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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

**TERMS OF REFERENCE**

**Independent terminal evaluation of the UNIDO project:**

**Demonstration of BAT and BEP in Fossil Fuel-fired Utility and Industrial Boilers in Response to the Stockholm Convention on POPs**

UNIDO project number: GF/RAS/10/003

UNIDO SAP ID: 104066

GEF ID: 3732

**MARCH 2016**

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## I. Project background and overview

### 1. Project factsheet

<b>Project Title</b>	<b>Demonstration of BAT and BEP in Fossil Fuel-fired Utility and Industrial Boilers in Response to the Stockholm Convention on POPs</b>
<b>UNIDO project No. and/or SAP ID</b>	<b>GF/RAS/10/003 / SAP ID: 104066</b>
<b>GEF project ID</b>	<b>3732</b>
<b>Region</b>	<b>Asia and the Pacific</b>
<b>Country(ies)</b>	<b>Cambodia, Indonesia, Lao People's Democratic Republic, Mongolia, Philippines, Thailand</b>
<b>GEF focal area(s) and operational programme</b>	<b>GEF-4: POPs SP-1; SP-2; SP-3</b>
<b>GEF implementing agency(ies)</b>	<b>UNIDO</b>
<b>GEF executing partner(s)</b>	<b>Ministry of Industry, Mines and Energy (Cambodia), Department of Environment (Lao PDR), Ministry of Environment (Indonesia), Ministry of Nature and Environment (Mongolia), Department of Environment and Natural Resources (Philippines), and Ministry of Natural Resources and Environment (Thailand)</b>
<b>Project size (FSP, MSP, EA)</b>	<b>FSP</b>
<b>Project CEO endorsement / Approval date</b>	<b>05 April 2010</b>
<b>Project implementation start date (First PAD issuance date)</b>	<b>20 May 2010</b>
<b>Expected implementation end date (indicated in CEO endorsement/Approval document)</b>	<b>30 April 2014</b>
<b>Revised expected implementation end date (if applicable)</b>	<b>30 June 2016</b>
<b>Actual implementation end date</b>	<b>June 2016</b>
<b>GEF project grant (excluding PPG, in USD)</b>	<b>4,000,000</b>
<b>GEF PPG (if applicable, in USD)</b>	<b>400,000</b>
<b>UNIDO co-financing (in USD)</b>	<b>200,000 (in-kind)</b>
<b>Total co-financing at CEO endorsement (in USD)</b>	<b>9,100,000 (cash+in-kind)</b>
<b>Materialized co-financing at project completion (in USD)</b>	

<b>Total project cost</b> (excluding PPG and agency support cost, in USD; i.e., GEF project grant + total co-financing at CEO endorsement)	<b>13,500,000</b>
<b>Mid-term review date</b>	<b>October 2012</b>
<b>Planned terminal evaluation date</b>	<b>June-July 2016</b>

(Source: Project document)<sup>1</sup>

## 2. Project background and context

According to Article 5(a) of the Stockholm Convention (SC) on Persistent Organic Pollutants (POPs), each Party to the Convention shall develop an action plan, or a regional or sub-regional plan to reduce the total release of chemicals listed in Annex C, with the goal of continuing the minimization and where feasible, elimination.

	<b>Signature, Succession to Signature (d)</b>	<b>Ratification, Acceptance (A), Approval (AA), Accession (a)</b>	<b>Deadline for transmission of NIP</b>	<b>Date when NIP was transmitted</b>	<b>UNIDO NIP project</b>
Cambodia	23/05/2001	25/08/2006	23/11/2008	3/5/2007	
Indonesia	23/05/2001	28/09/2009	27/12/2011	15/04/2010	X
Lao People's Democratic Republic	5/3/2002	28/06/2006	26/09/2008	11/8/2010	X
Mongolia	17/05/2002	30/04/2004	29/07/2006	8/1/2008	X
Philippines	23/05/2001	27/02/2004	27/05/2006	19/06/2006	
Thailand	22/05/2002	31/01/2005	1/5/2007	7/8/2008	

Source: Website of the Secretariat of the Stockholm Convention

Most of the developing countries and countries with economies in transition in East and South-East Asia (ESEA) region have completed the development of their NIPs for the Stockholm Convention and a number of issues have emerged as priority threats/root causes and barriers to be addressed.

The introduction of best available techniques (BAT) and best environmental practices (BEP) in the different source categories in Annex C of the Convention is the most important practical measure to continuing minimization of unintentionally-produced POPs (UP-POPs) releases.

The Conference of Parties (COP) in its first session (UNEP/POPS/COP.1/31/SC-3/5) stated that the incorporation of guidelines and guidance on BAT/BEP was a critical component of NIPs and that it needs to be widely disseminated, demonstrated and understood by users, stakeholders and decision makers as well as promoted at regional, sub-regional and national levels. The third session of the COP (UNEP/POPS/COP.3/30/SC-3/5) adopted the revised draft guidelines on BAT and provisional guidance on BEP and requested the use of further contribution by all Parties to the Convention.

The ESEA Forum on BAT and BEP is the first regional forum that has been established. The Pollution Control Department (PCD) of the Ministry of National Resources and Environment (MONRE) of Thailand, together with relevant ministries and institutions of ESEA and the Stockholm Conventional Unit at UNIDO, formally launched the Regional Forum for developing

<sup>1</sup> Project information data throughout these TOR are to be verified during the inception phase.

and formulating a regional action plan on BAT/BEP in October 2007 in Bangkok. All the 6 afore-mentioned countries are members of the Regional BAT/BEP Forum for ESEA countries.

The fossil fuel-fired utilities and industrial boilers source category was identified among the priority sources for the introduction of BAT/BEP in the respective NIPs of Cambodia, Indonesia, Lao PDR, Mongolia, Philippines and Thailand. The project aims to set the basis for the introduction of BAT/BEP in the industrial source category of fossil fuel fired power utilities (or power boilers) and industrial boilers (as identified in Part III: Source categories, Annex C or the SC) that have the potential for comparatively high formation and release of Polychlorinated dibenzo-p-dioxins and dibenzofurans (PCDD/PCDFs), hexachlorobenzene (HCB) and polychlorinated biphenyls (PCBs) to the environment.

PCDD/PCDFs and other UP-POPs can potentially be produced in the main combustion chamber of boilers at its cold spots and active sites suitable for their formations, and in the cooling zones in the heat exchanger section.

The project overall objective aims at reducing and eliminating UP-POPs releases by enhancing guidelines and guidance on best available techniques and best environmental practices (BAT/BEP) for fossil fuel-fired utilities and industrial boilers through addressing specific features of industry, common practices in the region and related socio-economic considerations. In addition, the project also targets the identification of possible options for the simultaneous reduction of dioxins and CO<sub>2</sub> from fossil fuel-fired utility and industrial boilers in response to Stockholm Convention and Climate Change requirements.

The project is funded through a GEF grant, amounting to USD 4,000,000 (and PPG Grant of USD 400,000), a UNIDO contribution of USD 200,000 (In-kind); and the counterparts' co-financing of USD 8,900,000 (cash and in kind), which amount to total project budget of USD 13,500,000.

Project implementation started in May 2010 and the initial project end date was in April 2014. The same was revised to June 2016. Actual implementation end date is June 2016.

The project will be subject to GEF Monitoring and Evaluation rules and practices of the GEF and UNIDO. A mid-term review (MTR), as well as a terminal evaluation (TE), is foreseen in the project document. Within the frame of the project monitoring and evaluation plan, an external MTR was carried out in October 2012 (MTR report, February 2013).

### **3. Project objective and structure**

The overall objective of the project aims at reducing, and where feasible, eliminating UP-POPs releases by capacity building at regional level to implement BAT/BEP measures in the fossil fuel fired utility and industrial boilers source category including UP-POPs monitoring. The project also aims at simultaneously increasing energy efficiency and reducing UP-POPs releases by application of appropriately selected technologies and fuels in the fossil fuel-fired utility and industrial boilers source category.

**6 substantive outcomes** have been developed to achieve the project objectives:

**Outcome 1:** Adopted guidelines and guidance on BAT/BEP addressing specific features of industry, common practices in the region and related socio-economic considerations

**Outcome 2:** Pollution prevention measures (cleaner production) applied prior to introducing BAT/BEP (Annex C, Part V, A)

**Outcome 3:** UP-POPs baseline inventories derived from representative industrial sources and projected at regional scale

**Outcome 4:** Established regional coordination of developing human resources

**Outcome 5:** Adequate capacity in sampling and analysis of UP-POPs

**Outcome 6:** Established project management office, stakeholder partnerships, and relevant meetings

#### 4. Project implementation and execution arrangements

**UNIDO:** is the implementing agency for the project. A project focal point was to be established within UNIDO to assist in the project execution

**ESEA Forum Board (FB):** was to oversee project implementation

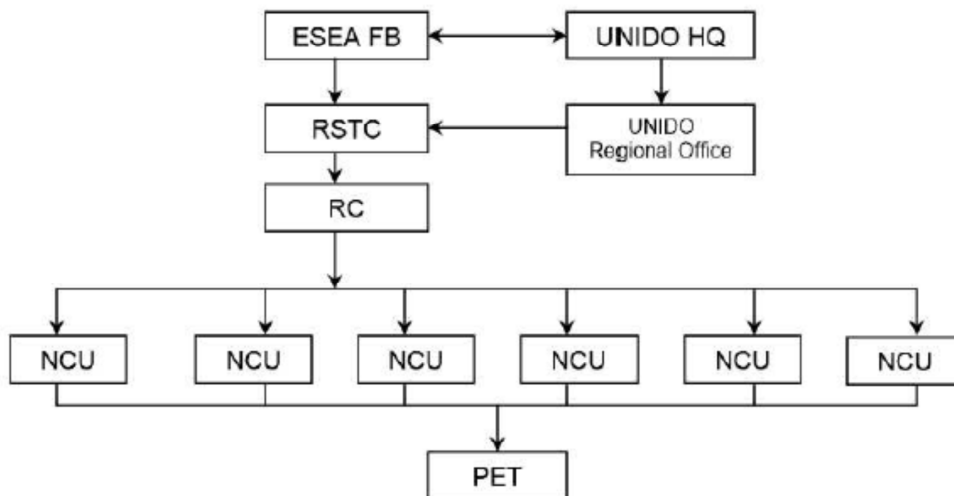
**Regional Sector Technical Committee (RSTC):** members of the RSTC were to be senior officials of relevant ministries of each participating country, the NPMs and UNIDO PM.

**Regional Coordinator (RC):** was to support the RSTC, and carry out amongst other, the day-to-day administration of the project, coordinate the timely inputs of various stakeholders

**National Coordination Units (NCU):** was to be set up in each participating country and was to have a **National Project Manager (NPM)**

**Project Expert Team (PET):** was to include the RC, the NPMs, policy experts, POPs management and disposal industry experts, chemists, as well as other technical experts

The project management structure is illustrated below:



#### 5. Mid-term Review (MTR)

The **MTR** was carried out by an independent evaluation consultant in October 2012.

Main findings of the MTR are as follows (see MTR report, February 2013):

The project should be considered mainly as a capacity building project, as the key outputs are training, upgrading of the existing legislation to include SC requirements, drafting and implementation of guidelines and guidance, and the establishment of a UP-POPs baseline inventory.

Overall rating of project outcomes, based on the SMART analysis, was satisfactory. Considering the limited budget available and the number of countries involved, the project structure was considered to be too complex. This complex project structure demanded a significant supervision effort to be carried out mostly at central level, supporting the supervision / coordination at regional or country level where it was not completely effective. An analysis of the project achievements also showed that under some project outputs, no significant results could be identified, as some project activities were a duplication of other activities. Rearrangement of project outputs and activities was proposed. Most of the project activities, at the time of the MTR, were moderately satisfactory, and some were satisfactory.

Further details can be obtained from the MTR report (February 2013).

## 6. Budget information

The project is funded through a GEF grant, amounting to USD 4,000,000 (and PPG Grant of USD 400,000), a UNIDO co-financing of USD 200,000 (in-kind); and the counterparts' total co-financing of USD 8,900,000 (cash and in-kind) which amount to total project budget of USD 9,100,000.

Financing plan summary for the project (in USD):

	<i>Project Preparation</i>	<i>Project</i>	<i>Total</i>
GEF financing	400,000	4,000,000	4,400,000
Co-financing (Cash and In-kind)	300,000	9,100,000	9,400,000
<b>Total</b>	<b>700,000</b>	<b>13,100,000</b>	<b>13,800,000</b>

(Source: CEO endorsement document)

Project budget:

<b>Project outcomes</b>	<b>GEF (in USD)</b>	<b>Co-financing (in USD)</b>	<b>Total (in USD)</b>
1. Formulation of regional guidelines and guidance on BAT/BEP for fossil fuel fired utility and industrial boilers consistent with relevant requirements of the Stockholm Convention	700,000	1,990,000	<b>2,690,000</b>
2. Dissemination of pollution prevention / cleaner production (PP/CP) measures in fossil fuel-fired utilities and industrial boilers source category	400,000	255,000	<b>655,000</b>



<b>Project outcomes</b>	<b>GEF (in USD)</b>	<b>Co-financing (in USD)</b>	<b>Total (in USD)</b>
3. Establishment of regional UP-POPs baseline inventory in fossil fuel-fired utilities and industrial boilers source category	1,900,000	1,900,000	<b>3,800,000</b>
4. Regional coordination in developing human resources	410,000	1,405,000	<b>1,815,000</b>
5. Capacity building in sampling at industrial sources and analysis of UP-POPs	340,000	3,010,000	<b>3,350,000</b>
Project Management and M&E	250,000	540,000	<b>790,000</b>
<b>Total</b>	<b>4,000,000</b>	<b>9,100,000</b>	<b>13,100,000</b>

(Source: CEO endorsement document)

Expected co-financing source breakdown is as follows:

<b>Name of Co-financier (source)</b>	<b>Classification</b>	<b>Type</b>	<b>Project</b>
<b>Cambodia</b>	Government	Cash	400,000
		In-kind	900,000
<b>Indonesia</b>	Government	To be defined later	
<b>Lao PDR</b>	Government	Cash	259,000
		In-kind	941,000
<b>Mongolia</b>	Government	Cash	120,000
		In-kind	1,080,000
<b>Philippines</b>	Government	In-kind	1,200,000
<b>Thailand</b>	Government	In-kind	4,000,000
<b>Total Co-Financing</b>			<b>8,900,000</b>

(Source: CEO endorsement document)

**UNIDO GEF-grant disbursement breakdown:**

<b>Item</b>	<b>Disbursement (expenditure, commitment) in 2012</b>	<b>incl. Disbursement in 2013</b>	<b>Disbursement in 2014</b>	<b>Disbursement in 2015</b>	<b>Total disbursement (in USD) (2012-present) (08 Dec. 2015)</b>
Contingencies					
Contractual Services	336,354.08	-31.04	425,558.15	194,710.02	<b>956,591.21</b>
Equipment	32,302.14	550,379.63	92,532.49	1,681.29	<b>676,895.55</b>
Internat. Cons/Staff	313,298.46	101,070.48	65,661.44	48,091.15	<b>528,121.53</b>
Internat. meetings	224,992.19	43,082.45	69,326.12	9,642.78	<b>347,043.54</b>
Local Travel	67,666.43	27,336.75	17,131.57	3,869.72	<b>116,004.47</b>
Nat. Consult./Staff	288,988.76	232,938.37	157,819.66	131,728.87	<b>811,475.66</b>
Other Direct Costs	45,650.97	12,202.83	11,511.59	217.76	<b>69,583.15</b>
Premises				54.08	<b>54.08</b>
Staff Travel		178.92			<b>178.92</b>
Train/Fellowsh/Study	69,807.94	33,746.12	14,901.30	3,481.67	<b>121,937.03</b>
<b>Total (in USD)</b>	<b>1,379,060.97</b>	<b>1,000,904.51</b>	<b>854,442.32</b>	<b>393,477.34</b>	<b>3,627,885.14</b>

(Source: SAP database, 08 Dec. 2015)

## II. Scope and purpose of the evaluation

The terminal evaluation (TE) will cover the whole duration of the project from its starting date in May 2010 to the estimated completion date in April 2016. It will assess project performance against the evaluation criteria: relevance, effectiveness, efficiency, sustainability and impact.

From the knowledge management perspective, the TE has an additional purpose of drawing lessons and developing recommendations for UNIDO and the GEF that may help improving the selection, enhancing the design and implementation of similar future projects and activities in the country and on a global scale upon project completion. The terminal evaluation report should include examples of good practices for other projects in the focal area, country, or region.

The terminal evaluation should provide an analysis of the attainment of the project objective(s) and the corresponding technical components or outputs. Through its assessments, the terminal evaluation should 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 promoting sustainability, providing an analysis of the attainment of global environmental objectives, project objectives, delivery and completion of project outputs/activities, and outcomes/impacts based on indicators, and management of risks. The assessment includes re-examination of the relevance of the objectives and other elements of project design according to the project evaluation parameters defined in chapter VI.

The key question of the terminal evaluation is whether the project has achieved or is likely to achieve its main objective of reducing, and where feasible, eliminating UP-POPs releases by capacity building at regional level to implement BAT/BEP measures in the fossil fuel fired utility and industrial boilers source category including UP-POPs monitoring

## III. Evaluation approach and methodology

The terminal evaluation will be conducted in accordance with the UNIDO Evaluation Policy<sup>2</sup>, the UNIDO Guidelines for the Technical Cooperation Programme and Project Cycle<sup>3</sup>, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations<sup>4</sup>, the GEF Monitoring and Evaluation Policy<sup>5</sup> and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies<sup>6</sup>.

It will be carried out 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 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.

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<sup>2</sup> UNIDO. (2015). Director General's Bulletin: Evaluation Policy (UNIDO/DGB/(M).98/Rev.1)

<sup>3</sup> 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)

<sup>4</sup> GEF. (2008). Guidelines for GEF Agencies in Conducting Terminal Evaluations (Evaluation Office, Evaluation Document No. 3, 2008)

<sup>5</sup> GEF. (2010) The GEF Monitoring and Evaluation Policy (Evaluation Office, November 2010)

<sup>6</sup> 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)

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:

1. A desk review of project documents, including, but not limited to:
  - (a) The original project document, monitoring reports (such as progress and financial reports to UNIDO and UNIDO-GEF annual Project Implementation Reports (PIRs)), mid-term review report, output reports (case studies, action plans, sub-regional strategies, etc.), back-to-office mission report(s), end-of-contract report(s) and relevant correspondence.
  - (b) If applicable, notes from the meetings of committees involved in the project (e.g. approval and steering committees).
  - (c) Other project-related material produced by the project.
2. 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.
3. 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.
4. 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.
5. 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.
6. On-site observation of results achieved in **at least 3 selected participating countries**, including interviews of actual and potential beneficiaries of improved technologies. Selection of the participating countries to be done in agreement with the UNIDO PM and ODG/EVQ/IEV and is to be specified in the inception report.
7. 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.
8. Interviews with the relevant UNIDO Field Offices in the 6 participating countries, to the extent that they were involved in the project, and the project's management members 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.
9. Other interviews, surveys or document reviews as deemed necessary by the evaluation team and/or UNIDO, ODG/EVQ/IEV.
10. The inception report will provide details on the methodology used by the evaluation team and include an evaluation matrix.

#### **IV. Evaluation team composition**

Owing to the size and scope of the project, the evaluation team will be composed of two international evaluation consultants. Both 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.

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 the participating countries 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.

## **V. Time schedule and deliverables**

The evaluation is scheduled to take place from June 2016 – July 2016. The evaluation mission is planned for July 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 countries.

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 evaluation team 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.

## **VI. Project evaluation parameters**

The evaluation team will rate the projects. The **ratings for the parameters described in the following sub-chapters A to J will be presented in the form of a table** with each of the categories rated separately and with **brief justifications for the rating** based on the findings of the main analysis. An overall rating for the project should also be given.

### **A. Design**

The evaluation will examine the extent to which:

- The project's design is adequate to address the problems at hand;
- A participatory project identification process was instrumental in selecting problem areas and national counterparts;
- The project has a clear thematically focused development objective, the attainment of which can be determined by a set of verifiable indicators;
- The project was formulated based on the logical framework (project results framework) approach;
- Is the expected result chain (impact, outcomes, outputs) clear and logical? Are outcomes, outputs and activities clearly defined, logical, coherent and appropriate to achieve the project objectives?
- Was there a need to reformulate the project design and the project results framework given changes in the country and operational context?

- The project was formulated with the participation of national counterparts, stakeholders and/or target beneficiaries through a participatory and broad public consultation approach;
- Relevant country representatives (from government, industries, gender groups, customs officers and civil society), including the GEF OFP, have been appropriately involved and were participating in the identification of critical problem areas and the development of technical cooperation strategies;
- All GEF-4 projects have incorporated relevant environmental and social risk considerations into the project design, established at the time of project design.

## **B. Relevance**

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

- 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.
- 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.).
- 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 SP-1; SP-2; SP-3.
- UNIDO's thematic priorities: Were they in line with UNIDO's mandate, objectives and outcomes defined in the Programme and Budget and core competencies?
- Does the project remain relevant taking into account the changing environment?

## **C. Effectiveness**

- The evaluation will assess the objectives and final results at the end of the project
- The evaluation will assess to what extent results at various levels, including outcomes, have been achieved. In detail, the following issues will be assessed: To what extent have the expected outputs, outcomes and long-term objectives been achieved or are likely to be achieved? Has the project generated any results that could lead to changes of the assisted institutions? Have there been any unplanned effects?
- Are the project outcomes commensurate with the original or modified project objectives? If the original or modified expected results are merely outputs/inputs, the evaluators should assess if there were any real outcomes of the project and, if there were, determine whether these are commensurate with realistic expectations from the project.
- How do the stakeholders perceive the quality of outputs? Were the targeted beneficiary groups actually reached?
- What outputs and outcomes has the project achieved so far (both qualitative and quantitative results)? Has the project generated any results that could lead to changes of the assisted institutions? Have there been any unplanned effects?
- 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.
- 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.

## D. Efficiency

The extent to which:

- The project cost was effective? Was the project using the most cost-efficient options?
- 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?
- 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?
- Was there coordination with other UNIDO and other donors' projects, and did possible synergy effects happen?
- Were there delays in project implementation and if so, what were their causes?

## E. 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:

- **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?
- **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?
- **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?
- **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.

## F. Assessment of monitoring and evaluation (M&E) systems

- **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).

- **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?
- **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.

## G. 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:

- a. 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?
- b. What were the accomplishments and shortcomings in establishment of this system?
- c. 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?
- d. Is the information generated by this system being used as originally intended?

## H. 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:

- a. **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?
- b. **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?

- c. **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?
- d. **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.
- e. **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?
- f. **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?
- g. **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?
- h. **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?
- i. **Environmental and Social Safeguards.** If a GEF-4 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?

The evaluation team will rate the project performance as required by the GEF. The ratings will be given to four criteria: Project Results, Sustainability, Monitoring and Evaluation, and UNIDO related issues as specified in Annex 2. The ratings will be presented in a table with each of the categories rated separately and with brief justifications for the rating based on the findings of the main analysis. An overall rating for the project should also be given. The rating system to be applied is specified in the same annex. As per the GEF's requirements, the report should also provide information on project identification, time frame, actual expenditures, and co-financing in the format in annex 5, which is modeled after the GEF's project identification form (PIF).

## **I. Project coordination and management**

The extent to which:

- 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)?
- 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)?

## **J. Assessment of gender mainstreaming**

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

- Did the project/programme design adequately consider the gender dimensions in its interventions? If so, how?
- Was a gender analysis included in a baseline study or needs assessment (if any)?
- How gender-balanced was the composition of the project management team, the Steering Committee, experts and consultants and the beneficiaries?
- 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)?
- To what extent were socioeconomic benefits delivered by the project at the national and local levels, including consideration of gender dimensions?

## **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 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<sup>7</sup>.

### **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 local 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.

### **Evaluation work plan**

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

1. 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.
2. Inception report: At the time of departure to the field mission, all the received material has been reviewed and consolidated into the Inception report.
3. 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.
4. 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.

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<sup>7</sup> The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by the UNIDO Office for Independent Evaluation.

5. A draft terminal evaluation report will be forwarded electronically to the UNIDO Independent Evaluation Division and circulated to main stakeholders.
6. Final terminal evaluation report will incorporate comments received.

<b>Evaluation phases</b>	<b>Deliverables</b>
Desk review	Development of methodology approach and evaluation tools
Briefing with UNIDO Independent Evaluation Division, Project Managers and other key stakeholder at HQ	Interview notes, detailed evaluation schedule and list of stakeholders to interview during field mission
Data analysis	Inception evaluation report
Field mission Present preliminary findings and recommendations to key stakeholders in the field	Presentation of main findings to key stakeholders in the field.
Debriefing at UNIDO HQ	Present preliminary findings and recommendations to the stakeholders at UNIDO HQ Additional interviews and analysis
Analysis of the data collected	Draft terminal evaluation report
Circulation of the draft report to UNIDO/relevant stakeholders and revision	Final terminal evaluation report

## **VIII. Quality assurance**

All UNIDO 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 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<sup>8</sup> 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:

- A. Design
- B. Relevance (report on the relevance of project towards countries and beneficiaries)
- C. 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)
- D. Efficiency (report on the overall cost-benefit of the project and partner countries' contribution to the achievement of project objectives)
- E. 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)
- F. Assessment of monitoring and evaluation systems (report on M&E design, M&E plan implementation, and budgeting and funding for M&E activities)
- G. Monitoring of long-term changes
- H. 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)

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<sup>8</sup> 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)

- I. Project coordination and management (report project management conditions and achievements, and partner countries commitment)
- J. 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:

##### **A. 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.

##### **B. 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

##### **C. 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 - Overall rating table

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

### 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<sup>9</sup>**

### **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:

- 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;
- SMART indicators for results (outcomes and, if applicable, impacts), and, where appropriate, indicators identified at the corporate level;
- 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;
- Identification of reviews and evaluations that will be undertaken, such as mid-term reviews or evaluations of activities; and
- 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:

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

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<sup>9</sup> [http://www.thegef.org/gef/sites/thegef.org/files/documents/ME\\_Policy\\_2010.pdf](http://www.thegef.org/gef/sites/thegef.org/files/documents/ME_Policy_2010.pdf)

## Annex 4 - Checklist on terminal evaluation report quality

Independent terminal evaluation of UNIDO-GEF project:

PROJECT TITLE:

PROJECT NO:

### CHECKLIST ON EVALUATION REPORT QUALITY

Report quality criteria	UNIDO Independent Evaluation Division: Assessment notes	Rating
A. The terminal evaluation report presented an assessment of all relevant outcomes and achievement of project objectives in the context of the focal area program indicators if applicable.		
B. The terminal evaluation report was consistent, the evidence presented was complete and convincing, and the ratings were well substantiated.		
C. The terminal evaluation report presented a sound assessment of sustainability of outcomes.		
D. The lessons and recommendations listed in the terminal evaluation report are supported by the evidence presented and are relevant to the GEF portfolio and future projects.		
E. The terminal evaluation report included the actual project costs (totals, per activity, and per source) and actual co-financing used.		
F. The terminal evaluation report included an assessment of the quality of the M&E plan at entry, the operation of the M&E system used during implementation, and the extent M&E was sufficiently budgeted for during preparation and properly funded during implementation.		

#### 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 5 – 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					
<b>Total (in USD)</b>					

Activity types are:

- a) Experts, researches hired
- b) technical assistance, Workshop, Meetings or experts consultation scientific and technical analysis, experts researches hired
- c) 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
	...							
<b>Total co-financing (in USD)</b>								

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 6 – Job descriptions



### UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

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

<b>Title:</b>	Senior International evaluation consultant, team leader
<b>Main Duty Station and Location:</b>	Home-based
<b>Missions:</b>	Missions to Vienna, Austria and Mongolia, Thailand and Cambodia
<b>Start of Contract (EOD):</b>	June 1, 2016
<b>End of Contract (COB):</b>	July 30, 2016
<b>Number of Working Days:</b>	32 working days spread over 2 months

#### 1. ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division (ODG/EVQ/IEV) is responsible for the implementation of independent evaluations 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

According to Article 5(a) of the Stockholm Convention (SC) on Persistent Organic Pollutants (POPs), each Party to the Convention shall develop an action plan, or a regional or sub-regional plan to reduce the total release of chemicals listed in Annex C, with the goal of continuing the minimization and where feasible, elimination. The introduction of best available techniques (BAT) and best environmental practices (BEP) in the different source categories in Annex C of the Convention is the most important practical measure to continuing minimization of unintentionally-produced POPs (UP-POPs) releases.

The fossil fuel-fired utilities and industrial boilers source category was identified among the priority sources for the introduction of BAT/BEP in the respective NIPs of Cambodia, Indonesia, Lao PDR, Mongolia, Philippines and Thailand. The project overall objective aims at reducing and eliminating UP-POPs releases by enhancing guidelines and guidance on best available techniques and best environmental practices (BAT/BEP) for fossil fuel-fired utilities and industrial boilers through addressing specific features of industry, common practices in the region and related socio-economic considerations.

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

### 3. DUTIES AND RESPONSIBILITIES

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); determine key data to collect in the field and adjust the key data collection instrument of 3A accordingly (if needed); Assess the adequacy of legislative and regulatory framework relevant to the project's activities and analyze other background info.</p>	<ul style="list-style-type: none"> <li>• Adjust table of evaluation questions, depending on country specific context;</li> <li>• Draft list of stakeholders to interview during the field missions;</li> <li>• Brief assessment of the adequacy of the country's legislative and regulatory framework.</li> </ul>	7 days	Home-based
<p>2. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders at UNIDO HQ. (This may be handled through email and skype conferences, depending on final costs)</p> <p>Preparation of the Inception Report</p>	<ul style="list-style-type: none"> <li>• Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to interview and site visits); mission planning;</li> <li>• Division of evaluation tasks with the International Evaluation Consultant.</li> <li>• Inception Report</li> </ul>	2 days	Vienna, Austria or Home-based
<p>3. Conduct field mission<sup>10</sup>.</p>	<ul style="list-style-type: none"> <li>• Conduct meetings with relevant project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications;</li> <li>• Agreement with the International Evaluation Consultant on the structure and content of the evaluation report and the distribution of writing tasks;</li> <li>• 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.</li> </ul>	3 days Bangkok; 3 days Phnom Penh, 3 days Mongolia (including travel)	Bangkok, Phnom Penh, Ulaanbaatar
<p>4. Present overall findings and recommendations to the stakeholders at UNIDO HQ</p>	<ul style="list-style-type: none"> <li>• After field mission(s): Presentation slides, feedback from stakeholders obtained and discussed</li> </ul>	2 days	Vienna, Austria

<sup>10</sup> 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
5. Prepare the evaluation report, together with the International Evaluation Consultant, according to the TOR; Coordinate the inputs from the International Evaluation 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.	8 days	Home-based
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.	4 days	Home-based
	<b>TOTAL</b>	<b>32</b>	

## 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)
- 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

- Presentation of initial findings at the end of the country mission(s) to key national stakeholders;
- Presentation and discussion of preliminary findings at UNIDO HQ
- Draft report;
- Final 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)

<b>Title:</b>	International evaluation consultant
<b>Main Duty Station and Location:</b>	HQ and Home-based
<b>Missions:</b>	Missions to Vienna, Austria and Thailand, Cambodia and Mongolia
<b>Start of Contract (EOD):</b>	June 1, 2016
<b>End of Contract (COB):</b>	July 30, 2015
<b>Number of Working Days:</b>	30 working days spread over 2 months

#### 4. ORGANIZATIONAL CONTEXT

The UNIDO Independent Evaluation Division (ODG/EVQ/IEV) is responsible for the implementation of independent evaluations 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.

#### 5. PROJECT CONTEXT

According to Article 5(a) of the Stockholm Convention (SC) on Persistent Organic Pollutants (POPs), each Party to the Convention shall develop an action plan, or a regional or sub-regional plan to reduce the total release of chemicals listed in Annex C, with the goal of continuing the minimization and where feasible, elimination. The introduction of best available techniques (BAT) and best environmental practices (BEP) in the different source categories in Annex C of the Convention is the most important practical measure to continuing minimization of unintentionally-produced POPs (UP-POPs) releases.

The fossil fuel-fired utilities and industrial boilers source category was identified among the priority sources for the introduction of BAT/BEP in the respective NIPs of Cambodia, Indonesia, Lao PDR, Mongolia, Philippines and Thailand. The project overall objective aims at reducing and eliminating UP-POPs releases by enhancing guidelines and guidance on best available techniques and best environmental practices (BAT/BEP) for fossil fuel-fired utilities and industrial boilers through addressing specific features of industry, common practices in the region and related socio-economic considerations.

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

## 6. DUTIES AND RESPONSIBILITIES

Under the supervision and coordination of the Senior International Evaluation Consultant and Team Leader (ETL):

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); determine key data to collect in the field and adjust the key data collection instrument of 3A accordingly (if needed);</p> <p>Assess the adequacy of legislative and regulatory framework relevant to the project's activities and analyze other background info.</p>	<p>Inputs to the ETL on:</p> <ul style="list-style-type: none"> <li>Adjust table of evaluation questions, depending on country specific context;</li> <li>Draft list of stakeholders to interview during the field missions;</li> <li>Brief assessment of the adequacy of the country's legislative and regulatory framework.</li> </ul>	7 days	Home-based
<p>2. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders at UNIDO HQ. (This may be handled through email and skype conferences, depending on final costs)</p> <p>Preparation of the Inception Report, together with the team leader.</p>	<p>Inputs to the ETL on:</p> <ul style="list-style-type: none"> <li>Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to interview and site visits); mission planning;</li> <li>Division of evaluation tasks with the team leader.</li> <li>Inception Report</li> </ul>	2 days	Vienna, Austria or Home-based
<p>3. Conduct field mission to Bangkok, Phnom Penh and Ulaanbaatar in <b>July 2016</b>.</p>	<p>Together with the ETL:</p> <ul style="list-style-type: none"> <li>Conduct meetings with relevant project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications;</li> <li>Agreement with the team leader on the structure and content of the evaluation report and the distribution of writing tasks;</li> <li>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.</li> </ul>	3 days Bangkok; 3 days Phnom Penh, 3 days Mongolia (including travel)	Bangkok, Phnom Penh, Ulaanbaatar
<p>5. Prepare the evaluation report, together with the team leader, according to the TOR;</p> <p>Share the evaluation report with UNIDO HQ and national stakeholders for</p>	<p>Inputs to the ETL on:</p> <ul style="list-style-type: none"> <li>Draft evaluation report.</li> </ul>	8 days	Home-based

MAIN DUTIES	Concrete/ Measurable Outputs to be achieved	Working Days	Location
feedback and comments.			
6. Revise the draft project evaluation report, together with the team leader, based on comments from UNIDO Independent Evaluation Division and stakeholders and edit the language and form of the final version according to UNIDO standards.	Inputs to the ETL on: • Final evaluation report.	4 days	Home-based
	<b>TOTAL</b>	<b>30</b>	

### MINIMUM ORGANIZATIONAL REQUIREMENTS

#### Education:

Advanced degree on development studies or related areas

#### Technical and functional experience:

- Minimum of 5 years' experience in the field of industrial development and evaluation, including experience at the international level involving technical cooperation in developing countries
- 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.

#### 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 7 – Project results framework

Interventions	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<b>Outcome 1: Adopted guidelines and guidance on BAT/BEP addressing specific features of industry, common practices in the region and related socio-economic considerations</b>			
<b>Output 1.1 : Adopted regional guidelines and guidance on BAT/BEP on fossil fuel-fired utilities and industrial boilers in ESEA by adding, among others, two columns to Table 3: “Summary of recommended measures...” of UNEP/POPS/COP.3/INF/4 on health and economic benefits as well as wood and other biomass fuels that are widely used in ESEA region</b>			
<p><i>Activity 1.1.1:</i> Identify relevant health and economic issues of Section VI.D in each participating country.</p> <p><i>Activity 1.1.2:</i> Prepare and test guidelines to be used to optimize the collection and comparison of data.</p> <p><i>Activity 1.1.3:</i> Collect and report data on occupational accidents and occupational exposures to fugitive emissions related to industrial boilers.</p> <p><i>Activity 1.1.4:</i> Draft regional BAT/BEP guidelines and guidance document by amending Section VI.D.</p> <p><i>Activity 1.1.5:</i> Publish and disseminate regional guidelines in English and local languages of the participating countries.</p> <p><i>Activity 1.1.6:</i> Targeted training programs in application of regional guidelines.</p>	<ul style="list-style-type: none"> <li>➤ Regional guidelines on collection of comparable data</li> <li>➤ Report on health and economic considerations</li> <li>➤ Country reports on occupational accidents</li> <li>➤ Regional guidelines on BAT/BEP</li> <li>➤ Two regional training programs and at least 20 trainees at each on regional BAT/BEP guidelines</li> </ul>	<ul style="list-style-type: none"> <li>➤ Country Technical reports</li> <li>➤ Regional Technical reports</li> <li>➤ Training reports</li> </ul>	<ul style="list-style-type: none"> <li>➤ Country reports timely available</li> <li>➤ Regional reports timely available</li> <li>➤ Lack of human resources, delayed human resource allocations, or personnel changes at key stakeholder agencies could cause delays in project implementation</li> </ul>
<b>Output 1.2: Enhanced or strengthened specifications for different types of boilers (small/medium/large) and fuels</b>			

Interventions	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<p><i>Activity 1.2.1:</i> Compare fuel prices and boiler efficiencies in the market for different types of boilers.</p> <p><i>Activity 1.2.2:</i> Estimate replacement costs versus increasing efficiency for different types of boilers.</p> <p><i>Activity 1.2.3:</i> Investigate the use of wood and other biomass fuels in the boiler sector</p>	<ul style="list-style-type: none"> <li>➤ Boiler specifications upgraded including achievable dioxin/GHG emission limits</li> <li>➤ Market study on fuel prices</li> <li>➤ Technical studies on use of biomass fuels including estimates on dioxin/GHG reduction</li> </ul>	<ul style="list-style-type: none"> <li>➤ Review report of boilers specifications</li> <li>➤ Workshop reports on specific technical studies</li> <li>➤ Review of cost-effectiveness analyses</li> </ul>	<ul style="list-style-type: none"> <li>➤ Specifications for different types of boilers and fuels not timely drafted</li> <li>➤ Review reports timely carried out</li> <li>➤ Technical capabilities in SME sector to carry out cost-effectiveness analysis</li> </ul>
<p><b>Output 1.3: Adopted government policies including regulations, standards, incentives (energy, environment, industry, health, education) supporting reduction of UP-POPs releases from the fossil fuel-fired utilities and industrial boilers (Section VI.D) and from firing installations for wood and other biomass (Section VI.E)</b></p>			
<p><i>Activity 1.3.1:</i> Identify and assess existing government policies related to Section VI.D and the relevant parts of Section VI.E.</p>	<ul style="list-style-type: none"> <li>➤ Government policies and regulations adopted to facilitate BAT/BEP implementation</li> </ul>	<ul style="list-style-type: none"> <li>➤ Workshop reports of national BAT/BEP implementation</li> </ul>	<ul style="list-style-type: none"> <li>➤ BAT/BEP implementation is a national priority</li> </ul>
<p><i>Activity 1.3.2:</i> Analyze gaps in existing standards, regulations and market based incentives relevant to the boiler sector.</p> <p><i>Activity 1.3.3:</i> Enhance existing enabling government policies on the above to be implemented at government level with specific reference to Boiler Act.</p> <p><i>Activity 1.3.4:</i> Publish and disseminate approved policies, regulations and standards in English and local languages of the participating countries.</p> <p><i>Activity 1.3.5:</i> Targeted training programs in applying those policies, regulations and standards.</p>	<ul style="list-style-type: none"> <li>➤ Enforcement mechanisms at government level in place</li> <li>➤ Two regional training programs and at least 10 trainees at each on policies, regulations and standards</li> </ul>	<ul style="list-style-type: none"> <li>➤ Training reports on policies, regulations and standards</li> </ul>	<ul style="list-style-type: none"> <li>➤ Delays in adoption of legal framework and specific policy and technical guidance</li> <li>➤ Delays in the adoption of regional guidelines and guidance on BAT/BEP on fossil fuel-fired utilities and industrial boilers</li> <li>➤ Laws and regulations not fully and consistently enforced</li> </ul>
<p><b>Outcome 2 : Pollution prevention measures (cleaner production) applied prior to introducing BAT/BEP (Annex C, Part V, A)</b></p>			

Interventions	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<b>Output 2.1: PP/CP methodology and the corresponding technical capabilities in the fossil fuel-fired utility and industrial boilers sector for use in power generation and in industrial processes</b>			
<p><i>Activity 2.1.1:</i> Assess and classify boilers in the ESEA region according to their capacity and fuel use.</p> <p><i>Activity 2.1.2:</i> Identifying the abatement technologies in use.</p> <p><i>Activity 2.1.3:</i> Carry out market survey for appropriate technologies and boiler technology providers.</p> <p><i>Activity 2.1.4:</i> Draft, approve and implement non-binding procurement guidelines for environmentally sound boilers as appropriate.</p> <p><i>Activity 2.1.5:</i> Publication and dissemination of non-binding procurement guidelines.</p> <p><i>Activity 2.1.6:</i> Hold awareness workshops for disseminating the procurement guidelines.</p>	<ul style="list-style-type: none"> <li>➤ PP/CP methodology guidelines document</li> <li>➤ Information material on appropriate, affordable and feasible technologies in ESEA region</li> <li>➤ Procurement guidelines</li> <li>➤ At least 2 awareness raising workshops in each of the participating countries</li> </ul>	<ul style="list-style-type: none"> <li>➤ Regional CP reports</li> <li>➤ Market survey on technologies</li> <li>➤ Published procurement guidelines</li> <li>➤ Published procurement guidelines</li> <li>➤ Reports on awareness raising workshops</li> </ul>	<ul style="list-style-type: none"> <li>➤ Close cooperation with CP centers in the ESEA region</li> <li>➤ PP/CP methodology and corresponding technical capabilities in the fossil fuel-fired utilities and industrial boilers sector is not implemented.</li> <li>➤ The classification and identification of boilers and abatement devices may be delayed due to lack of trained staff</li> <li>➤ Procurement guidelines not timely delivered may delay project activities</li> <li>➤ Higher cost of CP measures may cause stakeholders to abandon project activities</li> </ul>

Interventions	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<b>Outcome 3 : Unintentional POPs baseline inventories derived from representative industrial sources and projected at regional scale</b>			
<b>Output 3.1: Baseline studies on fossil fuel-fired utility and industrial boilers (through questionnaires completed in six participating countries)</b>			
<p><i>Activity 3.1.1:</i> Prepare baseline studies on industrial boilers by processing data collected through questionnaires;</p> <p><i>Activity 3.1.2:</i> Produce relevant publications on the above studies</p>	<ul style="list-style-type: none"> <li>➤ Six national baseline reports on fossil fuel-fired utility and industrial boilers</li> <li>➤ Regional baseline report on fossil fuel-fired utilities and industrial boilers</li> </ul>	<ul style="list-style-type: none"> <li>➤ National and regional reports available at sector coordinator</li> </ul>	<ul style="list-style-type: none"> <li>➤ Questionnaires made timely available</li> <li>➤ Local experts with adequate knowledge and experience are available in time to carry out the studies</li> <li>➤ Baseline studies and inventories on fossil fuel-fired utility and industrial boilers will not provide enough data for project requirements</li> </ul>

Interventions	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<b>Output 3.2: Specific studies made on: (i) fish residues as fuel in seasonal use in Cambodia; (ii) use of spent/used oils as boiler fuel; (iii) use of biomass fuels; and (iv) pressure furnaces and coal stoves in Mongolia.</b>			
<p><i>Activity 3.2.1:</i> Prepare, undertake, report, publish and disseminate specific studies on fish residues as fuel in seasonal use in Cambodia</p> <p><i>Activity 3.2.2:</i> Prepare, undertake, report, publish and disseminate specific studies on use of spent/used oils as boiler fuel.</p> <p><i>Activity 3.2.3:</i> Prepare, undertake, report, publish and disseminate specific studies on use of biomass fuels.</p> <p><i>Activity 3.2.4:</i> Prepare, undertake, report, publish and disseminate specific studies on; low pressure furnaces and coal stoves in Mongolia.</p>	<ul style="list-style-type: none"> <li>➤ At least five (5) published specific technical studies addressing specific features of participating countries</li> </ul>	<ul style="list-style-type: none"> <li>➤ Workshop reports on specific technical studies</li> </ul>	<ul style="list-style-type: none"> <li>➤ Studies timely carried out</li> <li>➤ Relevant institutional cooperation secured</li> </ul>
<b>Output 3.3: Identification and selection of fossil fuel-fired utility and industrial boilers that would be representative for establishing regional UP- POPs baseline inventory by determining UP-POPs releases</b>			
<p><i>Activity 3.3.1:</i> Identify criteria for boiler types selection.</p> <p><i>Activity 3.3.2:</i> Select representative boilers each in participating country for demonstration.</p> <p><i>Activity 3.3.3:</i> Modify and/or optimise technology parameters of selected boilers</p> <p><i>Activity 3.3.4:</i> Set up and carry out pilot monitoring programmes for a few selected boiler types at power generation and industry sectors.</p>	<ul style="list-style-type: none"> <li>➤ Criteria for boiler types selection and characterization of selected fossil fuel-fired utilities and industrial boilers</li> <li>➤ Maximum of 12 pilot demonstration cases for the project duration</li> <li>➤ Approximate reduction of 0.31 g TEQ/year from pilot cases and fuel savings of USD 1.3 m/year</li> <li>➤ At least 24 monitoring programs performed in 12 selected facilities before and after BAT/BEP implementation</li> <li>➤ At least 48 analytical tests</li> </ul>	<ul style="list-style-type: none"> <li>➤ Selection criteria and detailed technical specifications on identified pilot boilers</li> <li>➤ Results and data gathered from pilot cases</li> <li>➤ Analytical reports</li> <li>➤ Publications</li> </ul>	<ul style="list-style-type: none"> <li>➤ Trained monitoring staff timely available</li> <li>➤ Conflict of interest in the process of identification and selection of boilers for baseline inventory</li> <li>➤ Difficulty in identifying suitable facilities in the two sectors to carry out pilot monitoring programmes</li> </ul>

Interventions	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
	performed (at least 1 fly ash sample and 1 flue gas sample per monitoring campaign)		
<b>Outcome 4: Established regional coordination of developing human resources</b>			
<b>Output 4.1: Adequate capacity in BAT and BEP built through training programs including regular curricula for graduates and government officials and through technical in-plant training for boiler operators of private and public sectors</b>			
<p><i>Activity 4.1.1:</i> Identify relevant institutions in the energy sector that are able to provide training in the boiler sector.</p> <p><i>Activity 4.1.2:</i> Training of trainers including development of university curricula on environmentally sound boiler technologies.</p> <p><i>Activity 4.1.3:</i> Assess training needs and identify required training programs related to BAT and BEP.</p> <p><i>Activity 4.1.4:</i> Carry out different types of targeted training programs for concerned government officials and technical personnel of private and public sectors.</p>	<ul style="list-style-type: none"> <li>➤ At least 2 training institutions in ESEA region for the boiler sector</li> <li>➤ At least 12 training courses and at least 40 trained staff</li> <li>➤ At least 6 universities that introduce new curricula</li> <li>➤ In-plant training materials</li> </ul>	<ul style="list-style-type: none"> <li>➤ Reports on training courses</li> <li>➤ Effectiveness reports of curricula</li> </ul>	<ul style="list-style-type: none"> <li>➤ Industry involvement secured</li> <li>➤ Newly trained graduates remain in the sector</li> <li>➤ Training not fully enforced due to lack of relevant institutions</li> </ul>
<b>Output 4.2: Awareness raising campaigns for specific target groups such as government policy makers, community leaders, managers of state owned industries and owners of private industries, educational institutions and for the public at large</b>			
<p><i>Activity 4.2.1:</i> Identify target groups according to their involvement in the boiler sector.</p> <p><i>Activity 4.2.2:</i> Produce awareness raising materials for each target group and information materials for the public at large.</p> <p><i>Activity 4.2.3:</i> Carry out regular awareness raising campaigns.</p>	<ul style="list-style-type: none"> <li>➤ At least two (2) targeted awareness raising campaigns in each participating country</li> <li>➤ Awareness raising campaign materials produced in local language</li> </ul>	<ul style="list-style-type: none"> <li>➤ Reports on awareness campaigns</li> </ul>	<ul style="list-style-type: none"> <li>➤ Specifically targeted groups and public at large actively participate</li> </ul>



Interventions	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<b>Outcome 5: Adequate capacity in sampling and analysis of UP-POPs</b>			
<b>Output 5.1: Adequate regional capacity created by strengthening national and regional centers of excellence (national laboratories, private laboratories) in monitoring and assessment, specifically in sampling, analysis, and reporting of UP-POPs</b>			
<p><i>Activity 5.1.1:</i> Review all main international guidance documents on POPs monitoring.</p> <p><i>Activity 5.1.2:</i> Produce summary of the monitoring guidance documents for adoption and use in the ESEA region.</p> <p><i>Activity 5.1.3:</i> Survey existing monitoring capacity in the ESEA region.</p> <p><i>Activity 5.1.4:</i> Carry out training in sampling;</p> <p><i>Activity 5.1.5:</i> Carry out training in analysis;</p> <p><i>Activity 5.1.6:</i> Set up and carry out pilot monitoring programmes for a few selected boiler types at power generation and industry sectors.</p>	<ul style="list-style-type: none"> <li>➤ At least two (2) certified monitoring laboratories in the region</li> <li>➤ Two (2) regional training courses in monitoring</li> <li>➤ At least 2-3 technicians trained in sampling and analytical testing</li> </ul>	<ul style="list-style-type: none"> <li>➤ Certification reports</li> <li>➤ Training course reports</li> <li>➤ Sampling and analytical records</li> <li>➤ Pilot monitoring programme reports</li> </ul>	<ul style="list-style-type: none"> <li>➤ National and regional laboratories actively cooperate</li> <li>➤ Regional certified laboratories providing training programs</li> <li>➤ Participating countries agree in identifying pilot monitoring programmes based on common interest</li> <li>➤ Staff is inadequately skilled in sampling and analysis of POPs</li> <li>➤ Laboratory capacity building resources are inadequate to accomplish project monitoring tasks</li> <li>➤ Difficulty in identifying suitable facilities in the two sectors to carry out pilot monitoring programmes</li> <li>➤ Technical staff participating in the monitoring campaigns will be excessively exposed to harmful POP-contaminated waste</li> </ul>
<b>Output 5.2: Promotion of technology transfer and investment by identification and implementation of innovative mechanisms for PPPs</b>			
<p><i>Activity 5.2.1:</i> Identifying economic incentives to create enabling environment for innovative PPP mechanisms.</p> <p><i>Activity 5.2.2:</i> Implement incentives for promotion technology transfer and investment through PPP.</p>	<ul style="list-style-type: none"> <li>➤ Number of participating countries that introduce PPP incentives</li> </ul>	<ul style="list-style-type: none"> <li>➤ Case studies on PPPs</li> </ul>	<ul style="list-style-type: none"> <li>➤ Active participation of private sector</li> <li>➤ Lack of private sector interest in SMEs</li> </ul>

<i>Interventions</i>	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<b>Outcome 6: Established project management office, stakeholder partnerships, and relevant meetings</b>			
<b><i>Output 6.1: Project management structure established</i></b>			
<p><i>Activity 6.1.1:</i> Establish the Regional Forum Board (FB) and Regional Sector Technical Committee (RSTC) and appoint regional project coordinator.</p> <p><i>Activity 6.1.2:</i> Establish Regional Coordination and National Coordination Units (R/NCUs).</p> <p><i>Activity 6.1.3:</i> Recruit the Regional Coordinator (RC), National Project Managers (NPMs) and technical experts to constitute.</p> <p><i>Activity 6.1.4:</i> Establish the local project management offices in the participating countries.</p>	<ul style="list-style-type: none"> <li>➤ FB and RSTC established and regional project coordinator identified.</li> <li>➤ RCUs and NCUs established and staffed</li> <li>➤ PET established and RC, NPMs and experts recruited</li> </ul>	<ul style="list-style-type: none"> <li>➤ List of FB membership</li> <li>➤ List of RCUs and NCUs membership</li> <li>➤ PET members</li> <li>➤ Terms of References for experts, copy of appointment notice</li> </ul>	<ul style="list-style-type: none"> <li>➤ Changes in project input prices and exchange rates may increase project costs</li> <li>➤ Delays in project implementation and low quality performance</li> </ul>
<i>Output 6.2: M&amp;E framework of the project established</i>			

<p><i>Activity 6.2.1:</i> Hold project Inception Workshop.</p> <p><i>Activity 6.2.2:</i> Prepare Inception Report</p> <p><i>Activity 6.2.3:</i> Measure impact indicators on an annual basis.</p> <p><i>Activity 6.2.4:</i> Prepare Annual Project Reports and Project Implementation Reports</p> <p><i>Activity 6.2.5:</i> Hold annual RSTC meetings.</p> <p><i>Activity 6.2.6:</i> Hold annual Tripartite Review meetings.</p> <p><i>Activity 6.2.7:</i> Carry out mid-term external evaluation</p> <p><i>Activity 6.2.8:</i> Carry out annual project financial audits</p> <p><i>Activity 6.2.9:</i> Carry out annual visits to selected field sites</p> <p><i>Activity 6.2.10:</i> Establish a project management information system (MIS) including project website to disseminate information to the stakeholders.</p>	<ul style="list-style-type: none"> <li>➤ Inception Workshop held</li> <li>➤ Inception Workshop report submitted</li> <li>➤ Updated impact indicators</li> <li>➤ Financial audit completed</li> <li>➤ Annual reports and PIRs completed</li> <li>➤ Annual RSTC and TPR meetings held</li> <li>➤ Mid-term evaluation completed</li> <li>➤ Annual financial audits conducted</li> <li>➤ Annual visits carried out</li> <li>➤ Project MIS established</li> <li>➤ Final external evaluation conducted</li> <li>➤ Project Terminal Report completed</li> </ul>	<ul style="list-style-type: none"> <li>➤ Monitoring reports</li> <li>➤ Inception report</li> <li>➤ Progress Reports</li> <li>➤ Copy of audit reports</li> <li>➤ Copies of annual reports and PIRs</li> <li>➤ RSTC meetings reports</li> <li>➤ TPR meeting proceedings</li> <li>➤ Copy of mid-term evaluation report</li> <li>➤ Evaluation of annual visits</li> <li>➤ Website in operation</li> <li>➤ Copy of final external evaluation report</li> <li>➤ Copy of project terminal report</li> </ul>	<ul style="list-style-type: none"> <li>➤ Various ministries of participating countries agree on and support the project.</li> <li>➤ Delays in project implementation and low quality performance.</li> </ul>
<i>Interventions</i>	Objectively Verifiable Indicators	Sources of Verification	Assumptions and Risks
<p><i>Activity 6.2.11:</i> Carry out final external evaluation</p> <p><i>Activity 6.2.12:</i> Complete project terminal report</p>	<ul style="list-style-type: none"> <li>➤</li> </ul>	<ul style="list-style-type: none"> <li>➤</li> </ul>	<ul style="list-style-type: none"> <li>➤</li> </ul>