowledge, experience and technical capability of industry manager and technical staff on BAT/BEP for the reduction of U-POPs releases in the metal scrap recycling sector.	Industry managers and technical staff are trained on the technical and environmental aspect for a sound management of the recycling of scrap metal. Training on sound scrap metal management and BAT/BEP delivered to at least 100 trainees. Equal access to training for men and women ensured. At least 20% women.	Training material. Training reports, including post-training assessment through questionnaire surveys.	A large number of metal scrap recyclers is interested in attending trainings. Training of operators is effective so that the promotion and introduction of BAT/BEP will be sustained during and after project end.
Output 2.1: Awareness raising materials and awareness raising	Development of awareness programs and materials.	Limited environmental and health awareness on scrap metal recycling and	Development of at least 1 video material and 2 relevant publication on	Awareness raising materials.	Cooperation of training institutions in participating to the

workshop developed and implemented.	<p>Number of awareness raising initiatives.</p> <p>Number of participants (male/female) in the awareness raising campaigns.</p>	U-POPs issues in both the users and the general public.	<p>the issue of dioxin and BAT and BEP</p> <p>At least 2 awareness raising campaigns conducted for the users of scrap metal and the general public.</p> <p>At least 2 participants from the relevant stakeholders identified in the document participating in awareness raising campaigns. Equal access to training for men and women ensured.</p>	Awareness raising reports including feedback assessment.	awareness raising activities.
Output 2.2: Technicians and operators of the scrap metal sector are trained on BAT/BEP.	<p>Number of institutions involved in setting up training materials and providing training sessions.</p> <p>Number of people (male/female) trained on BAT/BEP.</p> <p>Number of participants (male/female) to the Study Tour.</p> <p>Number of company visited and speeches held during the Study Tour.</p> <p>Availability of training reports.</p>	<p>Training materials for a sound management of scrap metal recycling is not available.</p> <p>Limited knowledge and limited technical capacity among collectors, recyclers and users of scrap metal on BAT/BEP applicable to the scrap metal recycling chain.</p>	Training on sound scrap metal management and BAT/BEP delivered to at least 100 trainees. Equal access to training for men and women ensured.	<p>Training materials.</p> <p>Training assessment reports delivered.</p> <p>Study Tour report.</p>	<p>Cooperation of training institutions in participating to the training activities.</p> <p>Training of operators is effective so that the promotion and introduction of BAT/BEP will be sustained during and after project end.</p>
Component 3. Pilot project for the demonstration of BAT/BEP in selected metal recycling facilities.					
Outcome 3. State-of-the-art primary and secondary measures for	BAT/BEP measures adopted by the metallurgical sector	The absence of specific emission limits and/or institutional incentive	Demonstration project interventions/results adopted by the	Reports on deployment of BAT/BEP to other facilities	The technologies to be implemented are accessible to all facilities

U-POPs release reduction in selected facilities identified and deployed.		systems makes that BAT/BEP are not implemented.	metallurgical industry.		
Output 3.1. BAT/BEP measures identified and implemented for scrap collectors and scrap consumers	<p>Number of BAT/BEP identified, implemented and demonstrated.</p> <p>Amount of incremental investment made.</p> <p>Quantity of PCDD/F and other pollutant releases avoided, reduced or eliminated.</p> <p>Number of documents produced for each pilot case.</p>	BAT/BEP measures in thermal processes of the metallurgical industry have never been demonstrated in Thailand.	<p>Demonstrations and assessments of the BAT/BEP measure agreed with 4 enterprises carried out and completed at the selected pilot sites.</p> <p>Not less than 23 g-TEQ/year releases reduction by BAT/BEP introduction in the demonstration facilities.</p> <p>Incremental investment in USD reported.</p>	<p>Site visits and mission reports.</p> <p>Reports confirming that all implemented BAT/BEP are operational.</p> <p>BAT/BEP assessment report for each demonstration facility.</p> <p>Evaluation of pilot projects undertaken.</p> <p>Reports on monitoring campaigns and assessment of U-POPs releases.</p>	<p>Continuous support from the private sector despite the high costs associated with demonstration of BAT/BEP.</p> <p>The managers and the technical staff have good technical capacity to handle the BAT/BEP implementation and operations.</p> <p>Sampling and analysis of U-POPs releases will generate reliable results.</p>
Output 3.2. Training of local stakeholders (government staff, SMEs, scrap collectors, etc.) and technical staff in the management of BAT/BEP undertaken	<p>Number of people (male/female) trained on BAT/BEP.</p> <p>Availability of training reports.</p>	Insufficient knowledge, experience and technical capability of industry manager and technical staff on BAT/BEP for the reduction of U-POPs releases in the metal scrap recycling sector.	<p>Training of at least 50 technical professionals on BAT/BEP applicable to the industrial sector.</p> <p>Equal access to training for men and women ensured.</p>	<p>Training materials and training attendance sheets.</p> <p>Report demonstrating that training was successfully delivered.</p>	<p>Training of operators is effective so that the promotion and introduction of BAT/BEP will be sustained during and after project end.</p>
Output 3.3. Results of the implemented demonstration projects published and disseminated for replication through collaboration with	<p>Number of documents drafted and disseminated.</p> <p>National action plan for replication developed and approved.</p>	Currently there is no action plan for replication.	A national action plan including estimates of costs and benefits to the adoption of BAT/BEP finalized and endorsed.	The action plan document.	<p>Continuous cooperation between Government entities and private sector.</p> <p>Managers of demonstration sites</p>

existing financial institutions in the country.					committed to share experiences.
Component 4. Monitoring and evaluation; knowledge management and dissemination					
Outcome 4. Effective monitoring and evaluation of project impact and sustainability implemented.	Existence of project management structure; timely availability of reports	New staff dedicated to the project and most of the key stakeholders will require specific training on the UNIDO and GEF M&E procedures.	M&E activities implemented and project implementation monitored and evaluated to achieve project objectives	Various M&E and substantial reports, progress, annual and terminal reports, Mid-Term Review and Terminal Evaluation reports.	Efficient M&E to facilitate timely achievement of project outcomes and objectives
Output 4.1. Project M&E designed and implemented.	Timely project implementation. M&E adequately conducted according to UNIDO and GEF standard. Timely availability of inception, annual (APRs, PIRs, AWP) and evaluation (mid-term and final) project reports. Documentary evidence of M&E activities including but not limited to drafting TORs, selection and recruitment consultants and staff, review of substantial report.	Indicative Project Results Framework with outcome and output indicators and targets. Indicative M&E plan, budget and timeframe. New staff dedicated to the project and most of the key stakeholders will require specific training on the UNIDO and GEF M&E procedures.	Inception workshop held within one month from project approval. Project management structure implemented and fully functional within 6-months from the approval of the project Training on monitoring procedures, including gender, and administrative processes held during Inception Workshop. Mid-term evaluation delivered within 3 years from project signature. Terminal evaluation report delivered within 3 months from project closure.	Project inception workshop report. Annual Project Implementation Reports (PIRs). Project Annual Work Plans (AWPs) Annual Progress Reports (APRs) Independent Mid-term Evaluation report. Independent Terminal Evaluation report Terminal report	All the relevant project stakeholders are willing to cooperate in the timely establishment of project management structures. M&E and project reporting mechanisms agreed and adopted by all the relevant project partners. Project stakeholders actively cooperating in all M&E activities. Indicators are comprehensive and designed to be properly measured. All deliverables are submitted in time.
Output 4.2 Lessons learnt disseminated	Number of communication materials and	None	Lessons and experience documented and disseminated in at least 2	Knowledge products disseminated (newsletters, brochures,	Government and key stakeholders are willing to share data and
	dissemination events conducted.		workshops/conferences.	peer-reviewed publication(s), etc.)	information.

Annex 2: Job descriptions



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION
TERMS OF REFERENCE FOR PERSONNEL UNDER INDIVIDUAL SERVICE AGREEMENT (ISA)

Title:	Senior evaluation consultant, team leader
Main Duty Station and Location:	Home-based
Missions:	Missions to Thailand
Start of Contract (EOD):	01/06/2024
End of Contract (COB):	30/08/2024
Number of Working Days:	30 working days spread over the above mentioned period

1. ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Unit (EIO/IEU) is responsible for the independent evaluation function of UNIDO. It supports learning, continuous improvement and accountability, and provides evidence-based analysis and assessment on result and practices that feed into the programmatic and strategic decision-making processes. Independent evaluations provide credible, reliable and useful assessment that enables the timely incorporation of findings, recommendations and lessons learned into the decision-making processes at organization-wide, programme and project level. EIO/IEU is guided by the UNIDO Evaluation Policy, which is aligned to the norms and standards for evaluation in the UN system.

2. PROJECT CONTEXT

Detailed background information of the project can be found the terms of reference (TOR) for the terminal evaluation.

The international evaluation consultant/team leader will evaluate the project in accordance with the evaluation-related terms of reference (TOR). S/he will perform, inter alia, the following main tasks:

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
<p>1. Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data). Define technical issues and questions to be addressed by the national technical evaluator prior to the field visit. Determine key data to collect in the field and adjust the key data collection instrument if needed. In coordination with the project manager, the project management team and the national technical evaluator, determine the suitable sites to be visited and stakeholders to be interviewed.</p>	<ul style="list-style-type: none"> Adjusted table of evaluation questions, depending on country specific context; Draft list of stakeholders to interview during the field missions. Identify issues and questions to be addressed by the local technical expert 	4 days	Home-based
<p>2. Prepare an inception report, which streamlines the specific questions to address the key issues in the TOR, specific methods that will be used and data to collect in the field visits, confirm the evaluation methodology, draft theory of change, and tentative agenda for fieldwork. Provide guidance to the national evaluator to prepare initial draft of output analysis and review technical inputs prepared by national evaluator, prior to field mission.</p>	<ul style="list-style-type: none"> Draft theory of change and Evaluation framework to submit to the Evaluation Manager for clearance. 	2 days	Home based
<p>3. Briefing with the UNIDO Independent Evaluation Unit, project managers and other key stakeholders at UNIDO HQ (included in preparation of presentation).</p>	<ul style="list-style-type: none"> Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to interview and site visits); mission planning; 	1 day	Through skype
<p>4. Conduct field mission to Thailand ⁷.</p>	<ul style="list-style-type: none"> Conduct meetings with relevant project stakeholders, beneficiaries, the GEF 	8 days	(specific project site to be identified)

⁷ 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
	Operational Focal Point (OFP), etc. for the collection of data and clarifications; <ul style="list-style-type: none"> Evaluation presentation of the evaluation's preliminary findings, conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the mission. 		at inception phase)
5. Present overall findings and recommendations to the stakeholders at UNIDO HQ	<ul style="list-style-type: none"> After field mission(s): Presentation slides, feedback from stakeholders obtained and discussed. 	1 day	Vienna, Austria
6. Prepare the evaluation report. Share the evaluation report with UNIDO HQ and national stakeholders for feedback and comments.	<ul style="list-style-type: none"> Draft evaluation report. 	12 days	Home-based
7. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Unit and stakeholders and edit the language and form of the final version according to UNIDO standards.	<ul style="list-style-type: none"> Final evaluation report. 	2 day	Home-based

MINIMUM ORGANIZATIONAL REQUIREMENTS

Education:

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

Technical and functional experience:

- Minimum of 15-20 years' experience in evaluation of development projects and programmes
- Good working knowledge in Thailand.
- 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
- Familiarity with gender analysis tools and methodologies an asset

- Working experience in developing countries

Languages:

Fluency in written and spoken English is required. 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 Unit.

REQUIRED COMPETENCIES

Core values:

WE LIVE AND ACT WITH INTEGRITY: work honestly, openly and impartially.

WE SHOW PROFESSIONALISM: work hard and competently in a committed and responsible manner.

WE RESPECT DIVERSITY: work together effectively, respectfully and inclusively, regardless of our differences in culture and perspective.

Core competencies:

WE FOCUS ON PEOPLE: cooperate to fully reach our potential –and this is true for our colleagues as well as our clients. Emotional intelligence and receptiveness are vital parts of our UNIDO identity.

WE FOCUS ON RESULTS AND RESPONSIBILITIES: focus on planning, organizing and managing our work effectively and efficiently. We are responsible and accountable for achieving our results and meeting our performance standards. This accountability does not end with our colleagues and supervisors, but we also owe it to those we serve and who have trusted us to contribute to a better, safer and healthier world.

WE COMMUNICATE AND EARN TRUST: communicate effectively with one another and build an environment of trust where we can all excel in our work.

WE THINK OUTSIDE THE BOX AND INNOVATE: To stay relevant, we continuously improve, support innovation, share our knowledge and skills, and learn from one another.

Annex 3: Outline of an in-depth project evaluation report

Abstract

Contents

Acknowledgements

Abbreviations and acronyms

Executive summary

1. Introduction
 - 1.1 Evaluation Purpose
 - 1.2 Evaluation Objectives and Scope
 - 1.3 Theory of Change
 - 1.4 Methodology
 - 1.5 Limitations
2. Project Background and Context
3. Findings
 - 3.1 Relevance
 - 3.2 Coherence
 - 3.3 Effectiveness
 - 3.4 Efficiency
 - 3.5 Sustainability
 - 3.6 Progress to Impact
 - 3.7 Gender Mainstreaming
 - 3.8 Environmental Impacts
 - 3.9 Social Impact
 - 3.10 Performance of Partners
 - 3.11 Results-based Management
 - 3.12 Monitoring & Reporting
4. Conclusions and Recommendations
 - 4.1 Conclusions
 - 4.2 Recommendations and Management Response
5. Lessons Learned
6. Annexes
 - Annex 1: Evaluation Terms of Reference
 - Annex 2: Evaluation Framework / Matrix
 - Annex 3: List of Documentation Reviewed
 - Annex 4: List of Stakeholders Consulted
 - Annex 5: Project Theory of Change / Logframe
 - Annex 6: Primary Data Collection Instruments
 - Annex 7: Survey / Questionnaire
 - Annex 8: Statistical Data from Evaluation Survey / Questionnaire Analysis

Annex 4: Quality checklist

Quality criteria		UNIDO EIO/IEU assessment notes	Rating
1	The inception report is well-structured, logical, clear, and complete.		
2	The evaluation report is well-structured, logical, clear, concise, complete and timely.		
3	The report presents a clear and full description of the 'object' of the evaluation.		
4	The evaluation's purpose, objectives, and scope are fully explained.		
5	The report presents a transparent description of the evaluation methodology and clearly explains how the evaluation was designed and implemented.		
6	Findings are based on evidence derived from data collection and analysis, and they respond directly to the evaluation criteria and questions.		
7	Conclusions are based on findings and substantiated by evidence and provide insights pertinent to the object of the evaluation.		
8	Recommendations are relevant to the object and purpose of the evaluation, supported by evidence and conclusions, and developed with the involvement of relevant stakeholders.		
9	Lessons learned are relevant, linked to specific findings, and replicable in the organizational context.		
10	The report illustrates the extent to which the evaluation addressed issues pertaining to a) gender mainstreaming, b) human rights, and c) environmental impact.		
<p><u>Rating system for quality of evaluation reports</u></p> <p>A number rating of 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.</p>			