INDEPENDENT EVALUATION UNIT
OFFICE OF EVALUATION AND INTERNAL OVERSIGHT

INDEPENDENT TERMINAL EVALUATION

Lao People’s Democratic Republic
PCB Management and Disposal at the Energy Sector

UNIDO Project ID: 140157
GEF ID: 4782
Acknowledgements

The international consultant, Ms. Suman Lederer, extends her thanks to the representatives of the Ministry of Natural Resources and Environment, Électricité du Lao, Natural Resource and Environment Research Institute/MONRE, National University of Laos and national experts, as well as UNIDO Field Office and UNIDO Project Manager for their time they dedicated to the virtual meetings for technical clarifications and other evaluation questions, as well as for providing their valuable feedback on project activities. All the information readily made available to the evaluator by all people interviewed contributed to the work of the evaluation greatly. This evaluation was carried out remotely; therefore, the evaluator thanks all the interviewed stakeholders for their willingness, patience and support to participate and contribute to the evaluation. Last, but not least, the evaluator would like to thank the National Project Coordinator for his enormous support in conducting the evaluation by clarifying questions and following up with stakeholders.
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<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>BAT</td>
<td>Best available techniques</td>
</tr>
<tr>
<td>BTOMR</td>
<td>Back-to-office-mission-report</td>
</tr>
<tr>
<td>EDL</td>
<td>Electricité du Laos</td>
</tr>
<tr>
<td>ESM</td>
<td>Environmentally Sound Management</td>
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<tr>
<td>GEF</td>
<td>Global Environment Facility</td>
</tr>
<tr>
<td>IA</td>
<td>Implementing Agency</td>
</tr>
<tr>
<td>ISID</td>
<td>Inclusive and Sustainable Industrial Development</td>
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<tr>
<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
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<tr>
<td>MONRE</td>
<td>Ministry of Natural Resources and Environment</td>
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<tr>
<td>MSP</td>
<td>Medium-size Project</td>
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<td>MTE</td>
<td>Mid-term Evaluation</td>
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<td>NRER</td>
<td>National Resource and Environment Research Institute</td>
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<td>NIP</td>
<td>National Implementation Plan</td>
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<tr>
<td>NPC</td>
<td>National Project Coordinator</td>
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<tr>
<td>PCBs</td>
<td>Polychlorinated biphenyls</td>
</tr>
<tr>
<td>PCD</td>
<td>Pollution Control Department of the MONRE</td>
</tr>
<tr>
<td>PIF</td>
<td>Project Identification Form</td>
</tr>
<tr>
<td>PIR</td>
<td>Project Implementation Review</td>
</tr>
<tr>
<td>PM</td>
<td>Project Manager</td>
</tr>
<tr>
<td>PMU</td>
<td>Project Management Unit</td>
</tr>
<tr>
<td>POPs</td>
<td>Persistent Organic Pollutants</td>
</tr>
<tr>
<td>ppm</td>
<td>Parts per million</td>
</tr>
<tr>
<td>PSC</td>
<td>Project Steering Committee</td>
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<tr>
<td>SC</td>
<td>Stockholm Convention</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard Operating Procedures</td>
</tr>
<tr>
<td>TOR</td>
<td>Terms of Reference</td>
</tr>
<tr>
<td>UNIDO</td>
<td>United Nations Industrial Development Organization</td>
</tr>
</tbody>
</table>
## Glossary of evaluation terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td>The situation, prior to an intervention, against which progress can be assessed.</td>
</tr>
<tr>
<td>Effect</td>
<td>Intended or unintended change due directly or indirectly to an intervention.</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>The extent to which the objectives of a development intervention were or are expected to be achieved.</td>
</tr>
<tr>
<td>Impact</td>
<td>Positive and negative, primary and secondary, intended and non-intended, directly and indirectly, long term effects produced by a development intervention.</td>
</tr>
<tr>
<td>Indicator</td>
<td>Quantitative or qualitative factor or variable that provides a simple and reliable means to measure achievement, to reflect the changes connected to an intervention, or to help assess the performance of a development actor. Means by which a change will be measured.</td>
</tr>
<tr>
<td>Intervention</td>
<td>An external action to assist a national effort to achieve specific development goals.</td>
</tr>
<tr>
<td>Lessons learned</td>
<td>Generalizations based on evaluation experiences that abstract from specific to broader circumstances.</td>
</tr>
<tr>
<td>Logframe (logical framework approach)</td>
<td>Management tool used to guide the planning, implementation and evaluation of an intervention. System based on MBO (management by objectives) also called RBM (results-based management) principles.</td>
</tr>
<tr>
<td>Outcome</td>
<td>The achieved or likely short-term and medium-term effects of an intervention’s outputs.</td>
</tr>
<tr>
<td>Outputs</td>
<td>The products, capital goods and services which result from a development intervention; may also include changes resulting from the intervention which are relevant to the achievement of outcomes.</td>
</tr>
<tr>
<td>Recommendations</td>
<td>Proposals aimed at enhancing the effectiveness, quality, or efficiency of a development intervention; at redesigning the objectives; and/or at the reallocation of resources. Recommendations should be linked to conclusions.</td>
</tr>
</tbody>
</table>
| **Relevance** | The extent to which the objectives of a development intervention are consistent with beneficiaries’ requirements, country needs, global priorities and partners’ and donor's policies.  
Note: Retrospectively, the question of relevance often becomes a question as to whether the objectives of an intervention or its design are still appropriate given changed circumstances. |
| **Results-Based Management (RBM)** | A management strategy focusing on performance and achievement of outputs, outcomes and impacts. |
| **Review** | An assessment of the performance of an intervention, periodically or on an ad hoc basis.  
Note: Frequently “evaluation” is used for a more comprehensive and/or more in-depth assessment than “review”. Reviews tend to emphasize operational aspects. Sometimes the terms “review” and “evaluation” are used as synonyms. |
| **Risks** | Factors, normally outside the scope of an intervention, which may affect the achievement of an intervention's objectives. |
| **Sustainability** | The continuation of benefits from an intervention, after the development assistance has been completed. The probability of continued long-term benefits. The resilience to risk of the net benefit flows over time. |
| **Target group** | The specific individuals or organizations for whose benefit an intervention is undertaken. |
| **Theory of change** | Theory of change or programme theory is similar to a logic model, but includes key assumptions behind the causal relationships and sometimes the major factors (internal and external to the intervention) likely to influence the outcomes. |
1. Executive Summary

Introduction
The project “PCB Management and Disposal at the Energy Sector”, focuses on managing and disposing of polychlorinated biphenyls (PCBs) in the energy sector of Lao PDR. The evaluation examined the achieved results and overall effectiveness of the project, as well as its contribution to development outcomes and impact. It assessed the project’s design, results framework, relevance, coherence, efficiency, and gender mainstreaming.

Relevance
The project demonstrated a high degree of relevance to the needs and priorities of Lao PDR, as well as global environmental concerns. PCBs are hazardous substances that pose significant risks to human health and the environment. By addressing the management and disposal of PCBs in the energy sector, the project aligned with the national agenda for environmental protection and sustainable development.

Furthermore, the project’s relevance was evident in its alignment with the country’s polices, strategies and legal framework related to the environmental management and pollution control. It complemented the efforts of the Ministry of Natural Resources and Environment (MONRE) and other relevant stakeholders in addressing the changeless posed by PCBs.

The overall rating for relevance is highly satisfactory.

Efficiency
Project started in May 2014 with a project duration of 48 months; it has been extended 4 times, with the latest extension till June 2023, thus going 3 years beyond the initially foreseen time, even after deducting 2 years of COVID-19 pandemic. Reasons are reported to have been due to facing challenges during the inventory, restructuring of the MONRE and non-arrival of mobile decontamination unit by SETCAR into the country, the reason for this not being known, as SETCAR was reported to not responding to any queries regarding this.

The overall rating for efficiency is moderately unsatisfactory.

Effectiveness
From 11 Outputs, 7 have been achieved; one is considered to be completed for the project and 3 are partially achieved. The country has legislation related to POPs, and the MONRE has approved an official Agreement on Management and Monitoring of PCB-decontamination and Disposal. Capacity-building has been carried out, the NRER/MONRE was involved in inventory and preparing database, course material on POPs, including PCBs, is being taught at the National University of Lao; 1,000 oil samples from transformers at EDL have been taken, SETCAR’s mobile dechlorination technology has been selected after carrying out an international tendering process, awareness-raising has been carried out to some extent.

The overall rating for effectiveness is moderately satisfactory and overall project objective is partially achieved.

Likelihood of sustainability of project results
Financial, socio-political, institutional framework and governance and environmental risks are considered to be low. Knowledge transfer is reported to being carried out at EDL, and at the National University of Lao; the arrival of SETCAR with its mobile dechlorination unit was awaited
at the time of the TE; legislation on POPs exists in the country, and has been complemented with Guidance on ESM of PCBs and officially approved document on PCB-disposal.

Sustainability of project results is considered to be likely.

**Gender mainstreaming**

Participation of both genders has taken place during project meetings and workshops; both genders are involved in different project activities; a brochure for awareness-raising was prepared especially on effects of PCBs on children and pregnant women; no issues regarding gender were reported to the evaluation.

The overall rating for gender is highly satisfactory.

The overall rating for the project is moderately satisfactory.

**Recommendations**

**To UNIDO:**

- Complete sampling of the foreseen 1,000 transformers and prepare shorter version of guidance document on ESM of PCBs in the form of small booklet in Laotian, for easy reference for employees working in transformer repair and maintenance;
- Remind SETCAR of its obligation to carry out and complete the PCB-disposal activity in Lao, and to at least inform stakeholders about status of entry of equipment into Lao as well as detailed workplan;
- Ensure to hold PSC meetings at least once a year, compile gender-disaggregated data of project activities and ensure correct and detailed preparation of reports on awareness-raising activities.

**For EDL:**

- Continue training and transfer of knowledge on PCBs and ESM of PCBs for employees especially in transformer repair and maintenance outside Vientiane;

**For MONRE:**

- Remind the National University of Lao to extend the curriculum on POPs when the current curriculum is up for update, around 2025;
- Ensure that training and knowledge transfer on PCBs, alongside the testing of transformer oil is continued at EDL.

## 2. Evaluation objectives, methodology and process

### 2.1 Objectives

This report presents the findings of the independent terminal evaluation (TE) of the UNIDO-GEF project “PCB Management and Disposal at the Energy Sector”, GEF ID: 4782, UNIDO ID: 140157, in Lao People’s Democratic Republic (Lao PDR). The terminal evaluation was conducted between 01 August and 31 December 2022, by an international evaluation consultant, Ms. Suman Lederer.
The TE was a part of a Cluster Evaluation of 8 PCB projects; it was conducted in line with the GEF\textsuperscript{1} evaluation policy, the UNIDO\textsuperscript{2} evaluation policy and as mentioned in the project document. It was guided by the Terms of Reference (TOR) for the PCB Cluster Evaluation. It covers all the components as well as the full duration of the project, from May 2014 till 31 January 2023.

According to the TOR of the PCB Cluster Evaluation, the purpose of the TE is to independently assess the likelihood of sustainability of project results and impact, including its contribution to capacity development and achievement of global environmental benefit goals.

The TE had the following objectives:

- Assess the project performance in terms of relevance, coherence, effectiveness, efficiency, sustainability and progress to impact;
- Develop a series of findings, lessons and recommendations for enhancing the design of new and implementation of ongoing projects by UNIDO; and
- Contribute to organizational learning by UNIDO and its counterparts while being forward-looking, thus also guiding the development of new similar projects.

The TE assessed the project based on the evaluation criteria of relevance, coherence, effectiveness, efficiency, likelihood of sustainability, project management as well as cross-cutting issues such as gender.

Intended users of the TE are the project manager (PM) and project management team (PMT), project partners, government of Lao PDR, other organizations/institutions in Lao cooperating with UNIDO, the GEF, and UNIDO management and staff at UNIDO Headquarters (HQ).

\subsection*{2.2 Methodology and process}

The TE was carried out between 01 August and 31 December 2022 and covers the whole duration of the project from its commencement in May 2014 – 31 January 2023. The findings of the TE are based on document review and interviews with project stakeholders. The evaluation made efforts to speak with as many stakeholders as possible, amongst others, representatives of the NRER/MONRE, NPC at the MONRE, EDL, national experts and UNIDO.

The evaluation followed the evaluation criteria mentioned in the TOR of the Cluster Evaluation, relevance, effectiveness and efficiency, likelihood of sustainability of project results and cross-cutting issues. The evaluation parameters have been operationalized into an evaluation matrix.

Being a part of the PCB Cluster Evaluation, an evaluation mission was not planned for all 8 projects, including Lao PDR. Therefore, evaluation meetings were conducted remotely, via Zoom. Information received has been validated to the extent possible, via document review and stakeholder meetings. Findings, conclusions and recommendations are based on qualitative analysis of data received.

\subsection*{2.3 Information sources and availability of information}

For assessing the project, the TE referred to the following sources:

- **Document review:** a comprehensive desk review of the documents provided to the evaluation, inter alia, inception report, Project Information Reports (PIRs), meeting

reports, feasibility studies, expert reports, other output documents. All the documents were provided by the UNIDO PM and PMT in a timely manner;

- **Interviews:** Questionnaires had been prepared, for different types of stakeholders, that is, for the NPC, for PCB owners, for national experts, UNIDO FO, etc. Interviews were semi-structured; during the stakeholder meetings, depending on the response and information received, the evaluator asked additional questions to clarify further points and receive further necessary information. Annex I provides a list of persons consulted via Zoom.

### 2.4 Limitations of the evaluation

- **No site visit:** An evaluation mission of the international evaluation consultant to Lao to visit the project sites of EDL and key stakeholder organizations was not planned, as the project in Lao PDR was one of the eight projects in a cluster evaluation of UNIDO’s PCB projects. The evaluation made all possible efforts to conduct as many web-based interviews as possible, and reviewed all the available documents to ensure the validity of the findings of the TE to the maximum extent possible.

### 3. Country and project background

#### 3.1 Fact sheet

<table>
<thead>
<tr>
<th>Project Title</th>
<th>PCB Management and Disposal at the Energy Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIDO SAP ID / GEF ID</td>
<td>140157 / 4782</td>
</tr>
<tr>
<td>Region / Country</td>
<td>Asia and Pacific / Lao PDR</td>
</tr>
<tr>
<td>Project approved for implementation by GEF</td>
<td>15 April 2014</td>
</tr>
<tr>
<td>Project implementation start date (First PAD issuance date)</td>
<td>May 2014</td>
</tr>
<tr>
<td>Expected implementation end date (as per CEO endorsement document)</td>
<td>30 May 2018</td>
</tr>
<tr>
<td>Revised expected implementation end date (if applicable)</td>
<td>June 2023 (4 extensions)</td>
</tr>
<tr>
<td>Donor(s)</td>
<td>GEF</td>
</tr>
<tr>
<td>EA/MSP/FSP</td>
<td>Medium-size project (MSP)</td>
</tr>
<tr>
<td>GEF project grant (excluding PPG, in USD)</td>
<td>1,400,000</td>
</tr>
<tr>
<td>GEF PPG (if applicable, in USD)</td>
<td>58,000</td>
</tr>
<tr>
<td>UNIDO co-financing (in USD)</td>
<td>100,000 cash + in-kind</td>
</tr>
<tr>
<td>Total co-financing at CEO endorsement (in USD)</td>
<td>5,600,000 cash + in-kind</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Total project cost (excluding PPG and agency support cost, in USD; i.e., GEF project grant + total co-financing at CEO endorsement)</td>
<td>7,000,000</td>
</tr>
<tr>
<td>Mid-term evaluation</td>
<td>March-April 2017</td>
</tr>
<tr>
<td>Terminal evaluation</td>
<td>01 August – 31 December 2022</td>
</tr>
</tbody>
</table>

Source: project document, TOR.

### 3.2 Country and Project Background

#### National Implementation Plan

Lao People’s Democratic Republic signed the Stockholm Convention on Persistent Organic Pollutants (POPs) on 03 May 2002 and ratified it on 28 June 2006. It submitted its National Implementation Plan (NIP) on 08 November 2010. According to the NIP, Polychlorinated biphenyls (PCBs) and equipment containing PCBs present a serious problem for Laos. During the preparation of the NIP, an inventory was carried out between January to August 2005 throughout 6 main provinces of Laos by the PCBs task team. In 2015, Lao PDR, with the technical support of UNIDO (SAP ID 120208), updated the NIP to and issued the Updated NIP in January 2016 [Lao PDR NIP Update, March 2016]. The updated Action Plan entailed 7 main objectives for the environmentally sound management and disposal of PCBs.

#### 3.3 Project Description

Overall project objective is to facilitate the implementation of the Stockholm Convention in respect of sound management of PCBs and PCB-containing equipment and wastes including development of specific legislations, implementation of environmentally sound management practices, inventory, testing, labeling of at least 1000 electrical equipment and disposal/decontamination of 250 tonnes of PCB-containing equipment and wastes.

Main project technical components, expected outcomes and outputs, besides project management (including monitoring and evaluation (M&E)), are as follows:

<table>
<thead>
<tr>
<th>Component 1: Policy, legal framework and institutional capacity</th>
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<tbody>
<tr>
<td>Expected Outcome 1: Strengthening of institutional, legislation, policy framework and enforcement for management of PCBs</td>
</tr>
<tr>
<td>Outputs:</td>
</tr>
<tr>
<td>1.1 Specific policy/legal framework drafted, adjusted and enacted in accordance with the requirements of the SC</td>
</tr>
</tbody>
</table>

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3 The NIP was prepared together with UNIDO’s support (project no. GFLAO02016), and funded by the GEF. Further, the World Bank, the Governments of Canada, Japan, Lao PDR and Switzerland, as well as the United Nations Institute for Training and Research (UNITAR), the Switzerland Green Cross and the Hatfield Consultants provided their technical and financial support to the development of the NIP document [NIP, Lao PDR, July 2010].
1.2 Strategy for enforcement developed and implemented

1.3 Technical and human capacities for management of PCBs strengthened

**Component 2:** Technology transfer for sound management of PCBs in energy sector

**Expected Outcome 2:** Application of BATs in all stages of PCB waste management and disposal

**Outputs:**

| 2.1 | Detailed inventory and labelling of at least 1,000 transformers undertaken |
| 2.2 | PCB phase-out plan developed and implemented |
| 2.3 | Technical options selected for the safe disposal of 250 tons of PCB-containing equipment and wastes |
| 2.4 | Operation of a decontamination BAT sustained after the termination of the project |

**Component 3:** Public awareness-raising, education, dissemination of project results

**Expected Outcome 3:** Increased public awareness on issues concerning PCBs impact on health and environment, and reduced number of accidents of unintentionally contacts of people with PCB-contaminated materials

**Outputs:**

| 3.1 | Assessment of health and environmental impact issues, including management of public and occupational safety issues |
| 3.2 | Stakeholder engagement including NGOs and civil society established |
| 3.3 | Training and educational material developed |
| 3.4 | Awareness raising programmes implemented |

Source: project document.

**Project stakeholders:**

Main project stakeholders, according to the project document, are:

**UNIDO** is the Implementing Agency for the project.
**MONRE:** The Ministry of Natural Resources and Environment is the Executing Agency (EA) for the project, to ensure full coordination and timely execution of the project, and execute its day-to-day activities of the project.

**NRERI:** National Resources and Environment Research Institute – was involved in inventory and sampling and has prepared the database for inventory data.

**EDL:** Électricité du Laos, main electrical company and owner/operator of most transformers in the country and the principal technical partner of the project.

**Project Steering Committee (PSC):** The National POPs Steering Committee, chaired by the Vice-Minister of MONRE was to serve as the Project Steering Committee and decision-making body of the project.

**NPC:** A National Project Coordinator to work in close cooperation with the relevant departments of the MONRE and the project manager (PM), to ensure adherence to the workplan, timely and complete execution of all technical aspects of the project, as well as monitoring of the co-finance commitments of the project by the counterpart. The NPC has been assigned by the MONRE.

**NCPC:** UNIDO National Cleaner Production Center was to be a technical/executing partner of the MONRE.

No involvement of the NCPC in any project activities was mentioned to the evaluation.

**Other stakeholders:**
Ministry of Energy and Mines, Ministry of Public Health, NGOs, Ministry of Agriculture and Forestry, Ministries of Industry and Handicrafts, Ministry of Communication, Transport, Post and Construction, Ministries of Defense and Finance, Ministry of Foreign Affairs, Ministry of Culture and Information: some of these stakeholders have attended some of the PSC meetings.

4. **Theory of Change**

As a theory of change (TOC) was not a requirement at the time of project formulation, a TOC is not included in the project document. A TOC was reconstructed during the TE, to understand the logic chain of the project as well as the series of results that are expected to lead to the expected impacts. It illustrates, in a simplified manner, how the project intends to (contribute to) achieving impact, that is, the pathway to impact, and which assumptions and drivers (need to) come to work, in order for the project results to contribute to achieving impact. The TOC illustrates the project support – Outputs, expected Outcomes, Intermediate State I, Intermediate State II and the expected Impact.

Drivers are obligation to Stockholm Convention, health and environment concerns and incentives. For the achievement of the Expected Outcomes, Intermediate State I and Intermediate State II, it is important that the Assumptions hold true, that is, authorities have adequate resources for enforcement and monitoring; PCB-owners understand, have resources and continue; and Government provides support.

Intermediate State I is outside the control of the project. It falls under the responsibility of the country and key in-country stakeholder institutions, that authorities enforce national regulations

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4 Note of the evaluation: Outputs and Outcomes might be defined differently in different International Organizations. For the purpose of this evaluation, in the TOC, the terms – Outputs and Outcomes – are as defined in the Glossary of terms of the evaluation report.
on PCBs, EDL and authorities continue testing of transformer oil, and adherence to ESM of PCBs, especially at EDL.

At the time of the TE, majority of the Outputs had been achieved, namely, 1.1, 1.2, 1.3, 2.3, 3.1, 3.2 and 3.3; Output 2.4 was completed for the project; and Outputs 2.1, 2.2 and 3.4 partially achieved. Outcome 1 was achieved; 3 partially achieved; and 2 not (yet) achieved.
Reconstructed TOC

**Expected Outcomes**

1. Strengthened policy and regulatory framework
2. Technology transfer / Sound management of PCBs in energy sector
3. Awareness raising: education; dissemination of project results

**Intermediate State I**

1. Enforcement of national regulations on PCBs by relevant authorities
2. Testing continues
3. Adherence to ESM of PCBs by all, incl people dealing with, and coming in contact with, PCB oils and PCB-contaminated equipment.

**Intermediate State II**

Elimination of PCBs

**Impact**

Human health and environmental risks from PCBs reduced / protected

**Drivers**: Obligation to Stockholm Convention; health and environment concerns; Incentives

**Assumptions**: Authorities have adequate resources for enforcement and monitoring; PCB owners understand, have resources and continue; Govt supports

---

- Project support/Outputs
  - 1.1 Policy/legal framework drafted
  - 1.2 Strategy for enforcement developed and implemented
  - 1.3 Technical and human capacity for PCB management strengthened
  - 2.1 Inventory and labelling of 1,000 transformers
  - 2.2 PCB phase-out plan developed
  - 2.3 Technical options selected for disposal of 250 MT of PCBs
  - 2.4 Sustaining of BAT after project completion
  - 3.1 Health and environmental impact assessment
  - 3.2 Stakeholder engagement established
  - 3.3 Training and education material developed
  - 3.4 Awareness-raising programmes
5. Project’s contribution to Development Results – Effectiveness and likelihood of Impact

5.1 Project’s achieved results and overall effectiveness

Achievement of outputs detailed below [document review; interview data] follows the order of Components, Outcomes and Outputs as presented in the project logical framework:

Component 1: Policy, legal framework and institutional capacity

Output 1.1: Specific policy/legal framework drafted, adjusted and enacted in accordance with the requirements of the SC

Preparation of suggestions for adapting the existing Environmental Protection Law 2012 was supported by the project, after carrying out a review of the Law; the relevant Ministry, MONRE, decided to introduce legislation related to the overarching thematic issue of persistent organic pollutants (POPs) in 2016 – No. 4, Article 68 of Chemicals Management Law No. 25/NA. In April 2018, PCB was included as hazardous chemical in the Chemicals Management Law, with a special regulation No. 038/DoI MoIC, thus specifying PCBs to be handled as hazardous chemical. Both the 2016-2025 National Environment Strategy as well as in the Action Plan 2016-2020 have included POPs.

This output has been achieved.

Output 1.2: Strategy for enforcement developed and implemented

Beginning of 2021, the Minister at MONRE released an official Agreement on Management and Monitoring of PCB Decontamination and Disposal for Electrical Transformers. It defines PCBs, is valid for all individuals and entities in Lao PDR and entails information on all issues related to environmentally sound management (ESM) of PCBs, that is, inventory, storage and transportation, decontamination and disposal and the obligations of transformer and PCB-contaminated waste owner. As explained by key stakeholders, ESM of PCBs is in the process of being implemented at the EDL, the main transformer, and thus, PCB-owner in the country.

This output has been achieved.

Output 1.3: Technical and human capacities for management of PCBs strengthened

A training center is reported to have been established at the headquarter of EDL. As elaborated by EDL, it delivers training to staff on different issues relevant to their work at EDL, and has confirmed providing, also in future, information on PCBs to its employees, including persons working in repair and maintenance of transformers. As an evaluation mission did not take place, the training space, or any of the repair and maintenance workshops at any substations could not be physically evidenced by the evaluation, which is deemed to be crucial for any positive impact.

An international expert has carried out training of EDL staff, including plant operators handling transformers and capacitors and other equipment, on Standard Operating Procedures for the ‘Management and Handling of PCB-contaminated Equipment and Materials’, and included topics such as – identification and sampling of PCB-contaminated equipment and materials; analysis and labelling of PCB-contaminated equipment and materials.
equipment and materials; handling of PCB-contaminated equipment and materials/MSDS, PPE and draining of PCB-contaminated transformers; and environmentally sound management and disposal systems for PCB wastes.

Furthermore, in order to transfer knowledge about PCBs, under the overarching umbrella topic of POPs, a national expert from the National University of Laos prepared course material, which has been confirmed by interviewed stakeholders to being taught at the National University of Laos, since 2020, both in Bachelor and Master Degree Programmes,

- Bachelor Degree Programmes – Chemistry; and Environmental Management;
- Master Degree Programme – Chemistry – within the courses Environmental Management and Law of Environmental Protection.

Course material, in Laotian language, reviewed and approved by the Chemistry Department of the University and the MONRE, includes topics related to Stockholm Convention and POPs, including PCBs – general information, identification, sources, classification, analysis and management, under the overall topics of waste management and hazardous waste management and was provided to the evaluation. It was reported to the evaluation, that initially some students were interested in pursuing their thesis on topics related to PCBs; however, as practical research in the laboratory is a requirement, and owing to lack of financial resources related to substances required for the research work, they could not do it.

Current curriculum is reported to be valid till 2025 and stakeholders have pointed out the necessity to continue with these topics also thereafter.

The involved persons from the Chemistry Department have expressed their strong wish to accompany and observe the decontamination process, when it commences, as this would enable them to gain practical experience which is considered to be extremely valuable.

This output has been achieved.

Component 2: Technology transfer for sound management of PCBs in energy sector.

Output 2.1: Detailed inventory and labelling of at least 1000 transformers undertaken.

Project has partnered with the Natural Resources and Environment Research Institute\(^5\) (NRER) of the MONRE. Already in 2015, the laboratory at the NRER has been equipped with an L2000DX by the project for field screening. Standard Operating Procedures (SOP) for identifying, labelling, tracking and analysis was drafted. The laboratory adapted the User Guideline of the equipment to the SOP of the laboratory to carry out the analysis. As elaborated by a national expert, the PCB inventory forms from the Stockholm Convention, prepared by UNEP, were translated

\(^5\) … it has a focus on wet chemistry in the laboratory – heavy metal and other water parameters. The laboratory was not set up for the purpose of the project and existed already under the MONRE. Since 2016, it has the international ISO ICE 10725 certification. [MTE Report, 2017].
into Laotian language for usage. Inventory teams consisting of persons from the MONRE and the EDL were trained on carrying out sampling in line with the SOP.

A list of transformers for sampling was provided by EDL; 671 transformers were selected for sampling, from a total of 1,000 which were foreseen in the project document. From this, according to interview data, 139 samples demonstrated values higher than 50 ppm, most of them reported to be distribution transformers in the capital Vientiane and 4 power transformers in four locations in the Northern and Southern regions.

Challenges reported during the sampling process were accessing the transformers in terms of region and height, turning off the transformers, and monsoon.

This output is not completely achieved.

Output 2.2: PCB phase-out plan developed and accepted for implementation

According to interviewed stakeholders, after carrying out sampling and identification of PCB-contaminated equipment and oils, information about the transformers was compiled into a database, including inter alia, serial numbers, positioning, year of manufacture, trademark. This database has been provided to the Pollution Control and Monitoring Department of the MONRE.

An overview of disposal activities has been prepared, but not a detailed phase-out plan. The main stakeholders, EDL, was involved in the inventory process and is aware of the inventory results, as well as the disposal process. A detailed workplan is awaited from the disposal service provider SETCAR.

As sampling has taken place on pre-selected transformers, it is not confirmed if all the PCB-contaminated transformers have been covered.

This output is considered to be partially achieved.

Output 2.3: Technical options selected for the safe disposal of 250 tonnes of PCB-containing equipment and wastes

Based on inventory data, UNIDO released a Request for Proposals in mid-2019 and a contract was signed with SETCAR S.A., Romania, hereafter SETCAR, beginning of March 2020, for the decontamination/disposal of PCBs and regeneration of oil, for a total of 139 transformers, total transformer weight 406,487 MT and oil volume 110,371 L, using a non-combustion PCB-dechlorination system.

In this context, stakeholders expressed their deep concern about the negative implications of the outbreak of the COVID-19 pandemic exactly at this time, on the project. Due to the pandemic, restrictions were put into place all over the world, including in Lao, on international travel and entry into the country. Status as at 31 January 2023 was that SETCAR equipment was in Vietnam and was supposedly awaiting entry into Lao; however, due to lack of responses from SETCAR, even in-country stakeholders did not have further information on the reasons for the delay in entering the country.

This output has been achieved.

Output 2.4: Operation of the decontamination BAT sustained after the termination of the project
A BAT for PCB-disposal does not exist in the country. According to the contract with SETCAR, it will bring its own decontamination and oil-regeneration equipment to Lao, carry out the work and then take back the equipment. EDL has prepared a storage facility to bring in PCB-contaminated oil and store, till disposal activities commence.

At the time of the TE, it was not clear, if testing for PCBs is planned to be continued after project completion. In view of possible cross-contamination which may have taken place, or selling of old oils, or re-using old transformers, this is considered to be an important activity.

After ensuring technical capacity at EDL and the NRER to continue testing after project completion, this output can be considered to be completed for the project.

**Component 3: Public awareness raising, education, dissemination of project results**

**Output 3.1: Assessment of health and environmental impact issues, including management of public and occupational safety issues**

A ‘Report on the Health and Environmental Impact of PCBs in Lao PDR’ was prepared by a national expert in 2017. Besides an introduction on PCBs and the estimated status of PCBs in Lao PDR, it entails information on the toxicity of PCBs and effects on human health and environmental impact. It is a desk review based on existing literature, as primary data collection to prepare the report was not foreseen or included in the project. The report also refers to the "special course on PCBs" being taught at the Faculty of Chemistry of the National University of Lao. Further, as elaborated under output 1.3, an international expert prepared SOPs on ESM of PCBs.

This output has been achieved.

**Output 3.2: Stakeholder engagement, including NGOs and civil society established**

Project made efforts to involve different types of stakeholders in the project from the beginning; for example, according to the minutes of the 2\textsuperscript{nd} PSC meeting, it was attended by the Pollution Control Department of the MONRE, Ministry of Health, Ministry of Industry and Commerce, Public Work and Transport Institute, EDL, NRER and National University of Laos. According to interviewees, the NGO Lao Women’s Association is also invited to the PSC meetings.

This output has been achieved.

**Output 3.3: Training and educational material developed**

This has been covered under output 1.3 and is considered to be achieved.

**Output 3.4: Awareness-raising programmes implemented**

Posters and brochures have been prepared, on the effect of PCBs on human health and presented on World Environment Day, one of the posters especially for children and expectant mothers. Awareness-raising was carried out at 3 schools, with a participation of over 100 students, according to an awareness-raising report by the NPC. Awareness-raising with practical site exploratory was carried out at EDL, whereby a transformer with leak was shown to EDL staff and precautionary measures suggested. An awareness-raising workshop on ‘Guidance on PCB management and
disposal’ was conducted on 15 January 2020 in Louangphabang City, with the participation of 32 persons, which included 12 female persons.

Taking the foreseen budget into account for Outcome 3, awareness-raising activities are considered to have a potential for expansion.

This output is considered to be partially achieved.

Achievement of Outcomes:
Assessment of achievement of Outcomes, and likelihood of impact, based on the logframe of the project, is as follows:

Outcome 1: Strengthening of institutional, legislation, policy framework and enforcement for management of PCBs
Based on a review of existing legislations, an update was prepared and approved, covering the umbrella issue of POPs. To cover regulation tailored to PCBs, the MONRE approved an ‘Agreement on Management and Monitoring of PCB-decontamination and Disposal for Electrical Transformers’ as well as ‘Guidance for Management and Disposal of PCBs’; moreover, a definition of PCBs is provided in the National Environmental Standard.

This Outcome has been achieved.

Outcome 2: Application of BATs in all stages of PCB waste management and disposal
Selection of provider for carrying out decontamination has been done; SETCAR has been selected. However, due to the unexpected outbreak of the COVID-19 pandemic, SETCAR could not bring its mobile decontamination equipment into the country; at the time of the TE, the equipment was reportedly in Vietnam, at the border to Lao, and awaiting entry; the reason for not entering the country was not known.

This Outcome is not yet achieved.

Outcome 3: Increased public awareness on issues concerning PCBs impact on health and environment, and reduced number of accidents of unintentionally contacts of people with PCB-contaminated materials
Awareness-raising activities have been carried out to a limited extent and are considered to have potential for expansion. Data on number of accidents prior to intervention and post-commencement of intervention was not available.

This Outcome is partially achieved.

Overall project objective 'To facilitate the implementation of the Stockholm Convention on POPs in respect of sound management of POPs and PCB-containing equipment and wastes including development of specific legislations, implementation of environmentally sound management practices, inventory, testing, labelling of at least 1000 electrical equipment and disposal / decontamination of 250 tons of PCB-containing equipments’ is partially achieved.

Overall effectiveness is assessed to be ‘moderately satisfactory’, whereby it is to be noted that the stakeholders had made all preparations for carrying out the disposal activities, including preparing import documents for the decontamination equipment,
when COVID-19 was declared a pandemic, and travel restrictions were imposed all over the world, including in Lao PDR; and therefore, the evaluation does not see the responsibility of the delay since beginning of 2020 with any one stakeholder.

5.2 Progress towards impact

**Likelihood of Impact:**

Impact is defined as positive and negative, intended and non-intended, long-term effects produced by a development intervention. For the purposes of this terminal evaluation, the assessment of impact is based on likelihood of achievement of impact, as decontamination had not yet commenced and long-term impacts have not yet been achieved. Nonetheless, it would be crucial for EDL to continue taking oil samples and testing, for example during the maintenance of transformers.

a) **Behavioural change**

**Economic competitiveness:** EDL operates the electricity generation, transmission and distribution in the country, and is the largest owner of transformers, including the PCB-contaminated transformers. PCB-disposal of identified PCBs will be carried out and paid for by the project, without EDL paying any amount for it, besides its co-finance in the form of material, water, electricity, etc. necessary for SETCAR to carry out the disposal work.

**Environmentally sound:** No BAT for PCB-disposal existed in the country. SETCAR was contracted for this purpose, for which the company will bring in its own equipment, carry out the work and take its equipment back with it. Being a party to the Stockholm Convention, Lao is required to fulfil its obligations under it, including elimination of PCBs in the country. The country will be contributing to the environment by carrying out the PCB-disposal activity; further, EDL has confirmed transferring knowledge to its staff on ESM of PCBs, thus potentially contributing to a reduction of cross-contamination or contaminated sites.

**Socially inclusive:** As mentioned above, EDL has mentioned that it has transferred information about PCBs to its employees, including persons working in transformer repair and maintenance, thus making efforts towards health and safety of staff. The National University of Lao has included course material on POPs, including PCBs in its curriculum, and is teaching it in both Bachelor and Master Degree Programmes, thus ensuring that knowledge about POPs is transferred also to the future generations.

b) **Broader adoption**

The MONRE has approved legislation pertinent to POPs, as well as an approved definition of PCBs, including other hazardous wastes, guidance on handling and disposal of PCBs, as well as guidelines on PCB management, which are valid for all individuals and entities in the country. Moreover, course material on POPs, which also entails PCBs, has been introduced in the curriculum of the Department of Chemistry at the National University of Lao, both in Bachelor and Master Degree courses.

c) **Emergence of TOC intermediate states**

<table>
<thead>
<tr>
<th>Intermediate State</th>
<th>Findings</th>
<th>Rating</th>
</tr>
</thead>
</table>


23
<table>
<thead>
<tr>
<th>I. Enforcement of national regulations on PCBs by relevant authorities</th>
<th>According to interviewees and main transformer owner EDL, they are aware of their obligation to PCB-disposal and are awaiting the arrival of the mobile disposal unit.</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>II. Testing continues</td>
<td>This remains to be seen. 671 samples have been taken, out of a foreseen 1,000 transformers. Moreover, in order to identify cross-contamination, it would be important to continue testing.</td>
<td>MS</td>
</tr>
<tr>
<td>III. Adherence to ESM of PCBs by all, including people dealing with, and coming in contact with, PCB oils and PCB-contaminated equipment.</td>
<td>At the time of the TE, EDL has confirmed ESM of PCBs at EDL, and also having transferred information about PCBs to its employees, including persons working with transformer repair and maintenance. Nonetheless, this remains to be seen, if it is continued in an adequate manner.</td>
<td>S</td>
</tr>
</tbody>
</table>

**Drivers**

- All the drivers are considered to hold true.

**Obligation to Stockholm Convention**

- PCB-disposal has been integrated at national policy level; EDL has emphasized its commitment to the disposal of PCBs; disposal activity is yet to commence.

**Health and environment concerns**

- Interviewed stakeholders are aware of effects of PCBs; POPs, including PCBs has been included as course material at the National University of Lao; EDL has confirmed transferring information about PCBs to its employees.

**Incentives**

- Disposal costs, upto foreseen quantity in the project, that is, 250 MT will be provided by the project.

**Assumptions**

- i. Authorities have adequate resources for enforcement and monitoring
  - At the time of the terminal evaluation, the intent for enforcement and monitoring was confirmed, although
there was no documental evidence on this.

<table>
<thead>
<tr>
<th>ii. PCB owners understand, have resources and continue</th>
<th>PCB-owner institutions have expressed their understanding for the issue of PCBs and willingness to dispose off; EDL was awaiting the PCB-disposal activity to commence; continuation of testing of transformer oil would be important to identify any potential cross-contamination.</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>iii. Government provides support</td>
<td>The MONRE has confirmed its commitment towards its obligations to the Stockholm Convention, amongst others, via PCB-disposal, and provides support in terms of official letters and communication to the institutions; the NPC is an official from and based at the MONRE.</td>
<td>S</td>
</tr>
</tbody>
</table>

6. Project's quality and performance

6.1 Project Design and results framework/logframe

The project includes a monitoring and evaluation plan, with the specific M&E activities, budget and timing; the budget for the MTE and TE is in alignment with the total budget for the project; it contains a logical framework with specific and measurable or verifiable targets, tailored to the project in the country; it also contains a risk table, with risks due to potential accidents and natural disasters being rated as medium, and all other risks mentioned under the different outcomes rated as low.

Project's initially foreseen duration was 48 months, which, if everything works out as planned, is considered to be adequate for this project. At the same time, a few stakeholders pointed out that inventory took longer, as it was very challenging due to the necessity of the transformers being offline, due to access to the transformers, and due to the rainy season.

The project has a clear thematically focused development objective, and also clearly mentioned target of labelling at least 1,000 electrical equipment and disposal of 250 tons of PCB-contaminated equipment. The expected result-chain – outputs, outcomes – is clear and logical. To achieve this objective, the project design, entailing national regulation on PCBs, capacity building and knowledge transfer, awareness-raising, inventory and labelling and PCB-disposal, is deemed to be adequate and project approach sound and appropriate, the design technically feasible. At the time of the TE, project design was still valid and relevant, although a lack of budget for carrying out a few activities, such as procurement of additional material required to use the GC-ECD was mentioned by a few stakeholders.
Project is in line with the priorities of Lao PDR, UNIDO and the GEF. UNIDO, the implementing agency, has ample experience in implementing PCB projects in different countries.

The project document does not include a Theory of Change (TOC), as this was not a requirement at the time of project formulation. A TOC has been constructed by the TE based on information provided in the project document, and updated and validated based on document review and interviews.

### 6.2 Relevance and Coherence

High relevance of the project was emphasized by all the interviewed stakeholders.

Lao signed the Stockholm Convention on POPs on 03 May 2002 and ratified it on 28 June 2006. It submitted its NIP on 08 November 2010, according to which around 540 transformers were assumed to potentially contain PCB-contaminated oil, and according to the project document, 119 transformers, after testing, showed that they contained PCBs above 50 ppm. Further, project is also in line with the Environment Protection Law which includes waste management.

The project is in line with UNIDO's Inclusive and Sustainable Industrial Development (ISID). UNIDO's Mission Statement (IDB.39/13/Rev.1) includes safeguarding the environment⁶ and reiterates the flexible UNIDO approach⁷ for ISID. One of the pillars of the ISID is Safeguarding the Environment - environmentally sustainable growth, via “...the promotion, adaptation and transfer of environmentally sound technologies...”, under which UNIDO aims to “…assist countries in reaching compliance with the Stockholm Convention and aims at developing capacities in developing countries to protect their populations and their environmental resources from POPs-related pollution”.

The project is also in line with the GEF Focal Area Strategy for Chemicals under GEF-5. The GEF's goal in the POPs focal area is to protect human health and the environment by assisting countries to reduce and eliminate production, use and releases of POPs, and consequently contribute generally to capacity development for the sound management of chemicals. Under GEF-4, this goal was to be achieved by amongst others: strengthening capacities for National Implementation Plan (NIP) implementation, including assisting those countries that lag farthest behind to establish basic, foundational capacities for sound management of chemicals.

Project is also in alignment with the objectives of the Stockholm Convention on POPs.

### 6.3 Efficiency

**(Including Financial Management and Co-financing)**

GEF approval for the project was received in April 2014 and commenced at UNIDO with the first Project Allotment Document (PAD) in May 2014. It was approved for a time duration of 48 months, that is, till May 2018; it has been extended 4 times, the

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⁶ “UNIDO aspires to reduce poverty through sustainable industrial development. We want every country to have the opportunity to grow a flourishing productive sector, … and to safeguard their environment”.

⁷ “Differentiate and adapt our approaches and methodologies according to the needs of countries at different stages of development”.

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last time from December 2022 till June 2023, in order to complete its PCB-disposal activities.

Right after project commencement, an Inception Workshop took place in July 2014. At the time of the MTE, in the first half of 2017, it was delayed by 1.5 years. Should the project be able to achieve the foreseen PCB-disposal activities by June 2023, it would have experienced a delay of 3 years, after deducting a delay of 2 years due to the COVID-19 pandemic, during which movement of persons was strongly restricted in Lao, as also almost all over the world.

As mentioned earlier, inventory and sampling have taken longer than foreseen in the workplan of the project document; 15 months were planned for this activity, and was carried out for over 2 years. Reasons mentioned were challenges due to transformers being online and the necessity for being offline, accessing the transformers and the rainy season.

Interviewed stakeholders have expressed their satisfaction with all the output documents produced within the framework of the project, and highlighted the course material being taught at the National University of Lao.

Committed co-finance is as follows:

<table>
<thead>
<tr>
<th>Name of Co-financier (source)</th>
<th>Classification</th>
<th>Type</th>
<th>Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNIDO</td>
<td>GEF Agency</td>
<td>Cash</td>
<td>50,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In-kind</td>
<td>50,000</td>
</tr>
<tr>
<td>MONRE</td>
<td>National Government</td>
<td>In-kind</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Electricity du Lao (EDL)</td>
<td>Private sector</td>
<td>Cash</td>
<td>1,800,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In-kind</td>
<td>2,700,000</td>
</tr>
<tr>
<td>Total Co-Financing</td>
<td></td>
<td></td>
<td>5,600,000</td>
</tr>
</tbody>
</table>

Source: Signed commitment letters of the participating countries

Stakeholder institutions have spent co-finance, in the form of persons, office space and infrastructure; **official documentation of co-finance has been requested and is awaited.**

From the total GEF funds of USD 1,400,000 project has spent USD 1,213,038 till 31 December 2022, that is, 86.64%, and a total amount of USD 186,962 was still left. According to information received from the UNIDO PM, project has been extended till June 2023, to complete PCB-disposal activity.

Project expenditure, till 31 December 2022 is shown in the following table:
UNIDO budget execution:

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractual Services</td>
<td>0,00</td>
<td>2.918,00</td>
<td>230.000,30</td>
<td>1.295,92</td>
<td>0,00</td>
<td>-0,49</td>
<td>533.690,80</td>
<td>60,86</td>
<td>50.263,96</td>
<td>818.229,35</td>
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<tr>
<td>Equipment</td>
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<td>29.008,50</td>
<td>5.013,24</td>
<td>0,00</td>
<td>0,00</td>
<td>1.378,43</td>
<td>93,60</td>
<td>43,18</td>
<td>0,00</td>
<td>35.536,95</td>
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<tr>
<td>International Meetings</td>
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<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>1.024,43</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>1.024,43</td>
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<tr>
<td>Local travel</td>
<td>20.512,02</td>
<td>-52,27</td>
<td>1.611,50</td>
<td>0,00</td>
<td>0,00</td>
<td>10.205,83</td>
<td>8.713,78</td>
<td>0,00</td>
<td>1.742,30</td>
<td>42.733,16</td>
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<tr>
<td>Nat. Consult./Staff</td>
<td>4.573,19</td>
<td>43.169,74</td>
<td>17.515,08</td>
<td>17.702,93</td>
<td>18.722,12</td>
<td>15.805,09</td>
<td>15.129,72</td>
<td>17.372,60</td>
<td>27.668,68</td>
<td>177.659,15</td>
</tr>
<tr>
<td>Other Direct Costs</td>
<td>0,00</td>
<td>4.861,63</td>
<td>1.805,17</td>
<td>401,23</td>
<td>566,00</td>
<td>2.798,54</td>
<td>3.404,98</td>
<td>1.057,35</td>
<td>4.380,73</td>
<td>19.275,63</td>
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<tr>
<td>Premises</td>
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<td>25,81</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>25,81</td>
</tr>
<tr>
<td>Staff &amp; Intern Consultants</td>
<td>0,00</td>
<td>15.078,15</td>
<td>29.211,41</td>
<td>16.145,05</td>
<td>17.259,14</td>
<td>14.584,05</td>
<td>54,44</td>
<td>21.078,48</td>
<td>113.410,72</td>
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<tr>
<td>Staff travel</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>85,24</td>
<td>0,00</td>
<td>0,00</td>
<td>85,24</td>
</tr>
<tr>
<td>Train/Fellowship/Study</td>
<td>2.802,00</td>
<td>2.256,40</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>0,00</td>
<td>5.058,40</td>
</tr>
<tr>
<td>Grand Total</td>
<td>27.887,21</td>
<td>97.240,15</td>
<td>255.971,10</td>
<td>48.611,49</td>
<td>36.457,60</td>
<td>47.446,54</td>
<td>575.702,17</td>
<td>18.588,43</td>
<td>105.134,15</td>
<td>1.213.038,84</td>
</tr>
</tbody>
</table>

Source: UNIDO Project Management database as at 31 December 2022.
6.4 Likelihood of sustainability of project results

Financial risks:
As mentioned in earlier sections, EDL is a state corporation for electricity generation, transmission and distribution. It is the owner of the majority of transformers in the country, and has been a key stakeholder of the project since the beginning. It has reiterated its commitment to ESM of transformers and transferred information about PCBs to its employees. It was established in the late 1950’s and has been functioning since then. Therefore, financial risks are considered to be low.

Socio-political risks:
Socio-political risks are considered to be low. The MONRE is the relevant Ministry for the project, and has been involved in it since project conception and before that in the NIP development. It has already approved guidance document pertinent to PCBs and has expressed its commitment to the project and to PCB-disposal.

Course content related to PCBs has been prepared and is being taught at Bachelor and Master levels in the National University of Lao, thus expanding the outreach of information and knowledge on PCBs.

Institutional framework and governance risks:
As mentioned above, the MONRE has approved legislation regarding POPs, definition of PCBs within hazardous wastes, Guidelines on handling and disposal of PCBs and guidance document on PCB-management. Ownership of these documents is with the MONRE; ownership of the course content on POPs is with the Department of Chemistry at the National University of Lao; and PCB-disposal will be coordinated and carried out at and with the EDL. Therefore, institutional framework and governance risks are deemed to be low.

Environmental risks:
SETCAR has carried out PCB-disposal work for UNIDO in other countries also. Therefore, environmental risks related to PCB-disposal activities are considered to be low. Nonetheless, a continuation of testing of transformer oil at EDL in future would be necessary to detect any priorly-occurred cross-contamination.

6.5 Gender mainstreaming

The project document contains information on ‘gender dimensions’, it mentions involvement of women in several activities of the project, for example, inventorrying, recording results, and in working groups and steering committees, and creating awareness on effects of PCBs on pregnant women and babies.

Gender-disaggregated data has not been documented separately, but looking at the list of participants of all meetings and workshops that have taken place, both genders have participated.

Female persons are working at the NRER and have been involved in preparing the database for entering inventory data and female professors from the Department of Chemistry of the National University of Lao have prepared the course content and are teaching it.
Pictures of posters, prepared by the project, were provided to the evaluation, about the health effects of PCBs on animals and humans, including expectant mothers and children.

No gender-related issues were pointed out to the evaluation.

7. Performance of partners

7.1 UNIDO

Project team in the field

A National Project Coordinator (NPC) has been nominated from the MONRE; he is an official of MONRE, and is also based at the MONRE. The NPC coordinates with all stakeholders, inter alia, EDL, SETCAR, National University of Lao, national experts and other relevant divisions of MONRE regarding project activities; he is in contact with the UNIDO PM at headquarters (HQ). The same person has been the NPC of the project since the beginning of the project; between 2018 and 2020, this NPC was away to continue higher education, and joined back in 2020 to continue as NPC. He is well aware of the project, its requirements, activities and is reported to coordinate effectively and efficiently with all stakeholders.

UNIDO:

UNIDO is represented in Lao PDR by a Country Representative, who is reported to be very supportive of and to the project. He represents the project at country level at high-level meetings and fora, and provides support in the form of official letters as necessary.

UNIDO HQ-based management is deemed to be effective and is reported to be easily reachable, responds always in a timely manner and provides technical guidance and support.

7.2 National counterparts

MONRE is supportive to the project and participates in decision-making via the project steering committee (PSC) meetings. It has nominated one official as NPC of the project, who is also based at the MONRE. EDL is also very supportive and committed to the project; it has carried out the inventory and taken samples from the transformers; moreover, it has confirmed transferring information about PCBs and ESM of transformers to its employees. National experts were recruited and have prepared reports and documents, as foreseen. The NRER/MONRE was involved in the inventory and sampling, and has expressed its interest to be present during the PCB-disposal activity. Professors from the National University of Lao have prepared the content on POPs for Bachelors and Master Degree courses. Thus, all stakeholders have very actively participated and contributed to the project activities.

7.3 Donor

The project was approved by the GEF in April 2014, and funds transferred to UNIDO. The GEF has received annual progress reports, the PIRs in 2014, 2015, 2016, 2018, 2019, 2020, 2021, 2022.
8. Factors facilitating or limiting the achievement of results

8.1 Project management

UNIDO PM, based at UNIDO HQ in Vienna, is responsible for overall project management. Change in UNIDO PM has taken place once, in February 2016, and since then, the same/current PM has been responsible for it. After project commencement in April 2014, the Inception Workshop has taken place in July 2014; however, thereafter project implementation is reported to have been slow. Nevertheless, after the change in PM, inventory has commenced. UNIDO PM is reported to be in regular contact with the NPC, who coordinates, as mentioned earlier, with all other stakeholders. UNIDO Country Representative is informed about project activities, and represents the project at high-level meetings. Annual PIRs have been sent to the GEF regularly; the MTE was conducted in 2017. Decision-making is reported to be transparent and participatory and includes the key stakeholder institutions.

Delay in carrying out the PCB-decontamination started due to the outbreak of the COVID-19 pandemic; and at the time of the TE, the reason for the delay on SETCAR's side, or any reasons for not bringing the decontamination equipment into the country, were not known. This is not really considered a lapse in project management.

A detailed workplan for the PCB-disposal activity has not been provided by SETCAR.

8.2 M&E, reporting, results-based management

As mentioned under the Section Project design, the project document entails an M&E plan, with specific M&E activities, budget and timing; the budget for the MTE and TE is in alignment with the total budget for the project. The project document also contains a logical framework with specific and measurable or verifiable targets, tailored to the project in the country.

Reports and/or output documents prepared by national and international experts are reviewed by the MONRE and by the UNIDO PM. An MTE and a TE were foreseen in the project document; the MTE has been carried out in 2017, the TE has also been carried out. Reporting in the PIRs has been done against the Outputs mentioned in the logical framework.

An Inception Workshop took place in July 2014, after project commencement in May 2014. PSC meetings have taken place as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Place</th>
<th>Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>26 October 2015</td>
<td>Vientiane, MONRE, EDL, Cleaner Production Center Lao, NRER, NPC, UNIDO PM, UNIDO International Expert, National Expert, Department of Environment Promotion and Quality, Ministry of Foreign Affairs</td>
</tr>
<tr>
<td>2</td>
<td>29 March 2017</td>
<td>Vientiane, MONRE, NRER, national expert, NPC, National University of Lao, Ministry of Science and Technology, Ministry of Health, EDL, Department of</td>
</tr>
</tbody>
</table>
8.3 Stakeholder engagement and communication

Stakeholder engagement

This is elaborated under Section 6 Performance of Partners – Sub-Section 6.2 National counterparts.

Communication

On the whole, interviewees have reported good and effective communication amongst all stakeholders, and responses, with the exception of SETCAR, from which no response was being received at the time of the TE about the delay in bringing the decontamination equipment into the country. Decision-making is reported to be participative, at the PSC meetings, and the NPC coordinates amongst all stakeholders, MONRE, EDL, national experts and UNIDO.

External communication:

Posters and brochures have been prepared, on the effect of PCBs on human health and presented on World Environment Day, one of the posters especially for children and expectant mothers. Awareness-raising was carried out at 3 schools, with a participation of over 100 students, according to an awareness-raising report by the NPC.

8.4 Overarching assessment and ratings table

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating</td>
<td></td>
</tr>
<tr>
<td>A. Progress to impact</td>
<td>7 out of 11 Outputs have been achieved; 1 considered to be completed; 3 partially achieved; knowledge and information about PCBs are reportedly being transferred at the National University of Lao and at EDL; PCB-disposal had not commenced at the time of the TE.</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>B. Project Design</td>
<td>Project design is similar to UNIDO’s other PCB projects, has a clear development objective, planned activities are deemed to be adequate to achieve the project objective; however, no budget is allocated for Outputs 3.3 and 3.4 – awareness-raising.</td>
</tr>
<tr>
<td>B.1 Overall design</td>
<td>Logframe entails specific and measurable indicators; similar to other project documents of GEF projects, definitions and usage of the terms ‘Outputs’ and ‘Outcomes’ have not been adhered to appropriately.</td>
</tr>
<tr>
<td>C. Project performance</td>
<td>In line with priorities of Lao PDR, Stockholm Convention, GEF and UNIDO; high relevance emphasized by all interviewed stakeholders; course content on POPs is being taught at the National University of Lao.</td>
</tr>
<tr>
<td>C.1 Relevance and Coherence</td>
<td>7 out of 11 Outputs have been achieved; 1 is considered to be completed for the project; 3 have been partially achieved; 671 out of foreseen 1,000 oil samples have been taken; PCB-disposal had not commenced at the time of the TE, and arrival of SETCAR with the mobile PCB-decontamination equipment was awaited.</td>
</tr>
<tr>
<td>C.2 Effectiveness</td>
<td>Project has been extended four time, till June 2023. Delays have been due to restructuring at the MONRE, challenges in inventory and sampling and due to the COVID-19 pandemic. Co-finance has been spent by participating farms and institutions, however, documents are requested and awaited.</td>
</tr>
<tr>
<td>C.3 Efficiency</td>
<td>Financial, socio-political, institutional framework and governance and environmental risks are considered to be low. Knowledge transfer is reported to being carried</td>
</tr>
</tbody>
</table>
out at EDL, and at the National University of Lao; PCB-disposal activity had not commenced at the time of the TE.

<table>
<thead>
<tr>
<th>D. Cross-cutting performance criteria</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>D.1 Gender mainstreaming</td>
<td>No gender-related issues were reported; participation of both genders in project activities; brochure on effects of PCBs on children and pregnant women prepared.</td>
</tr>
<tr>
<td>D.2 M&amp;E</td>
<td>The project document entails an M&amp;E plan, with specific M&amp;E activities, budget and timing; the budget for the MTE and TE is in alignment with the total budget for the project; required annual PIRs have been submitted to the GEF; reports have been prepared by the national and international experts; PSC meetings have not taken place every year.</td>
</tr>
<tr>
<td>D.3 Results-based management (RBM)</td>
<td>Workplan was initially prepared for the project document; however, due to delays, it could not be adhered to. 671 oil samples have been taken out of a foreseen 1,000; no plan to continue and complete sampling was provided to the evaluation.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E. Performance of partners</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>E.1 UNIDO</td>
<td>UNIDO HQ-based management considered to be effective; UNIDO HQ provides support and technical inputs; UNIDO FO is very supportive of the project.</td>
</tr>
<tr>
<td>E.2 National counterparts</td>
<td>Relevant Ministry, MONRE, and other stakeholders and stakeholder institutions are supportive to the project and participate actively in project activities; sampling of at least 1,000 transformers was not achieved at the time of the TE.</td>
</tr>
<tr>
<td>E.3 Donor</td>
<td>It receives annual PIRs.</td>
</tr>
</tbody>
</table>

| F. Overall assessment | Project has carried out and achieved several activities and Outputs; 7 out of 11 Outputs have been achieved; 1 is considered to be completed; and 3 are partially achieved. Sampling has not been achieved, as initially foreseen; the PCB-disposal activity had not commenced, although the reason cannot be attributed to the project. |
As mentioned in the TOR, the evaluation rating scale is as follows:

<table>
<thead>
<tr>
<th>Score</th>
<th>Definition</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Highly Satisfactory (HS)</td>
<td>Level of achievement presents no shortcomings (90% - 100% achievement rate of planned expectations and targets).</td>
</tr>
<tr>
<td>5</td>
<td>Satisfactory (S)</td>
<td>Level of achievement presents minor shortcomings (70% - 89% achievement rate of planned expectations and targets).</td>
</tr>
<tr>
<td>4</td>
<td>Moderately Satisfactory (MS)</td>
<td>Level of achievement presents moderate shortcomings (50% - 69% achievement rate of planned expectations and targets).</td>
</tr>
<tr>
<td>3</td>
<td>Moderately Unsatisfactory (MU)</td>
<td>Level of achievement presents some significant shortcomings (30% - 49% achievement rate of planned expectations and targets).</td>
</tr>
<tr>
<td>2</td>
<td>Unsatisfactory (U)</td>
<td>Level of achievement presents major shortcomings (10% - 29% achievement rate of planned expectations and targets).</td>
</tr>
<tr>
<td>1</td>
<td>Highly Unsatisfactory (HU)</td>
<td>Level of achievement presents severe shortcomings (0% - 9% achievement rate of planned expectations and targets).</td>
</tr>
</tbody>
</table>

Source: GEF, UNIDO.

The following table entails the UNIDO rating for sustainability (six-point rating scale) and the corresponding GEF rating for sustainability\(^a\) (four-point rating scale):

<table>
<thead>
<tr>
<th>UNIDO rating</th>
<th>UNIDO rating for sustainability</th>
<th>GEF rating for sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Highly likely (HL)</td>
<td>Likely (L)</td>
</tr>
<tr>
<td>5</td>
<td>Likely (L)</td>
<td>Moderately Likely (ML)</td>
</tr>
</tbody>
</table>

\(^a\) GEF uses a four-point scale for the criterion of sustainability.
<table>
<thead>
<tr>
<th></th>
<th>Moderately Likely (ML)</th>
<th>Moderately Likely (ML)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Moderately Unlikely (MU)</td>
<td>Moderately Unlikely (MU)</td>
</tr>
<tr>
<td>2</td>
<td>Unlikely (U)</td>
<td>Moderately Unlikely (MU)</td>
</tr>
<tr>
<td>1</td>
<td>Highly Unlikely (HU)</td>
<td>Unlikely (U)</td>
</tr>
</tbody>
</table>

Source: TOR for the terminal evaluation.
9. Conclusions, recommendations, lessons learned, good practices

9.1 Conclusions

Project design: The project has a clear thematically focused development objective, and also clearly mentioned target of labelling at least 1,000 electrical equipment and disposal of 250 tons of PCB-contaminated equipment. The expected result-chain – outputs, outcomes – is clear and logical. To achieve this objective, the project design, entailing national regulation on PCBs, capacity building and knowledge transfer, awareness-raising, inventory and labelling and PCB-disposal, is deemed to be adequate and project approach sound and appropriate, the design technically feasible. No budget has been planned for Outputs 3.3 and 3.4 – development of training and educational material and awareness-raising.

The overall rating for project design is 'satisfactory'.

Relevance: The project is in line with the strategies and policies of Lao PDR, Stockholm Convention, GEF and UNIDO. High relevance of the project has been emphasized by all the interviewed stakeholders. The issue of POPs being highly relevant, course content has been prepared and is being taught at the National University of Lao.

The overall rating for relevance and coherence is 'highly satisfactory'.

Efficiency: Project commenced in May 2014 with a project duration of 48 months; it has been extended 4 times, with the latest extension till June 2023, thus going 3 years beyond the initially foreseen time, after deducting 2 years of COVID-19 pandemic. Reasons are reported to have been due to facing challenges during the inventory, restructuring of the MONRE and non-arrival of mobile decontamination unit by SETCAR into the country, the reason for this not being known, as SETCAR was reported to not responding to any queries regarding this. 86.64% of the budget of USD 1.4 million has been spent. Co-finance is reported to have been spent by the MONRE and by EDL, however, official documentation of co-finance spent has been requested by the evaluation and was awaited at the time of the TE.

The overall rating for efficiency is 'moderately unsatisfactory'.

Effectiveness: From 11 Outputs, 7 have been achieved; one is considered to be completed for the project; and 3 are partially achieved. The country has legislation related to POPs, and the MONRE has approved an official Agreement on Management and Monitoring of PCB-decontamination and Disposal. Capacity-building has been carried out, the NRER/MONRE was involved in inventory and preparing database, course material on POPs, including PCBs, is being taught at the National University of Lao, 671 out of foreseen 1,000 oil samples from transformers at EDL have been taken, SETCAR's mobile dechlorination technology has been selected after carrying out an international tendering process, awareness-raising has been carried out to some extent.

The overall rating for effectiveness is ‘moderately satisfactory’ and overall project objective is partially achieved.

Likelihood of sustainability of project results: Financial, socio-political, institutional framework and governance and environmental risks are considered to be low. Knowledge transfer is reported to being carried out at EDL, and at the National University of Lao; the arrival of SETCAR with its mobile dechlorination unit was
awaited at the time of the TE; legislation on POPs exists in the country, and has been complemented with Guidance on ESM of PCBs and officially approved document on PCB-disposal.

Sustainability of project results is considered to be ‘likely’.

**Gender mainstreaming:** Participation of both genders has taken place during project meetings and workshops; both genders are involved in different project activities; a brochure for awareness-raising was prepared especially on effects of PCBs on children and pregnant women; no issues regarding gender were reported to the evaluation.

The overall rating for gender is ‘highly satisfactory’.

Taking all of the above into consideration, the overall rating for the project is ‘moderately satisfactory’.

### 9.2 Recommendations

Project had been extended till June 2023 to achieve the PCB-disposal activity with the selected service provider SETCAR with its mobile dechlorination unit, and by the time this report was prepared has unspent funds amounting to around USD 186,962. Recommendations are as follows:

**To UNIDO:**

- Complete sampling of the foreseen 1,000 transformers and prepare shorter version of guidance document on ESM of PCBs in the form of small booklet in Laotian, for easy reference for employees working in transformer repair and maintenance;
- Remind SETCAR of its obligation to carry out and complete the PCB-disposal activity in Lao, and to at least inform stakeholders about status of entry of equipment into Lao as well as detailed workplan;
- Ensure to hold PSC meetings at least once a year, compile gender-disaggregated data of project activities and ensure correct and detailed preparation of reports on awareness-raising activities.

**For EDL:**

- Continue training and transfer of knowledge on PCBs and ESM of PCBs for employees especially in transformer repair and maintenance outside Vientiane;

**For MONRE:**

- Remind the National University of Lao to extend the curriculum on POPs when the current curriculum is up for update, around 2025;
- Ensure that training and knowledge transfer on PCBs, alongside the testing of transformer oil is continued at EDL.
9.3 Lessons learned

On the one hand, the project office/NPC, being from and based at the relevant Ministry, has proved to be beneficial in terms of receiving support from the Ministry, at the same time, the restructuring at the Ministry has also caused some delays in project activities.

9.4 Good practices

One good practice was definitely the preparation and inclusion of the course content on POPs, including PCBs, at the National University of Lao.

Another good practice, related to the above good practice, is the engagement of national experts from the National University of Lao to prepare the course content.

A brochure was prepared for awareness-raising on effects of PCBs on children and pregnant women.
## Annexes

I. List of stakeholders consulted

<table>
<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Position</th>
<th>Role in Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Khonekeo Kingkhambang</td>
<td>Ministry of Natural Resources and Environment Pollution Control Department</td>
<td>Deputy Director, Division of Environment Policy, Department of Environment</td>
<td>National Project Coordinator</td>
</tr>
<tr>
<td>Mrs. Setouvanh PHANTHAVONGSA</td>
<td>Natural Resource and Environment Research Institute (NRER), MoNRE</td>
<td>DDG of NRER</td>
<td>Laboratory service and field sampling</td>
</tr>
<tr>
<td>Mr. Vanhna PHANPHONGSA</td>
<td>Natural Resource and Environment Research Institute (NRER), MoNRE</td>
<td>Deputy Director of Environmental Laboratory</td>
<td>Laboratory service and field sampling</td>
</tr>
<tr>
<td>Ms. Bounmany SOULIDETH</td>
<td>Natural Resource and Environment Research Institute (NRER), MoNRE</td>
<td>Deputy Director of Modeling Division</td>
<td>Laboratory service and field sampling</td>
</tr>
<tr>
<td>Ms. Noyladda NAOVARANGSY</td>
<td>Natural Resource and Environment Research Institute (NRER), MoNRE</td>
<td>Technical Staff of Environmental Laboratory</td>
<td>Laboratory service and field sampling</td>
</tr>
<tr>
<td>Ms. Soulsay XAYYACHACK</td>
<td>Natural Resource and Environment Research Institute (NRER), MoNRE</td>
<td>Technical Staff of Environmental Laboratory</td>
<td>Laboratory service and field sampling</td>
</tr>
<tr>
<td>Mr. Sengphet SOUTTLAD</td>
<td>Transmission System Management Department</td>
<td>Deputy Director</td>
<td>Transformer owner institution</td>
</tr>
<tr>
<td>Name</td>
<td>Organization</td>
<td>Position</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-------------------------</td>
<td>---------------------------------</td>
<td></td>
</tr>
<tr>
<td>Dr Ms. Kesany</td>
<td>National University of Laos</td>
<td>National Consultant</td>
<td></td>
</tr>
<tr>
<td>Dr Ms. Ratdaphone Banchongpanith</td>
<td></td>
<td>National Consultant</td>
<td></td>
</tr>
<tr>
<td>Mr. Sommai Faming</td>
<td>UNIDO</td>
<td>UNIDO Country Representative</td>
<td></td>
</tr>
<tr>
<td>Ms. Carmela Centeno</td>
<td>UNIDO</td>
<td>Industrial Development Officer</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Project Manager</td>
<td></td>
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</tbody>
</table>
II. Evaluation Matrix

<table>
<thead>
<tr>
<th>Evaluation criteria and corresponding questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project's contribution to development results – Effectiveness and likelihood of impact</td>
</tr>
</tbody>
</table>

1. **a. Project's achieved results and overall effectiveness**
   - SO FAR, what are the main results (mainly outputs and if possible, outcomes) of the project? What have been the quantifiable results of the project to-date?
   - To what extent did the project achieve their objectives (outputs and outcomes), against the original/revised target(s)? Please provide a brief analysis on the project progress in achieving the objectives.
   - What is the quality of the results? How do the stakeholders perceive them? What is the feedback of the beneficiaries and the stakeholders on the project effectiveness? Please provide evidence/examples from the project to back up the statements.
   - Were the right target groups reached?
   - Can the project attain its objectives and utilize the resources assigned for this within the remaining period?

2. **b. Progress towards impact**
   - What difference has the project made to the beneficiaries?
   - What is the change attributable to the project? To what extent?
   - What are the social, economic, environmental and other effects, either short-, medium-, or long-term, on a micro- or macro-level?
   - What effects are intended or unintended, positive or negative?

   a) Behavioural change
   i. Economically competitive – Advancing economic competitiveness: Changes in the functioning and management of the resources, finances, income, and expenditure of, for example, a community, business or enterprise, contributed by the intervention
   ii. Environmentally sound – Safeguarding environment: Biophysical changes in reduction of threats emanating from action of humans and changes in the status of the environment
   iii. Socially inclusive – Creating shared prosperity: Changes in the provision of certain rights to all individuals and groups in society, such as employment, education and training.

   b) Broader adoption
   i. Mainstreaming: To what extent are information, lessons learned, or specific results of the project incorporated into broader stakeholder mandates and initiatives such as laws, policies, regulations and project?
   ii. Replication: To what extent are the project's specific results (for example methodology, technology or lessons learned) reproduced or adopted?
   iii. Scaling-up: To what extent are the project's initiatives and results implemented at larger geographical scale?
<table>
<thead>
<tr>
<th>Evaluation criteria and corresponding questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project's quality and performance</strong></td>
</tr>
<tr>
<td><strong>a</strong> Project design</td>
</tr>
<tr>
<td>• The project design was adequate to address the problems at hand?</td>
</tr>
<tr>
<td>• Is the project consistent with the Country's priorities, in the work plan of the lead national counterpart? Does it meet the needs of the target group? Is it consistent with UNIDO's Inclusive and Sustainable Industrial Development? Does it adequately reflect lessons learnt from past projects? Is it in line with the donor's priorities and policies?</td>
</tr>
<tr>
<td>• Is the applied project approach sound and appropriate? Is the design technically feasible and based on best practices? Does UNIDO have in-house technical expertise and experience for this type of intervention?</td>
</tr>
<tr>
<td>• To what extent the project design (in terms of funding, institutional arrangement, implementation arrangements...) as foreseen in the project document still valid and relevant?</td>
</tr>
<tr>
<td>• Does the project document include a M&amp;E plan? Does the M&amp;E plan specify what, who and how frequent monitoring, review, evaluations and data collection will take place? Does it allocate budget for each exercise? Is the M&amp;E budget adequately allocated (see a M&amp;E sample) and consistent with the logframe (especially indicators and sources of verification)?</td>
</tr>
<tr>
<td>• Risk management: Are critical risks related to financial, social-political, institutional, environmental and implementation aspects identified with specific risk ratings? Are their mitigation measures identified? Where possible, are the mitigation measures included in project activities/outputs and monitored under the M&amp;E plan?</td>
</tr>
<tr>
<td><strong>b</strong> Project results framework/logframe</td>
</tr>
<tr>
<td>• Expected results: Is the expected result-chain (impact, outcomes and outputs) clear and logical? Does impact describe a desired long-term benefit to a society or community (not as a mean or process), do outcomes describe change in target group's behaviour/performance or system/institutional performance, do outputs describe deliverables that project will produce to achieve outcomes? Are the expected results realistic, measurable and not a reformulation or summary of lower-level results? Do outputs plus assumptions lead to outcomes, do outcomes plus assumptions lead to impact? Can all outputs be delivered by the project, are outcomes outside UNIDO’s control but within its influence?</td>
</tr>
<tr>
<td>• Indicators: Do indicators describe and specify expected results (impact, outcomes and outputs) in terms of quantity, quality and time? Do indicators change at each level of results and independent from indicators at higher and lower levels? Do indicators not restate expected results and not cause them? Are indicators necessary and sufficient and do they provide enough triangulation (cross-checking)? Are they indicators sex-disaggregated, if applicable?</td>
</tr>
<tr>
<td>• Sources of verification: Are the sources of verification/data able to verify status of indicators, are they cost-effective and reliable? Are the sources of verification/data able to verify status of output and outcome indicators before project completion?</td>
</tr>
<tr>
<td><strong>c</strong> Relevance</td>
</tr>
<tr>
<td>• So far, how relevant is the project to the:</td>
</tr>
<tr>
<td>o target groups’ needs</td>
</tr>
<tr>
<td>o development priorities of the country (national poverty reduction strategy, sector development strategy, etc.)</td>
</tr>
<tr>
<td>o UNIDO comparative advantages and</td>
</tr>
<tr>
<td>o project’s donor policies and priorities</td>
</tr>
<tr>
<td>• Are appropriate beneficiaries groups being targeted by the project?</td>
</tr>
<tr>
<td>• Are the original project objectives (expected results) still valid and pertinent to the target groups? If not, have they been revised? Are the revised objectives still valid in today context?</td>
</tr>
<tr>
<td>Evaluation criteria and corresponding questions</td>
</tr>
<tr>
<td>------------------------------------------------</td>
</tr>
<tr>
<td><strong>d Efficiency at current stage of implementation</strong></td>
</tr>
<tr>
<td>- Comment on how economically the project resources/inputs (in terms of funding, expertise, time…) are being used to produce results (outputs and outcomes) SO FAR? Comment on the quality of expertise/technical assistance provided; whether the expected results were achieved within the original budget, if no please explain why.</td>
</tr>
<tr>
<td>- How timely is the project in producing outputs, initial outcomes and delivering inputs (with least delays)? Based on the work plan, comment on the delay or acceleration of implementation period of the project. Were the project's activities in line with the schedule of activities as defined by the project team and annual work plans? Were the disbursements and project expenditures in line with budgets?</td>
</tr>
<tr>
<td>- Have the inputs from the donor, UNIDO and Government/counterpart been provided as planned, and were they adequate to meet the requirements?</td>
</tr>
<tr>
<td>- Is the project cost-effective compared to similar interventions? Could the project have produced more with the same resources, or the same with less money, or with less delay? Wherever possible, the MTE team should also compare the costs incurred and the time taken to achieve outcomes with that for similar projects?</td>
</tr>
<tr>
<td><strong>Financial management and co-financing</strong></td>
</tr>
<tr>
<td>- Review the financial management of the project, with specific reference to the cost-effectiveness of interventions. 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?</td>
</tr>
<tr>
<td>- Review the changes to fund allocations as a result of budget revisions and assess the appropriateness and relevance of such revisions.</td>
</tr>
<tr>
<td>- Did promised co-financing materialize? Is co-financing being used strategically to help the objectives of the project? Is the Project Team meeting with all co-financing partners regularly in order to align financing priorities and annual work plans.</td>
</tr>
<tr>
<td><strong>e Likelihood of Sustainability of benefits</strong></td>
</tr>
<tr>
<td>The MTE should validate whether the risks identified in the Project Document and progress reports or implementations reviews are the most important and assess the following risks to sustainability:</td>
</tr>
<tr>
<td><strong>Financial risks:</strong></td>
</tr>
<tr>
<td>- What is the likelihood of financial and economic resources not being available once the project 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.)?</td>
</tr>
<tr>
<td><strong>Socio-political risks:</strong></td>
</tr>
<tr>
<td>- Are there any social or political risks that may jeopardize the sustainability of project outcomes?</td>
</tr>
<tr>
<td>- What is the risk that the level of stakeholder ownership and engagement (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained?</td>
</tr>
<tr>
<td>- Do the various key stakeholders see that it is in their interest that project benefits continue to flow?</td>
</tr>
<tr>
<td>- Is there sufficient public/stakeholder awareness in support of the project’s long-term objectives?</td>
</tr>
<tr>
<td><strong>Institutional framework and governance risks:</strong></td>
</tr>
<tr>
<td>- Do the legal frameworks, policies, and governance structures and processes within which the project operates pose risks that may jeopardize the sustainability of project benefits?</td>
</tr>
</tbody>
</table>
### Evaluation criteria and corresponding questions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Are requisite systems for accountability and transparency and required technical know-how in place?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Environmental risks:</strong></td>
<td>Are there any environmental risks that may jeopardize the sustainability of project outcomes? Are there any project outputs or higher level results that are likely to have adverse environmental impacts, which, in turn, might affect the sustainability of project benefits?</td>
</tr>
<tr>
<td><strong>Gender mainstreaming</strong></td>
<td>Did the project/programme design adequately consider the gender dimensions in its interventions? If so, was gender considered at the level of project outcome, output or activity? Was a gender analysis included in a baseline study or needs assessment (if any)? Were there gender-related project indicators? 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)? Are women/gender-focused groups, associations or gender units in partner organizations consulted and/or included in the project? To what extent were socioeconomic benefits delivered by the project at the national and local levels, including consideration of gender dimensions?</td>
</tr>
</tbody>
</table>

### Performance of partners

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UNIDO</strong></td>
<td></td>
</tr>
<tr>
<td>✓ <strong>Project team in the field</strong></td>
<td>Has the project team discharged its project implementation and management functions adequately (in terms of work planning and executing, monitoring and reviewing performance, allocating funds, and following up agreed/corrective actions)? Has an effective M&amp;E system been put in place, was it closely link with the logframe, does it generate information on performance and results which is useful for project managers and PSC to make critical decisions? Has the management of flow of funds and procurement been suitable for ensuring timely implementation? How proactive and prompt the project team was to ensure timely implementation of recommendations from experts of support missions and HQ-based project managers?</td>
</tr>
<tr>
<td>✓ <strong>UNIDO HQ-based management</strong></td>
<td>Timely recruitment of project staff Project modifications following changes in context Follow-up to address implementation bottlenecks Role of UNIDO country presence (if applicable) supporting the project Engagement in policy dialogue to ensure up-scaling of innovations Coordination function Exit strategy, planned together with the government</td>
</tr>
<tr>
<td><strong>National counterparts</strong></td>
<td>Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decision-making that supports efficient and effective project implementation?</td>
</tr>
<tr>
<td>Evaluation criteria and corresponding questions</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>• Has the government assumed ownership and fulfilled responsibility for the project?</td>
<td></td>
</tr>
<tr>
<td>• Were counterpart resources (funds and staffing) provided as planned in the project design?</td>
<td></td>
</tr>
<tr>
<td>• Did the government ensure suitable coordination of the various departments involved in the project implementation?</td>
<td></td>
</tr>
<tr>
<td><strong>Donor</strong></td>
<td></td>
</tr>
<tr>
<td>• How active has the donor been in reviewing the project performance and implementation?</td>
<td></td>
</tr>
<tr>
<td>• How proactive and prompt has the donor been in providing necessary support to the project implementation (in terms of decisions on fund installment, approval/rejection of request from project team...)?</td>
<td></td>
</tr>
<tr>
<td>• Does the donor ask for information related to project performance and results?</td>
<td></td>
</tr>
<tr>
<td>• To what extent does the donor make decisions based on performance and results information?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Factors facilitating or limiting the achievement of results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project management</strong></td>
</tr>
<tr>
<td>• Review overall effectiveness of project management as outlined in the Project Document. Have changes been made and are they effective? Are responsibilities and reporting lines clear? Is decision-making transparent and undertaken in a timely manner? Recommend areas for improvement.</td>
</tr>
<tr>
<td>• Review whether 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)?</td>
</tr>
<tr>
<td><strong>Results-based work planning, M&amp;E, reporting</strong></td>
</tr>
<tr>
<td><strong>Results-based work planning</strong></td>
</tr>
<tr>
<td>• Review any delays in project start-up and implementation, identify the causes and examine if they have been resolved.</td>
</tr>
<tr>
<td>• Are there any annual work plans? Are work-planning processes results-based? Has the logframe been used to determine the annual work plan (including key activities and milestone)? If not, suggest ways to re-orientate work planning to focus on results?</td>
</tr>
<tr>
<td><strong>Results-based M&amp;E</strong></td>
</tr>
<tr>
<td>• Verify whether an M&amp;E system is in place and facilitated timely tracking of progress toward project objectives by collecting information on selected indicators continually throughout the project implementation period; annual project reports are complete and accurate, with well-justified ratings; the information provided by the M&amp;E system is used to improve performance and to adapt to changing needs; and the project has an M&amp;E system in place with proper training for parties responsible for M&amp;E activities to ensure that data will continue to be collected and used after project completion. Are monitoring and self-evaluation carried out effectively, based on indicators</td>
</tr>
<tr>
<td>Evaluation criteria and corresponding questions</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td><strong>c</strong> for outputs, outcomes and impact in the logframe? Is any project steering or advisory mechanism put in place? Do performance monitoring and reviews take place regularly?</td>
</tr>
<tr>
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<tr>
<td></td>
</tr>
<tr>
<td>• Review the monitoring tool currently being used: Do they provide the necessary information? Do they involve key partners? Are they aligned or mainstreamed with national systems? Do they use existing information? Are they efficient? Are they cost-effective? Are additional tools required? How could they be made more participatory and inclusive?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>• Examine the financial management of the project monitoring and evaluation budget. Are sufficient resources being allocated to monitoring and evaluation? Are these resources being allocated effectively?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>• How has the logframe been used for Monitoring and Evaluation purposes (developing M&amp;E plan, setting M&amp;E system, determining baseline and targets, annual implementation review by the Project Steering Committee...) to monitor progress towards expected outputs and outcomes? Do project team and manager make decisions and corrective actions based on analysis from M&amp;E system and based on results achieved? Is information on project performance and results achievement being presented to the Project Steering Committee to make decisions and corrective actions? Do the Project team and managers and PSC regularly ask for performance and results information?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>• How well have risks outlined the project document and in the logframe been monitored and managed? How often have risks been reviewed and updated? Has a risk management mechanism been put in place?</td>
</tr>
<tr>
<td><strong>Results-based reporting</strong></td>
</tr>
<tr>
<td></td>
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<tr>
<td>• Assess how adaptive management changes have been reported by the project management and shared with the PSC.</td>
</tr>
<tr>
<td></td>
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<tr>
<td>• Assess how well the Project Team and partners undertake and fulfil donor and UNIDO reporting requirements (i.e. how have they addressed delays or poor performance, if applicable?)</td>
</tr>
<tr>
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</tr>
<tr>
<td>• Assess how lessons derived from the adaptive management process have been documented, shared with key partners and internalized by partners.</td>
</tr>
<tr>
<td><strong>Stakeholder engagement and communication</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>a</strong> Stakeholder engagement</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>• Project management: Has the project developed and leveraged the necessary and appropriate partnerships with direct and tangential stakeholders?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>• Participation and country-driven processes: Do local and national government stakeholders support the objectives of the project? Do they continue to have an active role in project decision-making that supports efficient and effective project implementation?</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>• Participation and public awareness: To what extent has stakeholder involvement and public awareness contributed to the progress towards achievement of project objectives?</td>
</tr>
<tr>
<td><strong>b</strong> Communication</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>• Review internal project communication with stakeholders: Is communication regular and effective? Are there key stakeholders left out of communication? Are there feedback mechanisms when communication is received? Does this communication with stakeholders contribute to their awareness of project outcomes and activities and investment in the sustainability of project results?</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
| • Review external project communication: Are proper means of communication established or being established to express the project progress and intended impact to the public (is there a web
### Evaluation criteria and corresponding questions

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>presence, for example? Or did the project implement appropriate outreach and public awareness campaigns?)</td>
</tr>
</tbody>
</table>

#### III. Evaluation ToR

**TERMS OF REFERENCE**

Cluster evaluation of UNIDO projects

*Polychlorinated biphenyls (PCBs)*
## Contents

1. UNIDO PCBs portfolio background ................................................................. 50
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1. **UNIDO PCBs portfolio background**

The Stockholm Convention (SC) on persistent organic pollutants (POPs) recognizes that POPs including polychlorinated biphenyls (PCBs) “possess toxic properties, resist degradation, accumulate and are transported through air, water and migratory species, across international boundaries and deposited far from their places, where they accumulate in terrestrial and aquatic ecosystems”. Exposure to PCBs is of a major public health concern, in particular impacts upon women and, through them, upon future generations.

PCBs are industrial products or chemicals mainly used in the energy sector, widely deployed as dielectric and coolant fluids in electrical apparatus, carbonless copy paper and heat transfer fluids. Generally, PCBs are very stable, which explains their persistence in the environment.

UNIDO’s PCBs management and disposal strategy aims to create fundamental capacities within industries, governments, institutions and PCBs owners, in order to comply with the PCB-related obligations under the SC. The projects implemented by UNIDO enhance the critical regulatory and legislative framework and strengthen institutions at the national, regional and local level to manage equipment and waste that contain PCBs in an environmentally sound manner.

Compliance with legislation is ensured by building capacities in local laboratories for PCB sampling and analysis, transfer of technology know-how for local PCBs treatment and elimination and undertaking inspections at PCB-contaminated sites. Environmentally sound PCB management practices reduce PCB releases and risks to human health and the environment; best practices are then further disseminated through public awareness raising initiatives.

Furthermore, UNIDO’s PCB projects include the elimination and disposal of PCBs, often by leveraging interests of the project recipient countries in non-combustion technology, which, in many cases, offer technical and financial advantages. One is on-site PCB decontamination, which solves many technical and procedural barriers for very large transformers that cannot be transported on the road to transformer maintenance facilities. The other is the regeneration of oil. Because workers would usually need to drain and
dismantle these transformers, this helps reducing the workers’ risk of exposure to PCBs.

2. Rationale and purpose of the evaluation

Given the number of PCB projects in the last phase of implementation and taken into account significant similarities at project design level, a cluster evaluation approach will be used. The cluster will be tentatively composed of eight (8) projects selected from Table 1 below and the final list of projects included will be validated at Inception phase.

One of the main reasons of the Cluster evaluation would be to overcome some of the shortcomings present in traditional project evaluation, namely the inward-looking nature of the exercise, the timing and high transactional costs and administrative burden.

The purpose of the cluster approach is to produce synergies and increase the value added in the conduct of evaluations.

The efficiency gains produced by this approach will be invested in additional learning and more strategic assessments to inform UNIDO management, Member States, donors and beneficiaries with further more relevant and useful evaluation findings, conclusions and recommendations, such as:

a) Inter-project comparisons (e.g. differences in implementation approaches, different strategies for broader adoption)

b) Incorporation of additional aspects normally not so well-covered (e.g. socio-economic and environmental impacts of projects, other aspects (e.g., global crisis such as the COVID 19 pandemic).

c) Aggregated information for cross-cutting and recurrent issues, such as management, systemic challenges and root causes based on several cases and therefore less anecdotal.

Table 1. List of projects for Cluster Evaluation

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>UNIDO project N.</th>
<th>GEF ID</th>
<th>Theme area</th>
<th>Project budget (EUR)</th>
<th>Year of Eval</th>
<th>Budget left (SAP 31.03.22 USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUR</td>
<td>SERBIA</td>
<td>1003 13</td>
<td>487 7</td>
<td>PCB</td>
<td>2,100,000</td>
<td>2022</td>
<td>786,423</td>
</tr>
<tr>
<td>ASP</td>
<td>INDIA</td>
<td>1040 44</td>
<td>377 5</td>
<td>PCB</td>
<td>14,100,000</td>
<td>2022</td>
<td>107,230</td>
</tr>
</tbody>
</table>
3. Scope and focus of the evaluation

The final cluster of projects will be decided upon in the Inception Report, based on the following criteria:

- **Thematic**: projects from same or similar programme, or within interrelated technical areas
- **Timing**: project which Terminal Evaluations are due within +/- 6 months

Projects will be selected based on the planned timing for the project end or operational completion and the respective thematic focal area. The final selection will be made in coordination with the respective project managers and the GEF coordination unit to ensure smooth implementation of the evaluation.
The Cluster Evaluation, as foreseen in the Independent Evaluation Division Work Plan (WP) 2018-19 and reiterated in WP 2020-21, will follow the UNIDO Evaluation Policy, the UNIDO Guidelines for the Technical Cooperation Project and Project Cycle, and UNIDO Evaluation Manual. Furthermore, the GEF Guidelines for GEF Agencies in Conducting Terminal Evaluations, the GEF Monitoring and Evaluation Policy and the GEF Minimum Fiduciary Standards for GEF Implementing and Executing Agencies will be applied. The evaluation will also build upon the findings and recommendations of the Cluster Evaluation on UNIDO POPs portfolio carried out in 2015.

The evaluation has three main specific objectives:

i. Assess the projects’ performance in terms of relevance, effectiveness, efficiency, sustainability, coherence, and progress to impact; and

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

iii. Contribute to organizational learning, by UNIDO and its counterparts, while being forward looking, thus also guiding the development of new similar projects.

4. Evaluation approach and methodology

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

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14 https://www.unido.org/sites/default/files/2015-04/FINAL_report_NIPS_CLUSTER_EVAL_20150409_0.pdf#page=81&zoom=100,120,76
The evaluation will use a theory of change (ToC) approach\textsuperscript{15} and mixed methods to collect data and information from a range of sources and informants. It will pay attention to triangulating the data and information collected before forming its assessment. This is essential to ensure an evidence-based and credible evaluation, with robust analytical underpinning.

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

5. Data collection methods

The complete array of instruments for data collection will be finalized at Inception Report stage. Among the main methods foreseen to be used by the Evaluation Team:

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

(b) **Stakeholder consultations** will be conducted through structured and semi-structured interviews and focus group discussion. Key stakeholders to be interviewed include:
   - UNIDO Management and staff involved in the projects; and
   - Representatives of donors, counterparts and stakeholders.

(c) Whenever possible, **field visits** to project sites in the involved countries.

Due to the persisting emergency caused by the virus Covid-19, it shall be noted that restrictions on international travels are still in place at the time this ToR is drafted, therefore the field visits should be carried out by the national consultants only.

- On-site observation of results achieved by the project, including interviews of actual and potential project beneficiaries.
- Interviews with the relevant UNIDO Country Office(s) representative to the extent that he/she was involved in the project, and the project’s management members and the various national [and sub-regional] authorities dealing with project activities as necessary.

\textsuperscript{15} For more information on Theory of Change, please see chapter 3.4 of UNIDO Evaluation Manual
Online data collection methods such as surveys will be used to the extent possible.

6. Evaluation key questions and criteria

The key evaluation questions, to be further refined at the level of Inception Report, are the following:

1) Have they done the right things in the context of PCB issues in the respective countries? How well have the projects fit with other policies and interventions that affect PCBs in the respective countries?
2) What are the projects’ key results (outputs, outcome and impact)? To what extent have the expected results been achieved or are likely to be achieved? To what extent are the achieved results to be sustained after the completion of the projects?
3) What are the key drivers and barriers to achieve the long term objectives? To what extent have the projects helped put in place the conditions likely to address the drivers, overcome barriers and contribute to the long term objectives?
4) What are the key risks (e.g. in terms of financial, socio-political, institutional and environmental risks) and how these risks may affect the continuation of results after the projects end?
5) What lessons can be drawn from the successful and unsuccessful practices in designing, implementing and managing the analysed projects?
6) How far have the Mid-term reviews conducted on the cluster projects been used to ensure the success of the projects in the second phase of implementation?
7) Are there tangible differences with regard to the evaluation criteria between MSPs and FSPs?
8) Were lessons learned from previous projects in the countries and the POPs thematic area sufficiently taken into account while designing the cluster projects?
9) Was the gender dimension given sufficient attention at both project design and implementation?

The table below provides the key evaluation criteria to be assessed by the evaluation. The details questions to assess each evaluation criterion are in annex 2 of UNIDO Evaluation Manual.

<table>
<thead>
<tr>
<th>#</th>
<th>Evaluation criteria</th>
<th>Mandatory rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Progress to impact</td>
<td>Yes</td>
</tr>
<tr>
<td>B</td>
<td>Project design</td>
<td>Yes</td>
</tr>
<tr>
<td>1</td>
<td>Overall design</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Logframe</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 2. Project evaluation criteria
<table>
<thead>
<tr>
<th>#</th>
<th>Evaluation criteria</th>
<th>Mandatory rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Project performance</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Relevance</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Effectiveness</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>Coherence</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td>Efficiency</td>
<td>Yes</td>
</tr>
<tr>
<td>5</td>
<td>Sustainability of benefits</td>
<td>Yes</td>
</tr>
<tr>
<td>D</td>
<td>Cross-cutting performance criteria</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Gender mainstreaming</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>M&amp;E:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✓ M&amp;E design</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>✓ M&amp;E implementation</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>Results-based Management (RBM)</td>
<td>Yes</td>
</tr>
<tr>
<td>E</td>
<td>Performance of partners</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>UNIDO</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>National counterparts</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>Donor</td>
<td>Yes</td>
</tr>
<tr>
<td>F</td>
<td>Overall assessment</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Yes</td>
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</tbody>
</table>

**Performance of partners**

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

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

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

a. **Need for follow-up**: e.g. in instances financial mismanagement, unintended negative impacts or risks.

b. **Materialization of co-financing**: e.g. the extent to which the expected co-financing materialized, whether co-financing was administered by the project management or by some other organization; whether and how shortfall or excess in co-financing affected project results.
c. **Environmental and Social Safeguards**: appropriate environmental and social safeguards were addressed in the projects’ design and implementation, e.g. preventive or mitigation measures for any foreseeable adverse effects and/or harm to environment or to any stakeholder.

7. **Rating system**

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

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

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8. Evaluation process

The cluster evaluation will be conducted from June 2022 to December 2022. The evaluation will be implemented in five phases which are not strictly sequential, but in many cases iterative, conducted in parallel and partly overlapping:

1) Inception phase: The evaluation team will prepare the inception report providing details on the evaluation methodology and include an evaluation matrix with specific issues for the evaluation to address; the specific site visits will be determined during the inception phase, taking into consideration the findings and recommendations of the mid-term reviews – whenever available – and the current limitations imposed by the Covid-19 pandemic.
2) Desk review and data analysis;
3) Interviews, survey and literature review;
4) Country visits (whenever possible) and debriefing to key relevant stakeholders in the field;
5) Data analysis, report writing and virtual debriefing to UNIDO staff at the Headquarters; and
6) Final report issuance and distribution, and publication of the final evaluation report in UNIDO website.

9. Time schedule and deliverables

The evaluation is scheduled to take place from April 2022 to August 2022. The data collection phase from the field is tentatively planned for May 2022 but will be tailored on the different stages of projects’ implementation and specific requirements by the different countries. At the end of the data collection, the evaluation team will present the preliminary findings for key relevant stakeholders involved in the project in the country. The tentative timelines are provided in the table below.

After the debriefing to the national stakeholders, the evaluation team will brief UNIDO Headquarters and the internal stakeholders involved for debriefing and presentation of the preliminary findings of the terminal evaluation. Online presentation is to be arranged in case the visit cannot take place.

After this phase and the factual validation, a synthesis aggregating the comparable findings from the different projects is expected to be produced by the team. 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 Project
Managers (PMs), UNIDO Independent Evaluation Division, the UNIDO GEF Coordinator and GEF OFP and other stakeholders for comments. The ET leader is expected to revise the draft TE report based on the comments received, edit the language and submit the final version of the TE report in accordance with UNIDO ODG/EIO/EID standards.

Table 4. Tentative timelines

<table>
<thead>
<tr>
<th>Timelines</th>
<th>Tasks</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2022</td>
<td>Desk review and writing of inception report</td>
</tr>
<tr>
<td>June 2022</td>
<td>Online briefing with UNIDO project manager and the project teams based in Vienna.</td>
</tr>
<tr>
<td>July-August 2022</td>
<td>Data collection from the Field</td>
</tr>
<tr>
<td>August 2022</td>
<td>Debriefing in Vienna</td>
</tr>
<tr>
<td></td>
<td>Preparation of first draft evaluation report</td>
</tr>
<tr>
<td>September 2022</td>
<td>Internal peer review of the report by UNIDO’s Independent Evaluation Division and other stakeholder comments to draft evaluation report</td>
</tr>
<tr>
<td>October 2022</td>
<td>Preparation of the synthesis of aggregated findings from the clustered evaluations</td>
</tr>
<tr>
<td>November 2022</td>
<td>Review of the Synthesis and the first draft</td>
</tr>
<tr>
<td>December 2022</td>
<td>Final evaluation report</td>
</tr>
</tbody>
</table>

10. Evaluation team composition

Given the number of projects included in the Evaluation and the current travel restrictions in place, the evaluation team will be composed of a mix of two international evaluation consultants - one acting as the team leader - and one national evaluation consultant per country, supported by a Cluster Evaluation coordinator from UNIDO IED. The evaluation team members will possess a mixed skill set and experience including evaluation, relevant technical expertise, social and environmental safeguards, and gender. All the consultants will be contracted by UNIDO pooling funds from the projects’ evaluation budgets.

The tasks of each team member are specified in the job descriptions annexed to these terms of reference. The evaluation team is required to provide information relevant for follow-up studies, including terminal evaluation verification on request to the GEF partnership up to three years after completion of the terminal evaluation.

According to UNIDO Evaluation Policy, members of the evaluation team must not have been directly involved in the design and/or implementation of the project under evaluation.
The UNIDO Project Manager and the project management team in the different countries involved will support the evaluation team. The UNIDO GEF Coordinator and GEF Operational Focal Point (OFP) will be briefed on the evaluation and provide support to its conduct. GEF OFP(s) will, where applicable and feasible, also be briefed and debriefed at the start and end of the evaluation mission.

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

11. Reporting

Inception report

This Terms of Reference (ToR) provides some information on the evaluation methodology, but this should not be regarded as exhaustive. After reviewing the project documentation and initial interviews with the project manager, the Team Leader will prepare, in collaboration with the team member, a short inception report that will operationalize the ToR relating to the evaluation questions and provide information on what type and how the evidence will be collected (methodology). It will be discussed with and cleared by the responsible UNIDO Evaluation Manager.

The Inception Report will focus on the following elements: preliminary project theory model(s); elaboration of evaluation methodology including quantitative and qualitative approaches through an evaluation framework ("evaluation matrix"); division of work between the evaluation team members; field mission plan, including places to be visited, people to be interviewed and possible surveys to be conducted and a debriefing and reporting timetable. The draft inception report will also include a suggested outline of the overall synthesis report (see below), including the specific evaluation questions for the cross-cutting analysis.

Evaluation report format and review procedures

All selected projects will be evaluated meeting GEF minimum requirements (see Annex I).

In terms of final outputs, one short evaluation report per project will be produced, including project performance ratings according to OECD-DAC criteria.

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17 The evaluator will be provided with a Guide on how to prepare an evaluation inception report prepared by UNIDO Independent Evaluation Division.
In addition, a final synthesis report of the evaluation findings of the cluster projects, inter-project comparisons and additional evaluation aspects will also be produced.

The draft reports will be delivered to UNIDO Independent Evaluation Division (with a suggested report outline) and circulated to UNIDO staff and key stakeholders associated with the project for factual validation and comments. Any comments or responses, or feedback on any errors of fact to the draft report will be sent to UNIDO’s Independent Evaluation Division for collation and onward transmission to the evaluation team who will be advised of any necessary revisions. On the basis of this feedback, and taking into consideration the comments received, the evaluation team will prepare the final version of the terminal evaluation report.

The evaluation team will present its preliminary findings to the local stakeholders at the end of the field visit and take into account their feedback in preparing the evaluation report. A presentation of preliminary findings will take place at UNIDO HQ afterwards.

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

Findings, conclusions and recommendations should be presented in a complete, logical and balanced manner. The evaluation report shall be written in English and follow the outline given by UNIDO Independent Evaluation Division.

12. Quality assurance

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

The quality of the evaluation report will be assessed and rated against the criteria set forth in the Checklist on evaluation report quality. The applied evaluation quality assessment criteria are used as a tool to provide structured...
feedback. UNIDO Independent Evaluation Division should ensure that the evaluation report is useful for UNIDO in terms of organizational learning (recommendations and lessons learned) and is compliant with UNIDO’s evaluation policy and these terms of reference. The draft and final evaluation report are reviewed by UNIDO Independent Evaluation Division, which will submit the final report to the GEF Evaluation Office and circulate it within UNIDO together with a management response sheet.
9.5 Annex 1: Job descriptions

<table>
<thead>
<tr>
<th>Title:</th>
<th>Senior evaluation consultant, team leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Duty Station and Location:</td>
<td>Home-based</td>
</tr>
<tr>
<td>Missions:</td>
<td>Not foreseen at this stage</td>
</tr>
<tr>
<td>Start of Contract (EOD):</td>
<td>July 2022</td>
</tr>
<tr>
<td>End of Contract (COB):</td>
<td>December 2022</td>
</tr>
<tr>
<td>Number of Working Days:</td>
<td>70 working days spread over the above mentioned period</td>
</tr>
</tbody>
</table>

1. ORGANIZATIONAL CONTEXT

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

2. PROJECT CONTEXT

The international evaluation consultant/team leader will evaluate the projects in accordance with the evaluation-related terms of reference (TOR) and provide a final report comprehensive of the single projects’ ratings and a final synthesis. They will perform, inter alia, the following main tasks:
<table>
<thead>
<tr>
<th>MAIN DUTIES</th>
<th>Concrete/ Measurable Outputs to be achieved</th>
<th>Working Days</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data). Define technical issues and questions to be addressed by the national technical evaluator prior to the field visits – when possible. Determine key data to collect in the field and adjust the key data collection instrument if needed. In coordination with the project managers, the project management teams and the national technical evaluators, determine the suitable sites to be visited and stakeholders to be interviewed.</td>
<td>• Adjusted table of evaluation questions, depending on country specific context; • Draft list of stakeholders to interview during the field missions. • Identify issues and questions to be addressed by the local technical expert</td>
<td>8 days</td>
<td>Home-based</td>
</tr>
<tr>
<td>2. Prepare an inception report which streamlines the specific questions to address the key issues in the TOR, specific methods that will be used and data to collect in the field visits, confirm the evaluation methodology, draft theory of change, and tentative agenda for field work. Provide guidance to the national evaluator to prepare initial draft of output analysis and review technical inputs prepared by national evaluator, prior to field mission.</td>
<td>• Draft theory of change and Evaluation framework to submit to the Evaluation Manager for clearance. • Guidance to the national evaluator to prepare output analysis and technical reports</td>
<td>5 days</td>
<td>Home based</td>
</tr>
<tr>
<td>3. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders at UNIDO HQ (included is preparation of presentation).</td>
<td>• Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to interview and site visits); mission planning; • Division of evaluation tasks with the National Consultant.</td>
<td>1 day</td>
<td>Through Skype/Zoom</td>
</tr>
<tr>
<td>4. Coordinate the field missions (whenever possible) conducted by the national</td>
<td>• Organise and participate remotely – whenever possible - to meetings with relevant</td>
<td>15 days</td>
<td>(specific project site to be</td>
</tr>
<tr>
<td>MAIN DUTIES</td>
<td>Concrete/ Measurable Outputs to be achieved</td>
<td>Working Days</td>
<td>Location</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td>consultants in the different countries involved.</td>
<td>project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications; • Agreement with the National Consultants on the structure and content of the evaluation reports and the distribution of writing tasks; • Evaluation presentation of the evaluation’s preliminary findings, conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the missions.</td>
<td>1 day</td>
<td>identified at inception phase)</td>
</tr>
<tr>
<td>5. Present overall findings and recommendations to the stakeholders at UNIDO HQ</td>
<td>• After field missions: Presentation slides, feedback from stakeholders obtained and discussed.</td>
<td>1 day</td>
<td>Through Skype/Zoom</td>
</tr>
<tr>
<td>6. Prepare the evaluation report, with inputs from the National Consultant, according to the TOR; Coordinate the inputs from the National Consultant and combine with their own inputs into the draft evaluation report. Share the evaluation report with UNIDO HQ and national stakeholders for feedback and comments.</td>
<td>• Draft evaluation report.</td>
<td>25 days</td>
<td>Home-based</td>
</tr>
<tr>
<td>7. Prepare a final Synthesis of findings stemming from the different projects analysed.</td>
<td>• Draft Synthesis report.</td>
<td>10 days</td>
<td>Home-based</td>
</tr>
<tr>
<td>8. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and edit the language and</td>
<td>• Final evaluation report.</td>
<td>5 days</td>
<td>Home-based</td>
</tr>
</tbody>
</table>
MINIMUM ORGANIZATIONAL REQUIREMENTS

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

Technical and functional experience:
- Minimum of 15-20 years’ experience in evaluation of development projects and programmes
- Sound knowledge of
- Knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards
- Experience in the evaluation of GEF projects and knowledge of UNIDO activities an asset
- Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks
- Familiarity with gender analysis tools and methodologies an asset
- Working experience in developing countries

Languages:
Fluency in written and spoken English is required. All reports and related documents must be in English and presented in electronic format.

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

REQUIRED COMPETENCIES
Core values:
WE LIVE AND ACT WITH INTEGRITY: work honestly, openly and impartially.
WE SHOW PROFESSIONALISM: work hard and competently in a committed and responsible manner.
WE RESPECT DIVERSITY: work together effectively, respectfully and inclusively, regardless of our differences in culture and perspective.

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

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

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

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

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

4. PROJECT CONTEXT

The international evaluation consultant/team leader will evaluate the projects in accordance with the evaluation-related terms of reference (TOR) and provide a final report comprehensive of the single projects’ ratings and a final synthesis. They will perform, inter alia, the following main tasks:
## MAIN DUTIES

<table>
<thead>
<tr>
<th>MAIN DUTIES</th>
<th>Concrete/ Measurable Outputs to be achieved</th>
<th>Working Days</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data). Define technical issues and questions to be addressed by the national technical evaluator prior to the field visits – when possible. Determine key data to collect in the field and adjust the key data collection instrument if needed. In coordination with the project managers, the project management teams and the national technical evaluators, determine the suitable sites to be visited and stakeholders to be interviewed.</td>
<td>• Adjusted table of evaluation questions, depending on country specific context; • Draft list of stakeholders to interview during the field missions. • Identify issues and questions to be addressed by the local technical expert</td>
<td>8</td>
<td>Home-based</td>
</tr>
<tr>
<td>2. Prepare an inception report which streamlines the specific questions to address the key issues in the TOR, specific methods that will be used and data to collect in the field visits, confirm the evaluation methodology, draft theory of change, and tentative agenda for field work. Provide guidance to the national evaluator to prepare initial draft of output analysis and review technical inputs prepared by national evaluator, prior to field mission.</td>
<td>• Draft theory of change and Evaluation framework to submit to the Evaluation Manager for clearance. • Guidance to the national evaluator to prepare output analysis and technical reports</td>
<td>5</td>
<td>Home based</td>
</tr>
<tr>
<td>3. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders at UNIDO HQ (included is preparation of presentation).</td>
<td>• Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to interview and site visits); mission planning; • Division of evaluation tasks with the National Consultant.</td>
<td>1</td>
<td>Through Skype/Zoom</td>
</tr>
<tr>
<td>4. Coordinate the field missions (whenever possible) conducted by the national</td>
<td>• Organise and participate remotely – whenever possible - to meetings with relevant</td>
<td>20</td>
<td>(specific project site to be</td>
</tr>
<tr>
<td>MAIN DUTIES</td>
<td>Concrete/ Measurable Outputs to be achieved</td>
<td>Working Days</td>
<td>Location</td>
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<tr>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------</td>
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<td>----------------------------------------</td>
</tr>
<tr>
<td>Consultants in the different countries involved.</td>
<td>Project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications; Agreement with the National Consultants on the structure and content of the evaluation reports and the distribution of writing tasks; Evaluation presentation of the evaluation’s preliminary findings, conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the missions.</td>
<td></td>
<td>Identified at inception phase)</td>
</tr>
<tr>
<td>5. Present overall findings and recommendations to the stakeholders at UNIDO HQ</td>
<td>• After field missions: Presentation slides, feedback from stakeholders obtained and discussed.</td>
<td>1 day</td>
<td>Through Skype/Zoom</td>
</tr>
<tr>
<td>6. Prepare the evaluation report, with inputs from the National Consultant, according to the TOR; Coordinate the inputs from the National Consultant and combine with their own inputs into the draft evaluation report. Share the evaluation report with UNIDO HQ and national stakeholders for feedback and comments.</td>
<td>• Draft evaluation report.</td>
<td>30 days</td>
<td>Home-based</td>
</tr>
<tr>
<td>7. Prepare a final Synthesis of findings stemming from the different projects analysed.</td>
<td>• Draft Synthesis report.</td>
<td>10 days</td>
<td>Home-based</td>
</tr>
<tr>
<td>8. Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and edit the language and</td>
<td>• Final evaluation report.</td>
<td>5 days</td>
<td>Home-based</td>
</tr>
</tbody>
</table>
## MAIN DUTIES

<table>
<thead>
<tr>
<th>Concrete/ Measurable Outputs to be achieved</th>
<th>Working Days</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>form of the final version according to UNIDO standards.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## MINIMUM ORGANIZATIONAL REQUIREMENTS

### Education:

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

### Technical and functional experience:

- Minimum of 15-20 years’ experience in evaluation of development projects and programmes
- Sound knowledge of
- Knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards
- Experience in the evaluation of GEF projects and knowledge of UNIDO activities an asset
- Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks
- Familiarity with gender analysis tools and methodologies an asset
- Working experience in developing countries

### Languages:

Fluency in written and spoken English is required. All reports and related documents must be in English and presented in electronic format.

### Absence of conflict of interest:

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

## REQUIRED COMPETENCIES

### Core values:

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

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

### Core competencies:

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of our UNIDO identity.

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

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

WE THINK OUTSIDE THE BOX AND INNOVATE: To stay relevant, we continuously improve, support innovation, share our knowledge and skills, and learn from one another.
Title: International Evaluation Consultant for LAC region

Main Duty Station and Location: Home-based

Missions: To be decided at Inception phase

Start of Contract (EOD): August 2022

End of Contract (COB): December 2022

Number of Working Days: 50 working days spread over the above mentioned period

5. ORGANIZATIONAL CONTEXT

The United Nations Industrial Development Organization (UNIDO) is the specialized agency of the United Nations that promotes industrial development for poverty reduction, inclusive globalization and environmental sustainability. The mission of UNIDO, as described in the Lima Declaration adopted at the fifteenth session of the UNIDO General Conference in 2013 as well as the Abu Dhabi Declaration adopted at the eighteenth session of UNIDO General Conference in 2019, is to promote and accelerate inclusive and sustainable industrial development (ISID) in Member States. The relevance of ISID as an integrated approach to all three pillars of sustainable development is recognized by the 2030 Agenda for Sustainable Development and the related Sustainable Development Goals (SDGs), which will frame United Nations and country efforts towards sustainable development. UNIDO’s mandate is fully recognized in SDG-9, which calls to “Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation”. The relevance of ISID, however, applies in greater or lesser extent to all SDGs. Accordingly, the Organization’s programmatic focus is structured in four strategic priorities: Creating shared prosperity; Advancing economic competitiveness; Safeguarding the environment; and Strengthening knowledge and institutions.

Each of these programmatic fields of activity contains a number of individual programmes, which are implemented in a holistic manner to achieve effective outcomes and impacts through UNIDO’s four enabling functions: (i) technical cooperation; (ii) analytical and research functions and policy advisory services; (iii) normative functions and standards and quality-related activities; and (iv) convening and partnerships for knowledge transfer, networking and industrial cooperation.
Such core functions are carried out in Departments/Offices in its Headquarters, Regional Offices and Hubs and Country Offices.

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

6. PROJECT CONTEXT

The international evaluation consultant/team leader will evaluate the projects in accordance with the evaluation-related terms of reference (TOR) and provide a final report comprehensive of the single projects’ ratings and a final synthesis. They will perform, inter alia, the following main tasks:

<table>
<thead>
<tr>
<th>MAIN DUTIES</th>
<th>Concrete/Measurable Outputs to be achieved</th>
<th>Working Days</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Review project documentation and relevant country background information (national policies and strategies, UN strategies and general economic data). Define technical issues and questions to be addressed by the national technical evaluator prior to the field visits – when possible. Determine key data to collect in the field and adjust the key data collection instrument if needed. In coordination with the evaluation team leader, project managers, the project management teams and the national technical evaluators, determine the suitable sites to be visited and stakeholders to be interviewed.</td>
<td>• Adjusted table of evaluation questions, depending on country specific context; • Draft list of stakeholders to interview during the field missions. • Identify issues and questions to be addressed by the local technical expert</td>
<td>6 days</td>
<td>Home-based</td>
</tr>
<tr>
<td>2. Briefing with the UNIDO Independent Evaluation Division, project managers and other key stakeholders at UNIDO HQ (included is preparation of presentation).</td>
<td>• Detailed evaluation schedule with tentative mission agenda (incl. list of stakeholders to interview and site</td>
<td>1 day</td>
<td>Through Skype/Zoom</td>
</tr>
<tr>
<td>MAIN DUTIES</td>
<td>Concrete/ Measurable Outputs to be achieved</td>
<td>Working Days</td>
<td>Location</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------</td>
<td>--------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>3. Conduct the field missions (whenever possible).</td>
<td>• Organise and participate remotely – whenever possible - to meetings with relevant project stakeholders, beneficiaries, the GEF Operational Focal Point (OFP), etc. for the collection of data and clarifications; • Agreement with the other international Consultants on the structure and content of the evaluation reports and the distribution of writing tasks; • Evaluation presentation of the evaluation’s preliminary findings, conclusions and recommendations to stakeholders in the country, including the GEF OFP, at the end of the missions.</td>
<td>15 days</td>
<td>(specific project site to be identified at inception phase)</td>
</tr>
<tr>
<td>4. Present overall findings and recommendations to the stakeholders at UNIDO HQ during the team presentation of preliminary findings.</td>
<td>• After field missions: Presentation slides, feedback from stakeholders obtained and discussed.</td>
<td>1 day</td>
<td>Through Skype/Zoom</td>
</tr>
<tr>
<td>5. Prepare the evaluation reports for the two projects, according to the TOR; Coordinate the inputs with the International Consultant and combine with their own inputs into the draft evaluation report.</td>
<td>• Draft evaluation report.</td>
<td>20 days</td>
<td>Home-based</td>
</tr>
<tr>
<td>MAIN DUTIES</td>
<td>Concrete/ Measurable Outputs to be achieved</td>
<td>Working Days</td>
<td>Location</td>
</tr>
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<td>-------------</td>
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<tr>
<td>Share the evaluation report with UNIDO HQ and national stakeholders for feedback and comments.</td>
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<tr>
<td>6. Participate in the preparation of the final Synthesis of findings stemming from the different projects analysed.</td>
<td>• Draft Synthesis report.</td>
<td>5 days</td>
<td>Home-based</td>
</tr>
<tr>
<td>7. 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.</td>
<td>• Final evaluation report.</td>
<td>2 days</td>
<td>Home-based</td>
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<tr>
<td>Tot</td>
<td></td>
<td></td>
<td>50 days</td>
</tr>
</tbody>
</table>

**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 evaluation of development projects and programmes
- Sound knowledge of PCBs and UNIDO’s portfolio
- Knowledge about GEF operational programs and strategies and about relevant GEF policies such as those on project life cycle, M&E, incremental costs, and fiduciary standards
- Experience in the evaluation of GEF projects and knowledge of UNIDO activities an asset
- Knowledge about multilateral technical cooperation and the UN, international development priorities and frameworks
- Familiarity with gender analysis tools and methodologies an asset
- Working experience in developing countries

**Languages:**
Fluency in written and spoken English and Spanish is required. All reports and related documents must be in English and presented in electronic format.

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

REQUIRED COMPETENCIES

Core values:
WE LIVE AND ACT WITH INTEGRITY: work honestly, openly and impartially.
WE SHOW PROFESSIONALISM: work hard and competently in a committed and responsible manner.
WE RESPECT DIVERSITY: work together effectively, respectfully and inclusively, regardless of our differences in culture and perspective.

Core competencies:
WE FOCUS ON PEOPLE: cooperate to fully reach our potential – and this is true for our colleagues as well as our clients. Emotional intelligence and receptiveness are vital parts of our UNIDO identity.
WE FOCUS ON RESULTS AND RESPONSIBILITIES: focus on planning, organizing and managing our work effectively and efficiently. We are responsible and accountable for achieving our results and meeting our performance standards. This accountability does not end with our colleagues and supervisors, but we also owe it to those we serve and who have trusted us to contribute to a better, safer and healthier world.
WE COMMUNICATE AND EARN TRUST: communicate effectively with one another and build an environment of trust where we can all excel in our work.
WE THINK OUTSIDE THE BOX AND INNOVATE: To stay relevant, we continuously improve, support innovation, share our knowledge and skills, and learn from one another.
Title: National evaluation consultant

Main Duty Station and Location: Home-based

Mission/s to: Travel to potential sites within [country name]

Start of Contract: July 2022

End of Contract: December 2022

Number of Working Days: 30 days spread over the above mentioned period

ORGANIZATIONAL CONTEXT

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

PROJECT CONTEXT

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

The national evaluation consultant will evaluate the projects according to the terms of reference (TOR) under the leadership of the team leader (international evaluation consultant). S/he will perform the following tasks:
<table>
<thead>
<tr>
<th>MAIN DUTIES</th>
<th>Concrete/measurable outputs to be achieved</th>
<th>Expected duration</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desk review</td>
<td>Evaluation questions, questionnaires/interview guide, logic models adjusted to ensure understanding in the national context; A stakeholder mapping, in coordination with the project team.</td>
<td>4 days</td>
<td>Home-based</td>
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<tr>
<td>Review and analyze project documentation and relevant country background information; in cooperation with the team leader, determine key data to collect in the field and prepare key instruments in English (questionnaires, logic models); If needed, recommend adjustments to the evaluation framework and Theory of Change in order to ensure their understanding in the local context.</td>
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<td>Carry out preliminary analysis of pertaining technical issues determined with the Team Leader. In close coordination with the project staff team verify the extent of achievement of project outputs prior to field visits. Develop a brief analysis of key contextual conditions relevant to the project</td>
<td>• Report addressing technical issues and question previously identified with the Team leader • Tables that present extent of achievement of project outputs • Brief analysis of conditions relevant to the project</td>
<td>4 days</td>
<td>Home-based</td>
</tr>
<tr>
<td>Coordinate the evaluation mission agenda, ensuring and setting up the required meetings with project partners and government counterparts, and organize and lead site visits, in close cooperation with project staff in the field.</td>
<td>• Detailed evaluation schedule. • List of stakeholders to interview during the field missions.</td>
<td>2 days</td>
<td>Home-based</td>
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<tr>
<td>Coordinate and conduct the field mission with the team leader in cooperation with the Project Management Unit, where required; Consult with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks. Conduct the translation for the Team Leader, when needed.</td>
<td>• Presentations of the evaluation’s initial findings, draft conclusions and recommendations to stakeholders in the country at the end of the mission. • Agreement with the Team Leader on the structure and content of the evaluation report and the distribution of writing tasks.</td>
<td>7 days (including travel days)</td>
<td>In XXX</td>
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<tr>
<td>Draft evaluation report with findings and recommendations stemming from the</td>
<td>• Short evaluation report drafted</td>
<td>13 days</td>
<td>Home-based</td>
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</table>
MAIN DUTIES

Concrete/measurable outputs to be achieved

- analysis and the field mission (when applicable).
- Follow up with stakeholders regarding additional information promised during interviews
- Revise the draft project evaluation report based on comments from UNIDO Independent Evaluation Division and stakeholders and proof read the final version.

MINIMUM ORGANIZATIONAL REQUIREMENTS

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

Technical and functional experience:
- Excellent knowledge and competency in the field of POPs and PCBs in particular.
- Evaluation experience, including evaluation of development cooperation in developing countries is an asset
- Exposure to the development needs, conditions and challenges in their country and region.
- Familiarity with gender analysis tools and methodologies and asset
- Familiarity with the institutional context of the project is desirable.

Languages: Fluency in written and spoken English and in local language 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.

REQUIRED COMPETENCIES

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Annex II – Guidelines for Terminal Evaluation (TE) report preparation and submission to the GEF

- Listed below, you will find five questions on which Agencies need to report when submitting TEs in the GEF Portal (Annex 1). The information provided should be in the form of few solid paragraphs, up to a page per question maximum. Tables, graphs, etc. are supported by the GEF Portal and can be included in the entry, if applicable.
- In addition to this, at TE stage, Agencies are expected to provide update on co-financing (Annex 2) and core indicators (Annex 3).
- The final version of the TE report itself will also be uploaded and can be referenced in the provided responses. It is strongly advised to incorporate the below annexes in the Terms of Reference (TOR) for the TE exercise and have the information readily available (to be directly copy/pasted in the Portal):

Annex 1: Answer to five GEF questions needed for GEF Coordination Unit to insert in the GEF Portal when submitting TE reports:

- **Main Findings** of the TE (this could be copy-pasted from the outcomes of the report);
- Information on progress, challenge and outcomes regarding engagement of **stakeholders** in the project/program as evolved from the time of the MTR (Mid-term Review) and based on the description included in the Stakeholder Engagement Plan or equivalent documentation submitted at CEO Endorsement/Approval;
- Information on completed **gender**-responsive measures and, if applicable, actual gender result areas as documented at CEO Endorsement/Approval including gender-sensitive indicators contained in the project results framework or gender action plan or equivalent as well as lesson learned if available;
- Information on the project's completed **Knowledge Management Approach** that was approved at CEO Endorsement/Approval;
- **Lessons learned**.

Annex 2. Update on Co-financing table (Table C) since Mid-Term Review (MTR, if applicable), if not applicable, then since CEO Approval/Endorsement (an update to the figures as submitted/approved at CEO stage is expected).

**Annex 3.** Update on Core-indicators since MTR (if applicable), if not applicable, then since CEO Approval/Endorsement. For older projects with Tracking Tools (TT), an update on the TT since CEO Approval/Endorsement and MTR (if applicable) would be required.
Please note that the information provided in Annex 2 and Annex 3 **has to build on the figures** submitted as part of the CEO Approval/Endorsement and the MTR (if applicable).

Once the TE report is finalized and **technically cleared** by the line manager, kindly submit it jointly with Annexes 1-3 to GEF Coordination Unit for further reporting to the GEF.