

Comprehensive Environmentally Sound Management of PCSs in Montenegro  
Terminal Evaluation report



# Comprehensive Environmentally Sound Management of PCBs in Montenegro

**UNDP/GEF Project**  
(UNDP PIMS ID: 5562)  
(GEF ID No: 5689)

## TERMINAL EVALUATION REPORT

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## ACRONYMS AND ABBREVIATIONS

PCB	Polychlorinated Biphenyl
POP	Persistent Organic Pollutant
MoSDT	Ministry of Sustainable Development and Tourism
NIP	Stockholm Convention National Implementation Plan
KAP	Kombinat aluminijuma Podgorica – alternatively Uniprom KAP
EPCG	Elektroprivreda Crne Gore AD
CEDIS	Crnogorski Elektroprenosni Sistem
CETI	Centar za Ekotoksikoloska Ispitivanja
MoSDT	Ministry of Sustainable Development and Tourism
MoESPU	Ministry of Ecology, Spatial Planning and Urbanisation
MP	Monitoring Plan
MYWP	Multi Year Work Plan
TE	Terminal Evaluation
ProDoc	Project Document
PIR	Project Implementation Report
PSC	Project Steering Committee
RF	Result Framework
RPSC	Regional Policy Steering Committee
RTA	UNDP-GEF Regional Technical Advisor
SDG	Sustainable Development Goals
SESP	Social and Environmental Screening Procedure
ToC	Theory of Change
ToR	Terms of Reference
UNDP	United Nations Development Program
UNEP	UN Environment Program

# EXECUTIVE SUMMARY

## PROJECT INFORMATION TABLE

<b>Project title</b>	<b>Comprehensive environmentally sound management of PCBs in Montenegro</b>				
GEF Project ID	9045	UNDP project ID (PIMS)	5562	Country	Montenegro
GEF Agency & Executing partner	UNDP	GEF Focal Areas	Chemicals and Wastes	Region	Balkans
PIF Approval	4 June 2015	UNDP Atlas Business Unit, Award ID, Project ID:		MNE10, 00088794, 00095303	
CEO Endorsement	14 October 2016	GEF Operational Programme or Strategic Priorities/Objectives:		CW-1 Program 2: Support enabling activities and promote their integration into national budgets and planning processes, national and sector policies and actions and global monitoring CW-2 Program 3: Reduction and elimination of POPs	
ProDoc Signature	16 January 2017	<b>Financial Information</b>			
Inception Workshop	26 May 2017	PDF/PPG	at approval (US\$M)	at PDF/PPG completion (US\$M)	
Date Project Manager hired:	01 January 2017	GEF PDF/PPG grants for project preparation	100 000	99 987.84	
Date of the Mid-term Review	31 October 2019	Co-financing for project preparation	0	0	
Extension request	3 June 2021	Project	At CEO Endorsement (USD)	At the TE (USD)	
Extension approval	10 June 2021	GEF Trust Fund	3 500 000	3 233 739.19	
Expected date of Terminal Evaluation	30 September 2022	UNDP Contribution	50 000	50 000	
End date of project	31 December 2022	Government	200 000	0	

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Trust Fund:	GEF TF	Other Partners	19 553 691	15 644 000
Implementing Partner (GEF Executing Entity):	Direct Implementation Modality UNDP	Total co-financing	19 803 691	15 703 000
Geospatial coordinates of project sites:	-	Total budget	23 303 691	18 927 739.19
NGOs/CBOs involvement:	NGO Ozone; NGO Green Home			
Private sector involvement:	Uniprom-KAP ; CEDIS , HEMOSAN ; port of bar, port of Adria, coal mine in Pljevlja; CETI (academic)			

## PROJECT DESCRIPTION

Montenegro still possesses and operates equipment containing PCBs and has a considerable amount of PCB waste stored on its territory. The country has been a state party to the Stockholm Convention since March 2011 and in response to Article 7 the country developed its National Implementation Plan (NIP) in November 2013. After institutional strengthening, PCB management and elimination of equipment containing PCBs is the highest priority identified in the NIP. Montenegro is also a Party of the Basel Convention (on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal) since 1999. However, several barriers exist to Environmentally Safe Management of PCBs in Montenegro, and to putting in place proper disposal practices that avoid release of PCBs in the environment:

- a. A comprehensive national PCB inventory is missing.
- b. Information on cross-contaminated equipment is scarce and the extent of PCB oil contamination spread is not completely known. Most on the information available concerns only pure PCB equipment.
- c. Aging equipment is still in operation.
- d. Some PCB equipment holders have gone bankrupt, posing questions of liability for orphan PCB equipment and waste.
- e. There is limited government capacity for monitoring and inspection and therefore low enforcement of national regulation.
- f. PCB equipment holders do not keep updated records of PCB equipment and waste.
- g. There is neither national disposal technologies or facilities, nor national know-how for comprehensive PCB management.

The project aims to address these barriers and has as an objective: the comprehensive identification and disposal/treatment of PCB contaminated equipment and waste in the country.

It aims to:

- 1) Increase national PCB management capacities and the enforcement of legislation,

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- 2) Increase the industry and general awareness,
- 3) Engage stakeholders,
- 4) Strengthen the reliability of information through updating the PCB inventory, and
- 5) Provide know-how and financial support on the technologies for the disposal of PCB equipment.

Activities are being implemented under four Components:

- Component 1. Capacity strengthening on PCB management,
- Component 2. PCB Inventory, planning and establishment of public-private partnership,
- Component 3. Environmentally Sound Management (ESM) of PCBs, and
- Component 4. Monitoring, Learning, Adaptive Feedback and Evaluation.

The project supports the country with the necessary technical and financial assistance to ensure that all the remaining PCBs in the country (estimated in not less than 900 tons of PCB contaminated equipment and waste) are identified and disposed of.

The project is implemented side by side with the relevant institutional and industrial stakeholders, i.e. the Ministry for Sustainable Development and Tourism, EPCG, KAP companies and other confirmed or potential holders of equipment contaminated by or containing PCB.

Although the project expects to solve all the remaining PCBs issues in the country, it will ensure that enough capacity for the sound management of PCB is built for the management of any further PCBs identified after project's closure.

Implementation of the project is done by a UNDP Project Management Unit; a Project Board comprising the national Government partner Ministry of Environment, provides supervision and guidance.

The project started in 2017 and was designed to run for five years. Delays in project implementation and Covid-19 disruptions to operations resulted in a no-cost extension being granted in June 2021, for 11.5 months, until end of December 2022.

## EVALUATION RATINGS TABLE

**Table 1: Evaluation ratings table**

Criteria	Evaluation Criteria	Evaluator's Rating	Comments and observations
<b>Monitoring &amp; Evaluation</b>	Design at entry	Moderately Satisfactory (MS)	The M&E plan is basic, but roles and responsibilities were well-articulated. Baseline conditions were not described in the M&E plan (but in the RF). The M&E plan does not include evaluation studies to assess results. The M&E plan identified responsibilities, appropriate time frames, data sources and collection methods. The indicators in the M&E plan run parallel to

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			those in the RF. The indicators in the MYWP and the RF are not aligned
	Implementation	Highly Satisfactory (HS)	The Multi-Annual Work Plan was used as a tool for monitoring project progress towards results, rather than the RF. Mandatory GEF M&E requirements were fulfilled
	Overall assessment of M&E	Satisfactory (S)	<p>Though not always filling out all (sections of) required monitoring documents, the PMU was de facto closely and effectively monitoring project activities and progress, and kept the Project Board, as well as the UNDP hierarchy informed in a transparent and detailed way (further substantiated by interviewees).</p> <p>The Project Board fulfilled its supervisory and guidance function.</p>
<b>Overall oversight and implementation execution</b>	Oversight	Highly Satisfactory (HS)	<p>The PMU team was said to communicate in a timely, transparent and effective way to the project board, and to put in considerable effort to facilitate smooth operation and collaboration between the project partners. From the available evidence, the TE team assesses that there was an appropriate focus on results and timeliness, and an appropriate use of funds, procurement and contracting of goods and services. Risks were managed appropriately, and timely, and the PIRs testify to candor and realism in annual reporting. Management of environmental and social risks as identified through the UNDP SESP and implementation of associated safeguards requirements (assessments, management plans; if any) was done appropriately. Interviewees expressed their appreciation for the management team of the project</p>
	Implementation	Highly satisfactory (HS)	
	Overall project execution	Highly Satisfactory (HS)	
<b>Progress towards objective and expected outcomes</b>	Project Objective	Highly satisfactory	Overall project objectives achieved, some over achieved
	Outcome 1	Highly satisfactory	7 out of 9 indicators are HS
	Outcome 2	Satisfactory	3 out of 6 indicators are HS, 2 S and 1 MU
	Outcome 3	Satisfactory	2 indicators out of 5 are HS, 2 S and 1 MS
	Outcome 4	Satisfactory	One indicator HS and one MS
<b>Relevance</b>		Highly Satisfactory	The project was highly relevant for the country and connected well with ongoing efforts on the government and the industry's behalf. In spite of spending considerable effort, the general public

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			showed little interest in the project or PCB/chemical issues in general.
<b>Effectiveness</b>		Highly Satisfactory	The management of the project, project activities, and the collaboration between all institutions involved was very effective.
<b>Efficiency</b>		Highly Satisfactory	Resources were managed very efficiently, budget saved on some activities was repurposed for financing extra activities.
<b>Overall outcome</b>		Highly Satisfactory	Based on the above
<b>Sustainability</b>	Financial	Likely	The project provided a comprehensive solution to the PCB issue in Montenegro. It effectively cleaned up almost all PCBs in the country and put in place a framework and process for dealing with (and destruction of) the residual PCB waste. An exhaustive and online dynamic PCB inventory was established. Only very little amounts remain, and hence funding needs to deal with these are small compared to the project.
	Socio-economic	Likely	PCBs cleaned up, there are very few social or political risks that can undermine the longevity of project outcomes. High stakeholder ownership, institutional and legal framework in place. Lessons learned to be documented and communicated more. potential for both short and longer terms sustained gender results
	Institutional framework and governance	Likely	Official guidance documents were put in place by the project, as well as different pieces of relevant legislation. Governmental actors were trained, and capacities built, relevant Montenegrin companies were associated with the project. , the conceptual approach and the institutional collaboration example set by the project have great potential to inform future projects dealing with hazardous waste or chemicals in the country
	Environmental	Likely	The project's outcomes guarantee a solid framework for dealing with any residual PCB waste remaining in the country. No accidents or spillages occurred during project activities. There are no environmental factors that could undermine the future flow of project environmental benefits.
	Overall likelihood	Likely	Based on the above

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The rating scales used in the TE report are described in the below table.

**Table 2: Ratings scale overview table**

Ratings for Outcomes, Effectiveness, Efficiency, M&E, Implementation/Oversight, Execution, Relevance	Sustainability ratings
6 = Highly Satisfactory (HS): exceeds expectations and/or no shortcomings	
5 = Satisfactory (S): meets expectations and/or no or minor shortcomings	4 = Likely (L): negligible risks to sustainability
4 = Moderately Satisfactory (MS): more or less meets expectations and/or some shortcomings	3 = Moderately Likely (ML): moderate risks to sustainability
3 = Moderately Unsatisfactory (MU): somewhat below expectations and/or significant shortcomings	2 = Moderately Unlikely (MU): significant risks to sustainability
2 = Unsatisfactory (U): substantially below expectations and/or major shortcomings	1 = Unlikely (U): severe risks to sustainability
1 = Highly Unsatisfactory (HU): severe shortcomings	Unable to Assess (U/A): Unable to assess the expected incidence and magnitude of risks to sustainability
Unable to Assess (U/A): available information does not allow an assessment	

## SUMMARY OF FINDINGS, CONCLUSIONS AND LESSONS LEARNED

The project is in line with national priorities and remained **relevant** throughout its implementation period. It provided technical and financial support to the Government of Montenegro and facilitated effective and timely enforcement of the national regulations on PCBs and waste, which requires the phasing out and disposal of PCB containing equipment by 2025. It also allowed further alignment with relevant EU legislation as well as the Stockholm and Basel Conventions.

Overall, the project was **well-designed**. The Results Framework was well integrated, outputs lead to the expected outcomes and contributed to the overall objective of the project. The indicators provided in the RF were relevant, but several of them were not SMART. Initially planned over 5 years, the project was no-cost extended in June 2021, by 11.5 months. The extension allowed the project to deliver and catch up effectively on the delayed and extra identified activities.

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The project identified a broad range of **stakeholders** from national and local government, private sector, civil society and academia at its start. Altogether five training workshops and two study visits were organized by the project and the project succeeded in keeping stakeholders interested and onboard throughout the project. After a recommendation in the MTR, the PMU sought to strengthen connections to secondary (supporting and peripheral) stakeholders that were indirectly affected by the project activities and to raise the general support for the project's interventions. The second half of the project therefore saw a stronger inclusion of academic stakeholders as well as the involvement of the Institute of Public Health. Not all stakeholders were clear on their roles at the beginning of the project, and considerable time and effort were spent clarifying roles, responsibilities, and budgetary issues with CEDIS. However, all interviewees acknowledged that stakeholder relationships worked fine after these initial challenges had been overcome. The project was able to identify those national institutions that possessed the initial skills and knowledge for the technical aspects of the project (CETI, Hemosan, IPH) and managed to build their capacity and international network. Interviewed institutions said that overall, the project had strengthened collaborations between the different stakeholders involved, giving them practical experience on the (joint) implementation of this type of project, and resulting in a better cooperation under other nationally implemented projects.

**A direct implementation by UNDP had been a major advantage**, according to interviewees, as it considerably relieved stretched government resources from managing complex tenders for waste handling, export and disposal. The PMU team was said to have communicated in a timely, transparent, and effective way to the Project Board, and to have put in considerable effort to facilitate smooth operation and collaboration between the project partners. Adaptive management was implemented throughout the project.

The initial **Project Board** was slimmed down in July 2019, to the MoESPU, the two main PCB holders and the PMU, so it could function more effectively. The board saw a reshuffling of several of its members after national elections in 2020, affecting decisions, and resulting in the delay of some activities, according to several interviewees. However, overall, the Project Board executed its supervisory and guidance function fine. The board also proved useful in securing political support for activities and facilitated for example the (legal) clearance to use fast-screening kits for PCB oil thereby significantly reducing the costs of the national PCB inventory establishment process.

The project has been **very effective** in achieving its results and outcomes. The project has managed to establish a full online dynamic inventory of PCB in the country, develop guidelines for ESM of PCB, train relevant stakeholders, adjust national legislation, and draft a national PCB management plan. Targets for sampling were exceeded, as well as those for waste disposal. The target for upgrading storage facilities was only partially achieved, as were the targets for company specific PCB management plans. Staff of PCB holding companies, ministries, participating technical institutes as well as university students were capacity built on technical procedures, guidelines and general PCB management issues. Guidelines were said to have been immediately put in practice by all institutions involved. Interviewees expressed their overall (high) satisfaction with the project, and especially with respect to the capacity building outcomes

The overall project **risk** rating at ProDoc stage was considered as Medium. However, risks were underestimated for the delay in project activities caused by a lack of commitment of PCB owners for final disposal of PCB contaminated equipment by 2020, the encounter of a larger

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(historical) contamination of soils at project sites, the impact of national elections, time needed for obtaining transportation permits for PCB waste, or private sector co-financing commitments. Risks were not systematically reported on or updated in the Critical Risk Management section of the PIRs, but the available evidence suggests that management responses to reduce the main risk identified in the UN SESP framework were duly implemented. Social and environmental risks were monitored, and no accidents occurred during project activities.

Overall, the project was run **very efficiently**. The project made very efficient use of tenders for waste export and disposal. As volumes of waste were lower than originally estimated, the project budget allowed dealing with a large historical contamination detected at one of the project sites and export of more contaminated soil than initially foreseen. The placement of a technical expert at the PMU also proved cost-efficient, as the expert was able to conduct the technical assessment for treatment and disposal of low-concentration contaminated equipment, eliminating the need to hire an additional consultant for this task. Also in the area of legal expertise the project went about efficiently, with the expert assisting the government on the drafting of several pieces of legislation.

The design of the **monitoring** plan was basic and not very effective. The TE team found some inconsistencies between the Results Framework, the Monitoring Plan and the Multi Year Work Plan. The Results Framework was used to inform the annual Project Information reports, whereas the Project Board decisions were based on the Multi Year Work plan. From the evidence presented, the TE team concludes that the PMU was de facto closely and effectively monitoring project activities and progress, and kept the Project Board, as well as the UNDP hierarchy informed in a transparent and detailed way. Interviewees praised the close management and the responsiveness of the PMU to any issues arising. The notes of the PBM testify that the Project Board fulfilled its supervisory and guidance function.

The project has progressed substantially towards its envisioned impact: the reduced exposure of the local and global environment and people to PCBs.

The TE team also deems the project very sustainable, across the board (financial, socio-economic, governance and institutional framework, environmental).

**The TE concludes that** the project Comprehensive Environmentally Sound Management of PCBs in Montenegro was well designed, and was implemented in an adaptive, efficient, and effective way. Management by the UNDP team was praised by all interviewees during the field mission, who highlighted the substantial and successful efforts put in by the team to manage relationships with the two industry partners - the main PCB holding companies in the country. The team furthermore was said to communicate in a transparent and timely manner with all parties involved. Monitoring and evaluation functions were performed to a satisfactory level, and in spite of some membership changes related to the outcome of national elections in 2020, the ministry and the project board performed their oversight and advising functions well. Initial delays in project activities were effectively dealt with by the project management and board in applying for a no-cost 11.5-month extension. In terms of outcomes, even though the construction of one of the foreseen storage facilities might be completed after the project end date, at an overall level, the project achieved higher results than initially planned, with the budget and time foreseen. Finally, the project made effective use of the existing expertise and know-how in the country, by involving relevant national companies and laboratories in the testing (CETI), and handling (Hemosan) of the waste, and by involving the Institute of Public

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Health in conducting a bio tracing study. These involvements have created opportunities for these companies and institutes in other countries in the region.

**Several lessons** can be learned from this project. In terms of design and management, the experiences under the project point towards the importance of establishing and maintaining good relationships and clear and transparent communication channels with the industry, for projects dealing with hazardous waste issues located on private industry property. Furthermore, in complex setups such as post-soviet economies and unclear historical ownership of sites and waste, involvement of both industry and government are necessary to deal with waste in a comprehensive way. Another lesson learned through the project is that a smaller project board makes for more agile adaptive management and does not necessarily mean that other interested parties will lose interest. Again, good communication about project progress and results to all interested parties is essential and a good complement to a small Project Board. Finally, the hiring of an in-house expert on PCB issues greatly facilitated the projects' activities and outcomes and allowed an efficient use of resources.

On a technical level, the main lessons to be learned from this project is that for smaller countries dealing with relatively small amounts of hazardous waste, it often is more cost effective to export waste compared to treating it in the country.

## RECOMMENDATIONS SUMMARY TABLE

Table 3: Overview of the recommendations

Rec #	TE Recommendations	Entity Responsible	Time Frame
A	Category 1: Lessons learned		
A.1	Formulate lessons learned  It would be very good if the project board could formulate the lessons they learned in jointly conducting the project. Apart from technical and practical lessons, it would also be very helpful if the board could elaborate on some of the challenges encountered during the project and how they were overcome. Considering the success of the project, these lessons learned will not only be valuable for the Montenegrin partners and public but stand a chance to resonate with a larger audience dealing with hazardous waste issues.	UNDP	Before project end
B	Category 2: Communication		
B.1	Better communicate the results of the project  In connection with recommendation 1, the TE team recommends that the results of the project be widely presented and communicated at relevant national, regional and international fora.	UNDP	Before project end
C	Category 3: Risk identification		
C.1	Better assess risks related to co-financing of the polluter	UNDP	For future projects

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	Considering the initial challenges in engaging one of the private sector partners, it would be good if future project, designed with substantial co-financing commitment from the private sector (polluter), identify this as a potential risk and formulate risk mitigation measures accordingly.		
D	Category 4: Risk identification		
D.1	For next similar projects, plan in some financial flexibility for historical soil contamination  The discovery of the historical contamination at one of the project sites leads the TE team to recommend that for next similar projects, some financial flexibility for historical soil contamination should be built in.	UNDP	For future projects

# 1. INTRODUCTION

## 1.1. EVALUATION CONTEXT

Polychlorinated Biphenyls (PCBs) are manmade chemicals that were produced on a large scale across the world between the 1930s and 1980s<sup>1</sup>. They were used in lubricants and in electrical and hydraulic equipment. They are pervasive, and have since been detected in soil, surface and ground water, as well as in food. PCBs are classified as class 1 carcinogens by the International Agency for Research of Cancer (IARC-WHO) since 2013<sup>2</sup>. Human exposure to PCBs leads to serious health effects, including certain cancers, birth defects, dysfunctional immune and reproductive systems, greater susceptibility to disease and damages to the central and peripheral nervous systems. Several countries limited the use of PCBs in the 1970s and their use and marketing has been very heavily restricted in Europe since 1985<sup>3</sup>. The Stockholm Convention (signed in 2001 and effective since 2004), aims at protecting human health by controlling, restricting, and eliminating the production and use of Persistent Organic Pollutants (POPs)<sup>4</sup>.

Even though PCBs were mostly used in closed systems, like transformers and capacitors, equipment containing these chemicals is still being used or is/has been discarded, and this type of waste must be identified and handled with great care. The EU's Directive on the disposal of PCBs/PCTs came into force in 1996, and many other countries have similar or aligned legislation in place<sup>5</sup>.

The ProDoc describes that Montenegro still possessed and operated equipment containing PCBs and had a considerable amount of PCB waste stored on its territory. The country has been a state party to the Stockholm Convention since March 2011 and in response to Article 7 the country developed its National Implementation Plan (NIP) in November 2013. After institutional strengthening, PCB management and elimination of equipment containing PCBs is the highest priority identified in the NIP. Montenegro is also a Party of the Basel Convention (on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal) since 1999. However, the ProDoc identified several barriers to Environmentally Safe Management of PCBs in Montenegro, and to putting in place proper disposal practices that avoid release of PCBs in the environment:

- a. A comprehensive national PCB inventory was missing.
- b. Information on cross-contaminated equipment was scarce and the extent of PCB oil contamination spread was not completely known. Most of the information available concerned only pure PCB equipment.
- c. Aging equipment was still in operation.
- d. Some PCB equipment holders had gone bankrupt, posing questions of liability for orphan PCB equipment and waste.
- e. There was limited government capacity for monitoring and inspection and therefore low enforcement of national regulation.

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<sup>1</sup> <https://www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pcbs>

<sup>2</sup> <http://chm.pops.int/implementation/industrialpops/pcbs/overview/tabid/273/default.aspx>

<sup>3</sup> [https://environment.ec.europa.eu/topics/waste-and-recycling/pcbspcts\\_en](https://environment.ec.europa.eu/topics/waste-and-recycling/pcbspcts_en)

<sup>4</sup> <http://chm.pops.int/implementation/industrialpops/pcbs/overview/tabid/273/default.aspx>

<sup>5</sup> [https://environment.ec.europa.eu/topics/waste-and-recycling/pcbspcts\\_en](https://environment.ec.europa.eu/topics/waste-and-recycling/pcbspcts_en)

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- f. PCB equipment holders did not keep updated records of PCB equipment and waste, and
- g. There were neither national disposal technologies or facilities, nor national know-how for comprehensive PCB management.

The project “Comprehensive Environmentally Sound Management of PCSs in Montenegro” aimed to address these barriers and had as an objective: the comprehensive identification and disposal/treatment of PCB contaminated equipment and waste in the country.

It aimed to:

- 1) Increase national PCB management capacities and the enforcement of legislation
- 2) Increase the industry and general awareness
- 3) Engage stakeholders
- 4) Strengthen the reliability of information through updating the PCB inventory
- 5) Provide know-how and financial support on the technologies for the disposal of PCB equipment

To achieve this, activities were implemented under four Components:

- Component 1. Capacity strengthening on PCB management,
- Component 2. PCB Inventory, planning and establishment of public-private partnership,
- Component 3. Environmentally Sound Management (ESM) of PCBs, and
- Component 4. Monitoring, Learning, Adaptive Feedback and Evaluation.

The project budget was composed as follows: 3,5 MIO USD from the GEF Trust Fund, 50,000 USD from UNDP TRAC resources and co-financing by two private companies, as well as by the government of Montenegro for a total of 19,803,691 USD. The project started in 2017 and was designed to run for five years. Delays in project implementation caused by Covid-19 resulted in a no-cost extension being granted for one additional year, moving the end date of the project to 31 December 2022.

## 1.2. SCOPE AND PURPOSE OF THE TERMINAL EVALUATION

As indicated in the UNDP Guidance for Conducting Terminal Evaluations<sup>6</sup>, the objective of the Terminal Evaluation (TE) is to provide a comprehensive and systematic accounting of performance at the end of the project cycle, considering the totality of the effort from project design, through implementation to wrap up, also considering the likelihood of sustainability and possible impacts. The TE purpose is:

- To promote accountability and transparency,
- To synthesize lessons that can help to improve the selection, design and implementation of future UNDP-supported GEF-financed initiatives; and to improve the sustainability of benefits and aid in overall enhancement of UNDP programming,

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<sup>6</sup> Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed projects, UNDP Evaluation Office, 2020.

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- To assess and document project results, and the contribution of these results towards achieving GEF strategic objectives aimed at global environmental benefits,
- To gauge the extent of project convergence with other priorities within the UNDP country programme, including poverty alleviation,
- Strengthening resilience to the impacts of climate change, reducing disaster risk and vulnerability, as well as cross-cutting issues such as gender equality, empowering women and supporting human rights.

The scope of the evaluation is defined by all activities undertaken by the project 'Comprehensive Environmentally Sound Management of PCBs in Montenegro', since the start of the PPG process in, and up to 17 August 2022, when the TE draft report was shared. The evaluation covers all project components, all beneficiaries and the entire geographical area covered by the project.

The evaluation mission had the following purpose:

- Analyze the activities conducted, and results (outputs, outcomes and impacts) achieved in the face of the initial objectives of the project;
- Assess the relevance, efficiency, effectiveness, results and sustainability of the project, applied to (i) project formulation (ii) project implementation and (iii) project results.
- Analyze the relationship among the different actors and their specific roles
- Draw lessons that can both improve the sustainability of benefits from this project, and aid in overall enhancement of the UNDP programming
- Synthesize lessons learned and propose recommendations aiming to provide a basis for the follow-up to the project if there is a need for that;
- Cover questions linked to the financial, administrative and managerial aspects of the project, and the projects' compliance with the rules and procedures of the projects administrative, financial and reporting system
- Verify that all is in accordance with the rules and regulations of UNDP and GEF.

## 1.3. METHODOLOGY

The main steps of the TE were the following:

### 1.3.1. INCEPTION PHASE

#### 1.3.1.1. Documentation review

In order to prepare the inception report and the mission, an initial documentation review was conducted. This allowed the evaluation team to clarify the context around the project and identify the main challenges of the evaluation mission and information gaps to be completed. The documentation review did not stop with the inception report and was conducted throughout the mission. An in-depth analysis of all project's key documents, ToRs, reports, activity documentation, and all the other documents provided by the UNDP was conducted. Adjustments to the evaluation matrix were done based on the information collected.

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#### 1.3.1.2. Preparation of the TE matrix

On the basis of the documentation review, an evaluation matrix was elaborated. The evaluation matrix is a key tool for data collection and analysis. It includes the evaluation questions as set in the terms of reference, following the three sections proposed, i.e. Project formulation, Project implementation, and Project results, assessed along the 5 OECD DAC criteria (relevance, effectiveness, efficiency, sustainability and impact). The review matrix details the most relevant qualitative and quantitative indicators that inform the review questions, data collection methods and information sources. It is contained in Annex 5.

#### 1.3.1.3. Inception report

Based on the literature review and first contacts with the project team, the inception report was prepared. It reflects the improved understanding of the assignment and incorporates a detailed work plan for the mandate. The draft inception report was submitted for comments and exchanges with UNDP and the project team; on this basis, a final inception report was prepared before the mission started in Montenegro.

### 1.3.2. DATA COLLECTION PHASE

#### 1.3.2.1. Field visit

Additional to the document review, done for the preparation of the inception report, and to gain more in-depth knowledge about the project, a 5-day mission to Montenegro took place between 25.06.2022 and 02.07.2022. It allowed the evaluator to deepen the analysis and understand the key determinants of the project implementation history, the strengths and weaknesses of the project as regards the country/local situation and context, and how beneficiaries and other key stakeholder perceive the project relevance, results, effectiveness, efficiency and sustainability. The field visit also helped the evaluator to assess local challenges, cross-cutting issues and possible ways for improvement. The list of stakeholders met during the mission, indicating the sites and organizations visited, can be found in Annex 3. By the end of the evaluation mission, a wrap up discussion was organized with the country office and project team to present the initial findings and to request additional information as needed.

### 1.3.3. DATA ANALYSIS AND REPORTING PHASE

#### 1.3.3.1. Data analysis and triangulation of information

This stage included, among other activities, the comprehensive analysis of key relevant quantitative and qualitative data through the integration and cross-comparison of findings from the field (interviews and direct observation), additional interviews, and documentation review, respectively. The evaluator ensured verification of the data and the articulation of key findings

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and lessons learned to assess progress toward reaching outcomes and formulate conclusions and recommendations.

#### 1.3.3.2. First draft TE report

The evaluator prepared a first draft evaluation report, addressing the key review questions as set in the ToRs and presenting the scope and methods and the review findings, conclusions, lessons learned, and recommendations. The report is structured according to the draft table of contents proposed in the ToRs. In particular, the 'Findings' chapter includes three subsections, namely Project design/formulation, Project implementation, and Project results, and covers the five OECD/DAC evaluation criteria. A section on Main findings, conclusions, recommendations, and lessons learned closes the report.

UNDP, the project team and project partners will review the draft TE report and provide the evaluator with a consolidated number of comments, clarification points, factual information and relevant observations.

#### 1.3.3.3. Final TE report

After the necessary discussions and clarifications, consolidated comments will be duly taken into account in the preparation of the final TE. The TE report will be submitted 15 days after actual receipt of consolidated comments. It will include, whenever possible, clarification points, factual information as well as relevant observations, views and suggestions expressed by the project partners.

## 1.4. DATA COLLECTION AND ANALYSIS

### 1.4.1. DATA COLLECTION

Both primary and secondary data was collected through different channels:

- **Documentary analysis.** Key project design and implementation documents were desk reviewed prior to the country mission to properly understand the context and situation of the project to date and start feed-in the evaluation framework, identifying information gaps and data collection needs. The list of project documents received by the evaluator is contained in Annex 4.
- **In-depth interviews.** These were primarily semi-structured conducted with project stakeholders. Secondary data was obtained mainly from UNDP country office and Regional Technical Advisor, the project management team, and relevant partners and organizations. Primary data was gathered through qualitative and quantitative methods, including desk reviews and semi-structured interviews. The in-country mission enabled the evaluator to meet with the main stakeholders involved in the project: the Ministry of Ecology, Spatial planning and Urbanism, the institute for public health, State Administration for Inspection Affairs, companies that have PCB contaminated equipment, the Center for Eco-toxicological Research (CETI); key experts and consultants in the subject area, and wider project beneficiaries.

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- **On-site visits and interviews.** The field mission enabled site visits and interviews with Uniprom-KAP and CEDIS in Podgorica, HEMOSAN in Bar and the CETI laboratory. The purpose of these visits was to acquire information from different sources to triangulate (i.e. cross-check) information and answer the evaluation questions on the basis of evidence. This approach also favored the participation and inclusion of stakeholders from different sectors, including project managers, local implementation teams and beneficiaries.

#### 1.4.2. DATA ANALYSIS AND INTERPRETATION

The evaluator compiled and analyzed all collected data on progress towards meeting the project targets, intermediate results achieved, and gaps reported, if any. Quantitative data, where applicable, was analyzed with the appropriate tools (eg: percentages, mean scores and perception indices). To ensure that the information is collected and cross-checked by information from a variety of informants, data triangulation was a key tool for the verification and confirmation of the information collected. Findings were related to pertinent information through interpretative analysis. The interpretative process applied both deductive and inductive logic. This systematic approach ensured all the findings, conclusions and recommendations are substantiated by evidence.

#### 1.4.3. SAMPLING

The choice of the selected project sites was made based on the prevalence of PCB waste or contaminated equipment as well as on where project activities were conducted. According to documentation reviewed and exchanges with the project team at the initial review stage, main sites are located in Podgorica and Bar. Given time and budget constraints, the team physically visited Uniprom-KAP in Podgorica, HEMOSAN in Bar, and CETI in Podgorica .

The mission plan can be found in annex 2 and was discussed with the project team and UNDP.

### 1.5. LIMITS TO THE EVALUATION

The main limit to the evaluation exercise was that the CEDIS site could not be visited due to agenda and availability constraints on the stakeholder side. This has however not impacted the TE process negatively and was compensated for by other interviews and document review.

### 1.6. ETHICS:

Evaluators are held to the highest ethical standards and have signed a code of conduct upon acceptance of the assignment. Please see the Annex 10. The evaluation was conducted in

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accordance with the principles outlined in the United Nations Evaluation Group (UNEG) 'Ethical Guidelines for Evaluations'<sup>7</sup>.

## 1.7. STRUCTURE OF THE REPORT

The remainder of the report is structured as follows: After presenting the original project description with its expected results, stakeholders and Theory of Change, the report presents the detailed findings. This section covers project design and formulation, implementation as well as results and impacts. The last section of the report summarizes the main findings and conclusions and formulates recommendations based on lessons learned.

## 2. PROJECT DESCRIPTION

### 2.1. PROJECT START AND DURATION, INCLUDING MILESTONES

The project started on 16 January 2017 and was designed to run for five years. Delays in project implementation and Covid-19 disruptions to operations resulted in a no-cost extension being granted in June 2021, for 11.5 months, until end of December 2022.

Project process milestones are:

**Table 4: Key dates of the project**

Milestone	Date
PIF approval	4 June 2015
CEO endorsement date	14 October 2016
Project Document Signature Date (project start date)	16 January 2017
Project Inception Workshop	26 May 2017
Date of the Mid-term Review	31 October 2019
Extension request	3 June 2021
Extension approval	10 June 2021
Expected date of Terminal Evaluation	30 September 2022
Planned Closing Date (including extension)	31 December 2022

### 2.2. DEVELOPMENT CONTEXT: ENVIRONMENTAL, SOCIO-ECONOMIC, INSTITUTIONAL, AND POLICY FACTORS RELEVANT TO THE PROJECT OBJECTIVE AND SCOPE

Montenegro has been a state party to the Stockholm Convention since March 2011 and in response to Article 7 the country developed its National Implementation Plan (NIP) in

<sup>7</sup> Access at: <http://www.unevaluation.org/document/detail/100>

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November 2013. After institutional strengthening, PCB management and elimination of equipment containing PCBs is the highest priority identified in the NIP. Under the POPs-related Protocol of the Convention, the economy-in-transition Parties are obliged to eliminate the use of PCBs in equipment (transformers, capacitors and the like) containing more than 5 dm<sup>3</sup> or concentration equal to or exceeding 0.005% PCBs no later than 31 December 2015<sup>8</sup>. Montenegro is also a Party of the Basel Convention (on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal) since 1999. This is an important MEA as regards the transboundary transportation (import and export) of waste, its disposal and relevant international rules, standards, and guidelines on sounds POPs<sup>9</sup>.

#### 2.2.1. LEGISLATION CONCERNING PCBS IN MONTENEGRO.

##### 2.2.1.1. PCB management and transport

While Montenegrin legislation on PCBs for most part was aligned with both the EU directive on PCBs management and the Stockholm Convention at project preparation phase, there were some deviations. Some of these were minor, whilst others needed to be addressed to ensure compliance with the Stockholm Convention's obligations.

National legislation on PCB management was captured in two key pieces of legislation: Special provisions established under the Law on waste [OGM 64/11] and the Montenegrin Legislation (Rulebook on the treatment of equipment and waste containing PCB [OGM 48/12] and Rulebook on handling waste oils [OGM 48/12]). Together they specify that:

- holders of PCB contaminated equipment (containing more than 5 dm<sup>3</sup> of PCB) and waste are obliged to keep special records in a logbook which should have been submitted by early 2012 (and subsequently updated on an annual basis). However, due to poor enforcement and low technical capability, most of the PCB owners did not submit their logbooks yet.
- holders of PCB contaminated equipment and waste are obligated to prepare their PCB management plan for contaminated equipment and waste 60 days before starting of disposal or decontamination.
- holders should transfer PCB contaminated equipment and waste for disposal or decontamination, within two years from the end of their operational live times (equipment) or their generation (waste), the latest. Within this period, such equipment and waste should be stored separately to reduce fire risk. Overall, after December 2020, only PCB free equipment may be still in use.

In addition, the national legal framework contained requirements for temporary storage of waste (including temporary PCB storage). Guidelines for the identification of contaminated soil was prescribed only on a general level. Further, Decree (64/11) defined minimal required conditions for temporary disposal sites. For contaminated soil, the existing legal framework

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<sup>8</sup> <http://chm.pops.int/implementation/industrialpops/pcbs/overview/tabid/273/default.aspx>

<sup>9</sup> <http://www.basel.int/>

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mostly focused on soil for agricultural production – therefore MACs are usually too strict to be achieved for industrial sites.

Transport of PCBs is regulated in Montenegro and must be carried out in accordance with the provisions of the Law on transport of hazardous materials (OGM 33/14).

#### 2.2.1.2. Enforcement

Non-compliance with the National PCB management laws is considered a misdemeanor and is fined. The State Administration for Inspection Affairs of Montenegro (i.e. ecological inspection) has the enforcement authority (as prescribed by the Law on waste).

The level of enforcement of PCB legislation at the start of the project was low for the following three main reasons:

- low level of awareness on the PCBs related issue (hazards, environmental impacts, sound management ways, global outlook);
- lack of appropriate knowledge/experience/tools by power equipment holders/users for proper PCB identification (including sampling and analytical capacity), management and reporting;
- insufficient inspection capacity from the authority and a resulting widely spread perception that the risk of being fined for non-compliance is much lower than the cost of replacing PCB contaminated equipment.

#### 2.2.2. AVAILABLE DATA ON PCBs AT PROJECT DEVELOPMENT STAGE

Under the NIP, a preliminary inventory of PCB contaminated equipment was carried out in 2013. Data were obtained from the Administration for Inspection.

The PCB inventory was not exhaustive, and for most of the equipment listed in the inventory traceability was not ensured. A large part of the equipment listed in the PCB inventory still needed to be tested to ascertain whether the PCB content exceeded the Stockholm Convention's limits.

During the Project Preparation stage, two (2) activities were carried out to verify the available information on PCB contaminated equipment:

- Verification, carried out by the Ministry of Sustainable Development and Tourism (MoSDT) through inspections, of the correctness of data related to the previously existing PCB inventory (Annex A of the project document). Based on this verification, the amount of pure PCBs, PCB waste, and equipment containing PCBs amounted to 299.8 tons. An additional amount of 180 tons was identified, coming from equipment categorized as PCB cross-contaminated, but still needing verification. Finally, a certain amount of equipment of unknown weight was "suspected" of being contaminated by PCB.
- The drafting of a preliminary inventory of PCB containing equipment. At PIF stage more than 500 tons of PCB contaminated material were identified. This amount of PCB was

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stored at the KAP site pending additional characterization and disposal. Around 316 tons of this material was officially listed by KAP either as pure PCB online equipment or PCB contaminated waste. During a visual site inspection, around 200 tons of soil were estimated to be contaminated and added to the preliminary inventory.

Subsequently, during the PPG stage, another preliminary inventory of contaminated equipment was conducted. PCB sampling and analysis of suspected materials was carried out to gather more detailed information on the expected frequency of PCB contaminated equipment in the country. In total, 230 transformers were sampled.

Based on these two preliminary inventories preliminary inventory, the total PCB contamination in the country was estimated. This further informed the project design and budget. Major findings were:

- An overall amount of 264 tons of PCB contaminated equipment in the electric sector, with an average level of contamination in the order of 250 ppm, indicating that PCB contamination likely had resulted from cross-contamination here.
- High levels of contamination (35,000 ppm) for most of the 35 transformers used at Uniprom-KAP. These transformers were not listed as PCB contaminated at the time of PIF preparation, and the project decided to pay special attention to electric equipment used in the manufacturing industry during sampling.
- The difference in PCB concentration between CEDIS and Uniprom-KAP informed the design of a two-way approach for PCB destruction under the project:
  - export of highly contaminated equipment for disposal in compliance with the Basel Convention requirements, as there were no disposal technologies available in Montenegro;
  - Exploration of options to rent or import technology for the removal and destruction of PCB from low contaminated transformers.

### 2.2.3. SOCIO-ECONOMIC AND ENVIRONMENTAL CHANGES SINCE THE BEGINNING OF THE PROJECT

Montenegro is a candidate member of the EU since December 2010, and is gearing up to become a member in 2025. Since 2010, the country has received assistance from the EU to align its legislation with that of the EU. Environmental legislation is a key part in this. During the project time, Montenegro received assistance under IPA II (2014-2020) and IPA III (2021-2027). Montenegro formally became a member of NATO in June 2017.

The project period saw political protests between 2018 and 2020. In the 2020 parliamentary election, there was a turn in government for the first time in three decades. In February 2022, the government was voted out in a vote of no-confidence.

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## 2.3. PROBLEMS THAT THE PROJECT SOUGHT TO ADDRESS, THREATS AND BARRIERS TARGETED

### 2.3.1. PROBLEMS, TREATHS AND BARRIERS

As described in the ProDoc, several barriers and threats existed to Environmentally Safe Management of PCBs in Montenegro, and to putting in place proper disposal and decontamination practices that avoid release of PCBs in the environment:

- a. A comprehensive national PCB inventory was missing
- b. Information on cross-contaminated equipment was scarce and the extent of PCB oil contamination spread was not completely known. Most on the information available concerned only pure PCB equipment.
- c. Aging equipment was still in operation
- d. Some PCB equipment holders had gone bankrupt, posing questions of liability for orphan PCB equipment and waste
- e. There was limited government capacity for monitoring and inspection and therefore low enforcement of national regulation
- f. PCB equipment holders did not keep updated records of PCB equipment and waste
- g. There were neither national disposal technologies or facilities, nor national know-how for comprehensive PCB management

### 2.3.2. PROJECT CONSISTENCY WITH NATIONAL PRIORITIES

The project was designed to be consistent with National strategies as follows:

- PCBs are listed as the most urgent priority in the Montenegro's National Implementation Plan. The following priority actions for solving the PCBs issue are identified in the NIP document:
  - a. Organize training in environmentally safe use and disposal of PCB containing equipment,
  - b. Establish a system for collecting data on the use of PCBs in the industry,
  - c. Establish a temporary storage for equipment and waste containing PCBs pending final disposal,
  - d. Develop Plans for replacement of equipment containing PCBs in accordance with the Law on Waste Management,
  - e. Ensure financial support for resolving PCB elimination.
- The project's design was in line with the national regulation on PCBs and waste, and intended to provide substantial technical and financial support to the Government of Montenegro for the more effective and timely enforcement of this regulation, which required the phasing out and disposal of PCB containing equipment by 2020<sup>10</sup>.

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<sup>10</sup> This has since changed to 2025

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- The project was designed to address the found obstacles in Montenegro in aligning the country's PCB regulation with basic international benchmarks which are also in line with the EU regulation on PCBs and POPs, namely:
  - a. Lack of inventories of the existing PCB equipment,
  - b. Unavailability of data on storage and removal of the obsolete equipment and waste oils containing PCB,
  - c. Lack of consistent instructions for identification, decontamination, use, transport, storage and disposal of PCB equipment or products,
  - d. Need of particular efforts for the safe disposal of the PCB containing equipment.
- The project was designed to implement key activities of the Strategy on Sound Chemicals management for 2015-2018 (adopted by Government in 2015)<sup>11</sup>.
- The then draft of the revised Law on Environment (article 47) included the prohibition of manufacturing, trading and using POPs in mixtures or as product constituents<sup>12</sup>.

Based on the above it can be affirmed that the objective of the project, to ensure an environmentally sound management of PCB in the country, and its planned activities were fully compliant with country national policies.

### 2.3.3. LINK TO GEF AND UNDP PRIORITIES, AND RELEVANT SDG

The project contributes to the GEF6 priority of eliminating the most harmful chemicals, which are covered by the [Stockholm Convention on Persistent Organic Pollutants](#), the [Minamata Convention on Mercury](#), and the [Montreal Protocol on Substances that Deplete the Ozone Layer](#). The project is also aligned with wider GEF support for the achievement of broader sound management of chemicals and waste through its support to the Strategic Approach to International Chemicals Management (SAICM), the United Nation's policy framework to promote chemical safety around the world.

The project outcomes contribute to one of the six signature solutions identified in UNDP's Strategic plan 2022-2025: *Putting nature and the environment at the heart of national economies and planning; helping governments protect, manage and value their natural assets*<sup>13</sup>, and to the following SDG targets:

- 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
- 6.3 by 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally
- 9.4 by 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and

<sup>11</sup> In the end the project implemented key activities under the Strategy for Sound Chemicals management 2019-2022, and 2023-2026.

<sup>12</sup> The Law has been adopted since

<sup>13</sup> United Nations development Programme, 2021. Strategic Plan 2022-2025. New York.

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environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities

- 12.4 by 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

## 2.4. IMMEDIATE AND DEVELOPMENT OBJECTIVES OF THE PROJECT

The project's overall objective was the comprehensive identification and disposal/treatment of PCB contaminated equipment and waste in the country. It was designed to address the challenges and priorities mentioned in section 2.3, and aimed at achieving the following:

- 1) Increasing national PCB management capacities and the enforcement of the legislation,
- 2) Increasing the industry and general awareness,
- 3) Engagement of stakeholders,
- 4) Strengthening the reliability of information through updating of the PCB inventory,
- 5) Provide know-how and financial support on the technologies for the disposal of PCB equipment.

The project was therefore designed to assist the country in developing and implementing a sound national PCB management programme which takes into consideration the above to increase the commitment of the potential PCB owners to comply with the Montenegrin regulation on PCB and to have their PCB contaminated equipment treated or disposed of under the project.

## 2.5. EXPECTED RESULTS

The project was expected to support the country with the necessary technical and financial assistance to ensure that all the remaining PCBs in the country (estimated in not less than 900 tons of PCB contaminated equipment and waste) were identified and disposed of.

As the ProDoc describes, the project was expected to be implemented jointly with the relevant institutional and industrial stakeholders, i.e. the Ministry for Sustainable Development and Tourism (MoSTD, later the Ministry for Ecology, Spatial Planning and Urbanism (MoESPU)), EPCG/CEDIS, Uniprom-KAP (KAP) and other confirmed or potential holders of contaminated equipment.

Although the project was expected to solve all the remaining PCBs issues in the country, it wanted to ensure that enough capacity for the sound management of PCB was built for the management of any further PCBs identified after project's closure.

The project consisted of the following four (4) components:

- Component 1. Capacity strengthening on PCB management,

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- Component 2. PCB Inventory, planning and establishment of public-private partnership,
- Component 3. Environmentally Sound Management (ESM) of PCBs, and
- Component 4. Monitoring, Learning, Adaptive Feedback and Evaluation.

#### 2.5.1. GLOBAL ENVIRONMENTAL BENEFITS (GEBS)

At the project start, it was envisaged that under the project, 700 tons of PCB contaminated equipment, and 200 tons of PCB containing waste including contaminated soil would be properly disposed of in such a way that the PCB content in this equipment or waste was irreversibly destroyed. Therefore, the project would contribute to the implementation of the Stockholm Convention's requirements by Montenegro.

#### 2.5.2. SOCIO – ECONOMICAL BENEFITS

The project was expected to bring direct and indirect social and economic benefits. The direct and immediate benefits are those related to the implementation of the project itself, including employment of project staff and operators; establishment of a public-private partnership for the management of the PCB contaminated equipment and waste; financial incentive for the PCB owners for the sampling, analysis, and treatment of their PCB-contaminated equipment.

#### 2.5.3. INDIRECT BENEFITS

The removal of PCB sources (equipment, waste, contaminated soil) from the environment would prevent the contamination of the environment by these substances. This would translate in a reduced mortality and morbidity of the population in the long term, with specific reference to the pathologies associated to exposure to PCBs, resulting in the reduction of social and economic costs. In addition, the technical capacity developed by the project partners (project staff, consultants, stakeholders) in the management of PCB waste would allow for the creation of skills and capacities on the management of hazardous substances and waste in general that would result in the creation of specialized jobs in the country.

#### 2.5.4. KNOWLEDGE MANAGEMENT

The project aimed to generate a significant account of knowledge, carefully managed during the project implementation, so that the project results could be properly communicated and disseminated during the whole project lifecycle, and so lesson learned and success stories could be shared among other countries / UN country offices.

## 2.6. MAIN STAKEHOLDERS: SUMMARY LIST

The evaluation team involved key stakeholders in the evaluation activities. Table 5 gives an overview of the main stakeholders as identified in the ProDoc, with their key function, mandate and role. The actual involvement of stakeholders will be discussed in section 3.2.

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**Table 5: Overview of the main project stakeholders and their envisaged role at project start**

Stakeholder type	Name	Role in the project
Government	Ministry of Sustainable Development and Tourism (MoSDT), now the Ministry of Ecology, Spatial Planning and Urbanism (MoESPU)	Project's implementing institution
	Agency for Environmental Protection (EPA)	Institutional partner (regulatory aspects, monitoring, data management) and beneficiary
	Administration for Inspection Affairs	Institutional partner (supervision and enforcement) and beneficiary
	Ministry of Economy	Institutional partner (Key partner for main PCB holders such as EPCG and KAP companies)
	Ministry of Finance	Institutional partner (development of Public-private partnership, state financial assistance)
	Ministry of the Interior- Directorate for Emergency Situations	Institutional partner (emergency preparedness during hazardous waste handling and transportation, and PCB dehalogenation technology operation time, supervision on implementation of prevention and protection safety measures during (re) construction of objects and beneficiary
	Ministry of Transport and Maritime Affairs	Institutional partner (transportation of hazardous substances)
Local municipalities	Local Municipality Golubovci	Project Beneficiary, environmentally impacted by management of temporary PCB storage at KAP
Industry	KAP	Owner of PCB contaminated equipment and waste.
	ECPG (FU distribution, FU supply and FU generation)	Owner of PCB contaminated equipment and waste
	CGES	Owner of PCB contaminated equipment and waste
	Chamber of Economy of Montenegro	Institutional partner (helps coordinate contacts in the private sector)
	Other identified owners of PCB equipment and waste (e.g. coal mine in Pljevlja)	Owners of PCB contaminated equipment and waste
NGO	Ozon	Stakeholder (awareness raising, information dissemination)
	Green Home	Stakeholder (awareness raising, information dissemination)
Academy / Laboratory	CETI	Stakeholder (laboratory which has the capacity to test POPs compounds)
	Faculty of Mechanical Engineering	Stakeholder (advisory function)
	Montenegrin Academy of Sciences and Arts	Stakeholder (advisory function)
	Institute for public health	Stakeholder (advisory function)

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### 2.7. THEORY OF CHANGE

The problem statement, barriers and threats are presented in the ProDoc. However, the ProDoc did not include an overall Theory of Change (ToC)<sup>14</sup>. Based on the results frameworks in the ProDoc, a project ToC has been constructed and is proposed in Figure 1 below.

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<sup>14</sup> Figure 1 in the ProDoc describes project objective, baseline, stakeholder engagement and target groups and a very short list of actions. It identifies project management, monitoring, evaluation and audit as well as lessons learnt as measures of changes and success. The figure in the ProDoc does not account however for the underlying threats and problems, nor clearly exposes the proposed solution. It does not include project impacts, outcomes, and assumptions.

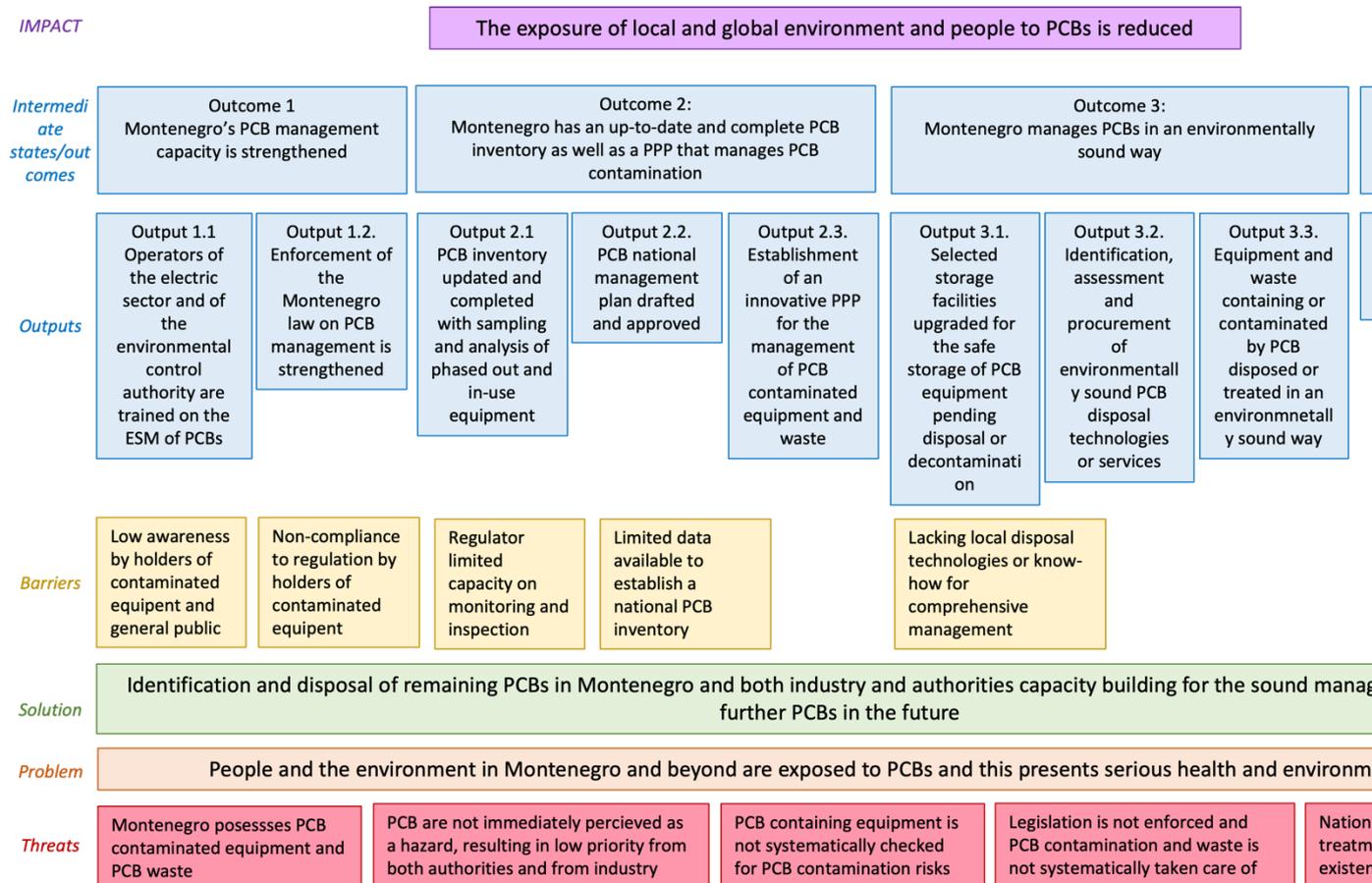


Figure 1: Reconstructed ToC

### 3. FINDINGS

#### 3.1. PROJECT DESIGN/FORMULATION

##### 3.1.1. ANALYSIS OF RESULTS FRAMEWORK: PROJECT LOGIC AND STRATEGY, INDICATORS

Section VI of the ProDoc presents the project Results Framework (RF) with indicators at the outcome and output level, including a baseline, a mid-term target, an end of project target and assumptions. Analysis of the RF shows that it is well integrated vertically. Overall outputs are likely to lead to the expected outcomes and contribute to the overall objective of the project. Activities are clearly described. No major elements seem to be missing. However, the TE noticed that the RF does not entirely follow the project description presented in section IV of the ProDoc. The study on the Gender Dimension for example, is presented as an activity under Output 1.2 in section IV, but the related target related features under Output 1.1 in the RF. Furthermore, section IV mentions the preparation of a business plan with sustainability considerations in support of the PPP approach as activity under Output 2.3., whereas the RF lists a business and sustainability plan under its mid-term and end of project targets under Output 2.3.

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The indicators provided in the RF of the ProDoc are overall relevant, but several of them are formulated as results, not as indicators. At the project objective level, the targets do not match the indicators. They are rather general project targets or even objectives. The RF moreover formulates indicators and targets for some activities, but not for others. For some of the outcomes, the TE team therefore suggested in its inception report to formulate additional indicators that could help more comprehensively capture the level of achievement of the outcome. The TE team's observations on projects outcomes, outputs, indicators, and targets, as well as suggestion for additional indicators are captured in Table 3 below. Many of these shortcomings as well as the need to define SMART indicators were also identified at the MTR. This is further discussed in section 3.2.1.

Table 6: Assessment of the indicators in the RF

ProDoc outcome indicator formulation	TE team's observations	TE team' suggestion for reformulation
Project objective: Comprehensive identification and disposal/treatment of PCB contaminated equipment and waste in the country		
National environmentally sound management (ESM) system of PCB chemicals and waste drafted, and implemented by 2020	This contains an indicator, and a project target	<i>Indicator:</i> Evidence that such a system is drafted and implemented  <i>End of project target:</i> Implementation by 2020
700 tons of pure PCBs and 200 tons of low-concentrated PCBs/related waste are safely managed and disposed of/decontaminated by the end of the project, thus reducing global and local environment from exposure to these hazardous wastes	This is not a SMART indicator 'reducing global and local environment from exposure to these hazardous wastes' is rather the description of the project impact	<i>Proposed indicator:</i> Tons of pure PCB and low concentrated waste managed and processed  <i>End of project target:</i> 700 tons of pure PCB and 200 tons of low concentrated waste
Amount of PCB equipment identified and listed in the PCB inventory and included in the national management plan	This is a correctly formulated indicator	
Amount of PCB contaminated equipment and waste treated or disposed of	This is a correctly formulated indicator	
<b>Component/outcome 1 : Capacity strengthening on PCB management</b>		
Output 1.1: Operators of the electric sector and of the environmental control authority are trained on the ESM of PCBs		
Number of operators of the electric sector and of the environmental control authority trained on and feel confident in practically applying the ESM system for PCBs	This is a correctly formulated indicator	<i>Suggested additional indicator:</i>  - Number of guidance documentation for sampling of online and offline equipment, handling storage and disposal of PCB containing waste and equipment completed and approved
Number of technical and procedural guidance documents compliant with Stockholm Convention and national regulation completed and endorsed	This is a correctly formulated indicator	<i>Suggested additional indicator:</i>  - Number of officers from the relevant line ministries and research institutions trained

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Gender dimension in the context of PCBs issue in Montenegro completed, strategies for better Gender Mainstreaming in POPs related activities identified	This is a (mid-term) target, which partly belongs to outcome 1.2 (gender study)	<ul style="list-style-type: none"> <li>- Existence of a gender dimension study (and move this under outcome 1.2)</li> <li>- Number of strategies for gender mainstreaming developed</li> </ul> <p><i>Suggested additional indicator:</i></p> <ul style="list-style-type: none"> <li>- Number of dissemination activities, with enhancement on gender issues</li> </ul>
Output 1.2. Enforcement of the Montenegro law on PCB management strengthened		
Level of enforcement of the Montenegro's law on PCB management strengthened, measured through the number of owners of electrical equipment complying with the regulation	This indicator is not SMART	<ul style="list-style-type: none"> <li>- % of participating companies that have drafted company-wide PCB management plans and submitted them</li> </ul> <p><i>Suggested additional indicators:</i></p> <ul style="list-style-type: none"> <li>- Number of specialized training session to the environmental authorities</li> <li>- Number of joint participations of project staff and government representatives in site inspections and related assessments</li> <li>- Existence of an awareness raising campaign</li> <li>- Existence of a gender dimension study</li> </ul>
<b>Component/outcome 2: PCB Inventory, planning and establishment of a PPP</b>		
Output 2.1: PCB inventory updated and completed with sampling and analysis of phased-out and in-use equipment		
One consolidated country-wide PCB inventory updated and completed, with appropriate data of sampling dates and analysis results of phased out and in-use equipment	This indicator also contains an end of project target	<p>Existence of a dynamic PCB inventory available to the authorities and PCB holders through a dedicated website with access policies</p> <p><i>Suggested additional indicators:</i></p> <ul style="list-style-type: none"> <li>- % of originally envisioned sampling of pieces of equipment completed</li> </ul>
Output 2.2: PCB national management plan drafted and approved		
PCB national management plan is drafted and approved	This contains a target	<p>Existence of a PCB national management plan</p> <p><i>Suggested additional indicators:</i></p> <ul style="list-style-type: none"> <li>- Number of revisions and improvements</li> <li>- % of participating companies that have drafted individual PCB management plans</li> </ul>
Output 2.3. Establishment of an innovative PPP for the management of PCB contaminated equipment and waste		
An innovative public-private partnership for the management of PCB contaminated equipment and	This contains a target	Existence of an innovative public-private partnership for the

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waste is established and supports national PCB disposal/decontamination effort.		management of PCB contaminated equipment  <i>Suggested additional indicators:</i>  - Existence of a business plan and sustainability plan for the PPP
<b>Component/outcome 3: Environmentally Sound Management of PCBs</b>		
Output 3.1. Selected storage facilities upgraded for the safe storage of PCB equipment pending disposal or decontamination		
National PCB storage capacity, in terms of a mass of PCB equipment and waste that can be safely stored, of selected storage facilities in the country is available and up to international standards.	This contains a target already	- % of national PCB storage capacity at selected storage facilities that is available and up to international standards
Storage facilities are upgraded and monitored under the project for the safe storage of PCB equipment/oils/waste pending final disposal or decontamination procedures	This contains a target already	- % of storage facilities that are upgraded and monitored under the project for the safe storage of PCB equipment/oils/waste pending final disposal or decontamination procedures
Output 3.2. Identification, assessment and procurement of environmentally sound PCB disposal technologies or services		
Documentary and direct evidence that environmentally sound technologies or services for PCBs disposal/dehalogenation have been identified, assessed and procured	This describes how data on an indicator will be collected	- Number of documents that testify to the identification, assessment and procurement of PCB disposal/dehalogenation services
Output 3.3. Equipment and waste containing or contaminated by PCB disposed or treated in an environmentally sound way		
Amount of equipment or waste containing or contaminated by PCB disposed in an Environmental Sound Way	Correctly formulated	<i>Suggested additional indicator:</i>  - % of necessary EIA processes carried out
<b>Component/outcome 4: Knowledge Management and M&amp;E</b>		
Documentary evidence that the project's results sustained and replicated through proper M&E and Knowledge Management actions	This describes how data on an indicator will be collected	- Number of pre-identified management and M&E activities carried out or completed

In terms of capturing broader development impacts, the project included the indicator: '*Gender dimension in the context of PCBs issue in Montenegro completed, and strategies for better Gender Mainstreaming in POPs related activities identified*', with one corresponding mid-term target: 'Gender study completed', and one end of project target: 'Dissemination of project achievements through regular updating of website content, broadcasting, workshop, with enhancement on gender-related issues'. The gender dimension of the project will be further discussed in section 3.3.8.

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Initially planned over 5 years, the time period seemed to be sufficient for the achievement of project objectives. However, the project needed to be cost-neutral extended in June 2021, by 11.5 months, due to a number of factors:

- *Slow initial response by the key private sector partners/PCB owners* in the project after a successful private sector lobby campaign to postpone the entry into force of the State Programme on PCB management by five years (from 2020 to 2025).
- *Political dynamics in the country* around the elections in August 2020, significantly affecting national partners' activities in the pre-election period, reshuffling the Project Steering Committee and leading to the appointment of a new GEF Operational Focal Point.
- *COVID-19 related delays*
  - o Field teams had to shift activities on in-field re-labeling of circa 5000 transformers and capacitors to 2021. This in turn delayed an independent re-labeling monitoring mission to be deployed. The project team argued the importance of this activity for the overall project outcome, as well as for the quality, accuracy, and reliability of the online database.
  - o A total of five workshops had to be postponed. The team argued the necessity to still have these trips, as they constituted crucial elements related to the project's capacity building outcomes.
  - o Economic activities slowed down in 2020, prompting the private sector partners to postpone earlier planned necessary investments to replace the PCB equipment still in use. This caused a delay in the second export of PCB contaminated equipment and waste.
- *Major historical soil contamination was detected* at one of the main stakeholder facilities (Aluminum Plant KAP). Removal and disposal were only feasible after the removal of the existing stocks of PCB equipment and waste. As soil excavation cannot be performed during the rainy season in the winter, this was planned to take place in early 2022.
- *Obtaining the permits necessary for the transport of PCB waste took significantly more time* than was determined by the Basel Convention, prolonging the implementation of activities related to the removal of PCBs from the country.

The extension allowed the project to deliver and catch up effectively on the delayed and extra identified activities.

### 3.1.2. ASSUMPTIONS AND RISKS

The ProDoc clearly identified the risks to achieving the results, rated associated risk levels, and identified mitigation strategies/measures as well as responsible entities for each. A total of eight risks were identified, covering environmental, strategic, organizational, financial, and social risks across four broad domains: operations, financial resources, environmental safety, and stakeholder commitment and collaboration (Table 7). Estimated risk impact ranged between 3 to 4 and most risk probabilities were estimated at level 1 or 2. The overall project risk rating was considered as Medium.

The initial risk matrix did not include and hence underestimated risks coming from:

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- the potential delay in project activities caused by a lack of commitment of PCB owners for final disposal of PCB contaminated equipment by 2020, as identified in the project extension request,
- potential larger (historical) contamination of soils at project sites,
- the impact of national elections,
- time needed for obtaining transportation permits for PCB waste,
- risks related to co-financing.

Considering it was not legally possible to establish a PPP, it would have been useful to identify a risk and mitigation measures in this area.

The RF also identified assumptions at project objective, and for each output level. Some of these overlap with the risk matrix, while others introduce or allude to additional risks (Table 7). The overall combination of risks and assumptions is logical and robust but could have benefited from better harmonization. The RF assumptions do mention the risk related to obtaining permits in time (No PCB waste transit limitations are in place to block waste export operations). They also include assumptions related to the establishment of a PPP. No risk level was estimated for this or any other assumption in the RF. The combined set of risks and assumptions in Table 7 were directly relevant to the project activities and helped the project team with planning the activities. The risk 'Chemical accidents or spillage of PCBs during sampling, transport, storage or disposal' for example, informed the training activities of staff at the PCB holding companies, executed under component 1.

The project was also subjected to a Social and Environmental Screening Procedure (SESP). It identified one main risk: 'Release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts, and risk to communities' health and safety posed by the improper handling of hazardous waste during transport, storage and disposal' (Impact: 5 Probability:2 Significance: high).

**Table 7: Overview of the risks and assumptions identified in the ProDoc**

Risks	Mitigation measures	Assumptions
Delayed or incomplete PCB inventory due to the absence of coordination, and technical and economic difficulties in carrying out sampling of dielectric oil	The project intends to address this risk by establishing a feasible and cost-effective inventory plan integrated with the maintenance schedule of electric equipment in participating companies.	<b>Additional:</b>  The capacity of the country to carry out sampling and analysis of dielectric oil and waste for PCB quantification is large and reliable enough to timely carry out sampling and analysis activities  Proper chain of custody and quality control procedures is established to ensure the reliability of sampling and analysis operations.
Lack of commitment of PCB owners hindering the prompt identification and inventory of PCB equipment	The project fully acknowledges the technical and financial impact of PCB management for manufacturing and electric power industries. An open discussion with the main industrial stakeholders (KAP and EPCG) already	<b>Overlap:</b>  Potential PCB owners are willing to facilitate sampling and analysis of their equipment.  Government-led communication strategy on national PCB related effort (legislation, technical regulations, PCB equipment inventory and phase-out/disposal/decontamination) is in place

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	started at PIF stage, so that their commitments has preliminary secured and tentative co-financing identified. At this stage, the commitment from main industrial stakeholders is high.	and implemented to ensure better support from PCB equipment/waste owners and other stakeholders.
Project resources are not sufficient to ensure the disposal or decontamination of all the PCB containing equipment.	The project allocated enough grant and co-financing resources to dispose of and/or decontaminate 700 tons of PCBs containing equipment and 200 tons of PCB contaminated soil. This amount is a realistic threshold which - based on the available information from recent tenders within the portfolio - should cover all the PCB contaminated equipment and waste in the country. Based on the PCB inventory, the exact quantity of PCBs will be better estimated to verify that the allocated resources are adequate.	<p><b>Overlap:</b></p> <p>Disposal of 700+200 tons of PCB equipment or can be completed within project and budget constraints</p> <p><b>Additional:</b></p> <p>The technology or service for the disposal of PCB equipment and waste (within the country or abroad) will be selected and procured/rented in a cost-effective manner to stay within the project's budget and timing constraints.</p> <p>Storage facilities needs only limited intervention to ensure the increase of their safety up to the required standards.</p> <p>Storage facilities can be upgraded and permitted within planned budget and timeframe.</p>
PCB contaminated equipment not secured for disposal at the project's start.	Commitment with the main PCB owners will be obtained at the PPG stage. At this stage, commitments from both KAP and EPCG, which are the 2 largest PCB owners in the country, have been already obtained.	<p><b>Overlap:</b></p> <p>Identified PCB containing equipment and waste amount to at least 700+200 tons and is properly stored for treatment or disposal under the project.</p>
Chemical accidents or spillage of PCBs during sampling, transport, storage or disposal	<p>Procedures and associated training for the safe handling and disposal of PCBs will be established since the very beginning of the project.</p> <p>Reputable and qualified international waste management firms will be selected to ensure best standards are followed, and local capacity is improved for future similar work.</p>	<p><b>Overlap:</b></p> <p>PCB contaminated equipment and waste are identified, safely stored and secured to their disposal under the project</p> <p>Prospects for adoption of technical guidance lines are high, and related consultations initiated and ongoing.</p> <p>Equipment operators willing to attend training and apply knowledge practically in joint work with the project.</p> <p>Trainers have extensive experience in the field of PCB management.</p>
Exposure to PCBs by workers involved in the management of PCB containing equipment.	Workers will receive practical training of safety matters related to handling of such specific hazardous waste and on the use of	<p><b>Overlap:</b></p> <p>Equipment operators willing to attend training and apply knowledge practically in joint work with the project.</p> <p><b>Additional:</b></p>

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	<p>PPE since the very beginning of the project.</p> <p>Health checks for workers involved in PCB management operation will be ensured.</p>	<p>Identified PCB contaminated equipment are under control and secured for disposal until technologies or service delivered by the project are available.</p> <p>Handling of PCB equipment and disposal activities are carried out in an environmentally safe way without any harm to the environment and the health.</p>
Improper or unsafe technology selected for the disposal of PCBs.	<p>The project will be built on the experience of many other GEF financed projects related at PCB management. There are already a clear information and experience both available on suitable technologies for treatment of particular categories of PCB containing equipment and waste.</p> <p>In addition, the fact that Montenegro already has in place and enforced a national legislation on hazardous waste management inspired by the EU regulation and compliant with the Stockholm and Basel conventions on Best available Technologies (BAT) will ensure that the requirements of these conventions will be fulfilled.</p> <p>GEF STAP guidance material on selection of disposal/decontamination technologies will also be used in the project's implementation.</p>	<p><b>Overlap:</b></p> <p>UNDP uses experience from other projects to ensure the effectiveness and reliability of technology's choice for both pure/high-concentrated and low-concentrated wastes</p> <p>Technologies for the safe disposal of waste with high PCB content – up to 60% - and for the treatment of equipment with low PCB content – up to few thousands ppm – are commercially available and vendors of these technologies will submit bids to UNDP tenders.</p> <p>Selected vendors already familiar with the requirements and activities related to testing of their technologies.</p> <p><b>Additional:</b></p> <p>UNDP experts and national stakeholders establish cooperation so that the technical specification and identification of proper technologies are really suited to the specific country situation and needs.</p> <p>No PCB waste transit limitations are in place to block waste export operations</p> <p>EIA/SIA assessments are completed to allow PCB dehalogenation technology to be put into operation for low-concentrated PCB containing oils.</p>
Difficulties in establishing a complete regulatory system within project timeframe.	<p>Montenegro already has a foundational legislation on PCBs which is inspired by the EU directive on PCBs and which is compliant with the Stockholm and Basel conventions' requirements. The project intends to assist the country in drafting national technical level guidance documents, which will be therefore approved under a procedure which is faster compared to the approval of a new or amended overarching legislation</p>	<p><b>Additional:</b></p> <p>A fruitful cooperation among project staff, government, and key stakeholders on technical, legal and financial matter is ensured so that the amended / improved regulatory package is implementable, enforceable and sustainable.</p>

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		<p><b><i>Additional, related to output 2.3: establishment of a PPP</i></b></p> <p>A public private partnership to conduct ESM of PCB is more effective than a purely private or public institution due the fact that most PCB holders are public/private companies.</p> <p>Public institutions and private industry willing to establish a partnership to conduct ESM of PCB.</p> <p>The public-private partnership established is effective and sustainable and will continue to bring economic and environmental benefit to the Montenegrin population after project closure</p>
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### 3.1.3. LESSONS FROM OTHER RELEVANT PROJECTS (E.G. SAME FOCAL AREA) INCORPORATED INTO PROJECT DESIGN

Rather than mentioning specific projects that would have informed the design of the project at hand, the Prodoc emphasized that many – especially procedural, managerial, and operational – aspects of the project were informed by extensive UNDP experience elsewhere with the procurement and testing of disposal services for POPs contaminated materials, and resulting in high quality/cost ratios. The ProDoc furthermore mentioned UNDP’s unique experience in the pre-commercial testing of disposal technologies, through for instance the on-site testing conducted on technologies for the disposal of soil highly contaminated by PCDD/F in Vietnam, including the mechano-chemical technology. Finally, the ProDoc stated that general robust UNDP procedures for tendering and risk management have informed project design.

The UNDP implementation team mentioned during the interviews that the project was largely informed by a similar project and experience in the Republic of North Macedonia, as well as data from Serbia and Croatia, where similar equipment was or had been in operation. The project also benefited from previous UNDP experience in Kazakhstan and Jordan, especially in terms of inventory/cadastral creation experience, and costs of POPs disposal per ton, as well as procedural understanding of the time required to process POPs waste export/transit/import processes. A network between experts involved in these projects was established, and a North Macedonian technical consultant with extensive experience in similar projects was contracted and accompanied the project (management unit) for its entire duration.

Finally, the RTA mentioned also having informed the project design, bringing experience and knowledge in terms of budgeting (market prices for transport, disposal and treatment), inventories and technologies (costs, where to go, time required), potential bottlenecks for

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disposal of waste (e.g. the need for waste to be diluted, requiring extra time<sup>15</sup>), and the need to attach key technical experts from the region.

#### 3.1.4. PLANNED STAKEHOLDER PARTICIPATION

Following the ProDoc, the project planned to keep civil society and the public at large informed of project objectives, its activities, and achievements through an awareness campaign. In addition, the project planned to give the community several opportunities to provide comments on project activities:

- Participation of civil society NGOs in related forums/seminars/round tables related to decision making over project's implementation plans,
- Through establishment of moderated discussion forums on the project's website,
- As a part of the social and environmental impact assessments (SIA and EIA) procedures in case the project envisages the rental/establishment of a PCBs dehalogenation facility for low-contaminated PCB oil.

A list of the project partners and stakeholders, at project design stage, and with their relative roles, is provided in Table 5 above.

#### ***Were stakeholder partnership arrangements properly identified and roles and responsibilities negotiated prior to project start?***

From the interviews it seems as if not all stakeholders were clear on their roles at the beginning of the project. The UNDP implementation team and the RTA both mentioned having spent considerable time and effort clearing roles, responsibilities, and budgetary issues with the private companies, and more particularly with CEDIS. Several other interviewees mentioned the project's initial difficulties in establishing communication with the industrial/private company stakeholders. However, all interviewees acknowledged that stakeholder relationships worked fine after these initial challenges had been overcome. Though dynamic in terms of membership, from the interviews transpired that the Project Board was working well throughout most of the project.

#### 3.1.5. LINKAGES BETWEEN PROJECT AND OTHER INTERVENTIONS WITHIN THE SECTOR

The ProDoc mentions linkages and complementarities with the following ongoing activities in the country:

- Alignment with EU regulation in the framework of accession activities,
- Initiatives by the private sector to start inventories of PCB containing equipment,
- Initiatives by the private sector to replace PCB contaminated equipment and to clean up contaminated sites

This got confirmed during the interviews. One interviewee for example confirmed the 'very strong foundation in terms of regulations to progress with PCB management' in the country,

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<sup>15</sup> This relates to a practice of disposing POPs waste at HTI factories in the EU where, due to high chlorine content which is corrosive and due to the need to control air emissions, it is blended to reduce its chlorine content with other hazardous (industrial) waste which is disposed simultaneously at the factory.

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at the start of the project, attributed to the country's proximity to the EU and the influence of EU framework. It was also mentioned that the establishment of the project helped overcome the initial pushbacks from the private sector on phasing out PCBs (see section 3.1.1 and 3.1.2).

## 3.2. PROJECT IMPLEMENTATION

### 3.2.1. ADAPTIVE MANAGEMENT (CHANGES TO THE PROJECT DESIGN AND PROJECT OUTPUTS DURING IMPLEMENTATION)

On an overall level, no major changes to the project design were made. Four elements cause minor changes or adjustments of the project:

- Slow initial responsiveness of the private sector stakeholders, partly delaying project activities
- Efficient use of funds in the first half of the project, freeing up funds for extra activities in the second half
- Remaining contamination being located at just one project site, making a PPP redundant
- The discovery of a large historical soil contamination at one of the project sites

These elements led the Project Board to apply for a no-cost extension to catch up on activities and implement newly identified extra activities within the project timeframe, de facto responding to the first three elements above. We will discuss project outputs in section 3.3.1, but it is worth mentioning here already that the project had a higher output than originally foreseen, and that adaptive management was successfully applied during project implementation.

The design and speed of delivery of the project hinged on the establishment of the national inventory and populating it with sampling outcomes. The interviewees and the first PIRs convey that a fast reaction on the PMU side achieved a change in the national decree on PCB sampling and testing, freeing the way for the project to use a simplified screening method, for getting the private stakeholders on board, and for allowing more sampling than initially foreseen.

The project had originally budgeted for the remediation of 700 tons of equipment and oil, and 200 tons of soil. In the end only 550 tons of equipment and oil had to be remediated, This meant that some budget was left over from this activity. As a consequence, a much higher volume of contaminated soil could be treated, This was very fortunate as the funds could be used to remediate the contaminated soil encountered at the KAP site. Now, future remediation works at the KAP site will be cheaper as the heavily contaminated parts of the site have been taken care of by the project, and only moderately and low contaminated soils is left to be treated. The flexible approach and the efficient management of fund by the project team hence brought about extra benefits for the country and for the stakeholders involved.

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The PIRs comment on the spending pattern of the project deviating from the original budget plans. According to the PMU, this was due to the project's activities depending on big tenders, causing a 'jumpy' spending pattern, rather than a consistent linear one.

***How well was the project managed by the team in place? Did it react appropriately to inquiries, difficulties and identified risks, in a timely manner?***

Both the assessments in the PIRs as well as the feedback during interviews confirm that the project was managed well by the team in place, and that it reacted appropriately and in a timely manner to any issues or opportunities identified. The PMU is also said to have communicated well with the Project Board, and with all stakeholders, carefully managing collaboration and good communication between the MoESPU and the private companies (KAP and CEDIS). The performance of the project management team will be further discussed in section 3.2.5.

***What follow-up actions and/or adaptive management were taken in response to monitoring reports (PIRs)?***

The PMU and RTA jointly prepared the annual PIRs for submission to the GEF. Except for 2021, the PIRs do not contain any information on the Critical Risk Management, making it difficult to assess whether follow-up actions were taken or not.

***Was the Project Board responsive to the needs of the project? What would have improved their respective contributions?***

The size of the project's initial project board compromised fast decision taking as well as ease of convening (e.g. the 4<sup>th</sup> project board meeting did not take place as too many members could not make it). The project hence decided to slim down the project board during the 5<sup>th</sup> PBM (10.07.2019), significantly improving its performance according to the interviewees.

Several members of the Project Board were replaced after elections reshuffled national politics and ministries in 2020. This temporarily delayed decisions by the board, and resulted in the delay of some activities, according to several interviewees.

Overall, the Project Board executed its supervisory and guidance function fine. The board also proved useful in securing political support for activities and facilitating for example the (legal) clearance to use fast-screening kits for PCB oil thereby significantly reducing the costs of the national PCB inventory process.

The TE team noticed that the meetings of the board were informed by an updated annual work plan, with the PMU reporting on past activities as well as upcoming ones. As the MTR also noted and commented: budgetary, disbursement or co-financing information was not systematically presented or discussed at the board meetings before the MTR. Notes from the Project Board Meetings (PBM) after the MTR do contain this information.

***Did the project undergo significant changes following recommendations from workshops, steering committee or review procedures? In case of extensive changes, did they materially change the project outcomes?***

The Mid-Term Review (MTR), conducted between March and October 2019, formulated 12 recommendations for improvement of the project (Table 8). The PMU formulated a Management Response within one week, and the status of implementation at the end of 2021

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of these responses is captured in Table 8. Apart from the 11.5 months extension, the project did not undergo any significant changes.

Even though the management responses to the MTR seems appropriate, and timely, the TE noticed that a number of the decisions that were taken cannot be traced in the notes of, for example, the PB meetings.

**Table 8: Status of MTR follow-up**

	Recommendations in the MTR	Management response	Status/ activities
1	PMU should initiate the analysis of the technical and economic feasibility of disposal of low-concentration PCB waste by an independent consultant as a matter of the highest priority and investigate the legislative requirements and timelines necessary for securing relevant permits for different disposal technology options	Having in mind that work on development of PCB inventory is in the final stage we have enough information on PCB quantities present in the country. Following the recommendation, the PMU start with this activity immediately.	The study was completed in May 2020
2	PMU in cooperation with PSC should develop a road map for continued coordination of PCB management in the country, including consideration of temporary institutionalization of PSC beyond the project completion date	The PMU will initiate discussion on this with the PSC and propose development of PPP model with the business plan until 2025, in order to have clear strategy for the establishment of such entity. Since the new Law on PPP is still pending adoption, we will guide our work with the final draft of this Law	<p>A consultant was engaged to perform an analysis of the PPP model in December 2019. The conclusion of the study was that 'in Montenegro there is no justified possibility of establishing a public-private partnership in the management of polychlorinated biphenyls.</p> <p>There are two key reasons for this: first, the regulation governing public-private partnership does not recognize industrial waste, that is, PCB as an area of public action in which it is possible to establish a PPP; secondly, the cost-benefit analysis unequivocally indicates that for Montenegro, the option of exporting transformers containing PCBs for treatment abroad, i.e. in established purification plants in the region and returning the treated transformers to reuse, is the most cost-effective solution for removing transformers containing PCBs in Montenegro, which, along with the ban on importing PCBs, excludes the option of investing in a treatment unit in Montenegro or renting it.'</p>
3	PMU in cooperation with CEDIS, and other owners of the recently identified	PMU initiated discussion with CEDIS and they agreed to collect and provide us with	Decision at the 6 <sup>th</sup> Project Board Meeting (24.03.2020): CEDIS and KAP need to provide lists of

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	potentially PCB-contaminated equipment and CETI should initiate sampling and analysis of this equipment, including capacitors owned by CEDIS and transformers owned by other entities including the so called "unknown owners" in order to establish the amounts of PCB-contaminated equipment and waste for disposal or decontamination.	data on this equipment. After that on PSC meeting, we will decide on how to proceed since during the sampling of the oil equipment can be damaged and we need to know who will be responsible to resolve the issue if occur.	equipment for decontamination and destruction no later than 30 April 2020.  The 5 <sup>th</sup> Project Board Meeting (10.07.2019) had already recommended this action. However, the Management Response form reports that it was decided not to take samples from the transformers which do not have identified owner, as there is a possibility for them to be damaged in the process. This decision was discussed and taken at the PBM.
4	PMU should solicit necessary external expertise for assessment of available technological and financial options in order to determine feasible alternatives for decontamination or disposal of the special transformers at Uniprom-KAP	Project already has international expert on contract but if project partners express their interest that someone other than this expert do the assessment, we will solicit other expertise. This will also be discussed at the PSC meeting.	From the Management Response form:  - All the project partners are satisfied with the expert support provided by the international expert engaged by the project and there is no need to solicit the services of additional one for the same scope of work. - The assessment has been developed and the project will follow the recommendations from it.  No trace of discussion at PBM.
5	PMU should ensure provision of international expertise in enforcement of PCB legislation for hands-on training of the national environmental inspectors	PMU initiated discussion with the national environmental inspection and will intensify the work on building their expertise.	The PIR 2022 reports that the project provided further assistance to the capacity strengthening of the Inspectorate involving them in the training organized on 20-23 June 2022 on contaminated site remediation and monitoring. This is substantiated by the training workshop report.
6	PMU in collaboration with MoSDT should consider elaboration of a proposal for legal and financial incentives to encourage the PCB holders to take early actions for phase out of the in-service electrical equipment well in advance of the 2025 deadline. In addition, the PMU in collaboration with CEDIS and Uniprom-KAP should consider introducing presentation of maintenance plans of online PCB equipment at PSC meetings and discuss timelines for replacement and disposal of online PCB	The recommendation on incentives will be further investigated and discussed vit the PSC and the MoSDT.  The part about presentation of maintenance plans on PSC meetings will be implemented on the meetings that will be organized at the beginning of 2020.	From the Management Response form: There was no interest to start with these discussions. Also, there will be only one owner of the PCB equipment left after the project closure.  The 6 <sup>th</sup> and 7 <sup>th</sup> PBM mention the need for CEDIS and KAP to provide information on the list of equipment for decontamination and destruction, as well as the need to send proposed project activities and budget required for their implementation to the PMU.

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	equipment well before the project ends in 2021		
7	PMU in cooperation with MoSDT should ensure cooperation with the on-going research project on health impact of PCBs that is being implemented by the Montenegrin Institute for Public Health. The cooperation should focus on monitoring PCB health impacts for workers with electrical equipment and communities living in the neighborhood of the temporary PCB storage facilities.	We already started with the formalization of the cooperation with the Institute for Public Health (IPH). This recommendation will be fully implemented.	Signed cooperation agreement with IPH.  Study on monitoring PCB impact on health
8	PMU in cooperation with the main PCB holders should consider practical involvement of students of higher education in activities on PCB management, for example through participation of students in the preparation of the next export shipment of PCB waste.	PMU will ensure participation of students in all future activities related to preparation and execution of export of PCB waste and, in addition, we will include them in capacity building workshops/trainings that will be organized	Reported in PIR 2022: A study visit to the Stockholm Convention Regional Centre for Capacity Building and the Transfer of Technology in Brno, Czech Republic (RECETOX) will be carried out on 19-23 September 2022. Ten (10) participants are from the national laboratories, researchers and postgraduate students from the relevant study programmes, as in the MTR the project was recommended to include these categories in its capacity building activities. The topics that will be covered are: monitoring of the POPs compounds in the environment, National Implementation Plan, environmental chemistry, sampling technics, laboratory analysis.
9	PMU in cooperation with MoSDT and other relevant governmental agencies should consider <i>pilot testing on sampling and analysis of PCBs</i> in caulk, glazing and painting materials in older buildings	This activity is not part of the PCB project that we were approved to implement. We will investigate the willingness of the Government to do some investigation to determine if there is a PCB in caulk, glazing and painting materials in older buildings. This could be considered as an idea for another chemicals project.  We believe that this activity needs to be approved by the donor in order to be financed from already approved financial resources.	Management Response document: There was no interest in the Government to discuss on this.
10	PMU should consider a revision of the project results	The project was designed in the past and based on a	Management Response document: Due to Covid-19 it was not easy to

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	framework to ensure its consistency and full compliance with the principles of the results-based management.	number of years of implementation of similar programmes. We will review results framework again and decide on the PSC will we do the proposed revision.	organize PSC meetings, and as this was not an urgent matter it was not included in discussions.
11	PMU in cooperation with MoSDT and the two major PCB holders should develop and agree clear rules for accounting of the in-kind contributions to the project	This recommendation will be implemented, and all in-kind contribution will be recorded.  Collect data on in-kind co-financing from the partners	PMU has developed guidelines for the in-kind contributions accounting that will be used for the future co-financing calculations.  7 <sup>th</sup> PBM: CEDIS and KAP should send proposed project activities and budget required for their implementation by 15 January 2021; CEDIS and KAP to provide co-financing certificates for 2019.
12	PMU should conduct a thorough reassessment of the project risks after the MTR stage and ensure that critical risks are properly identified and addressed in the Critical Risk Management section of the annual PIRs together with the corresponding assessment from the side of RTA.	The PMU will do the reassessment of the project risks and continue to follow it on a quarterly basis. Every risk that is considered to be critical will be reported in the annual PIR.	PIR 2021 reported on COVID-19 related risks as well as on elections.  PIR 2022 reports nothing under Critical Risk Management.

With regards to recommendation 6, the issue of access to equipment for sampling (causing a delay of the project) was also mentioned by the RTA, who had to conduct several missions to agree on a plan to have access.

### 3.2.2. ACTUAL STAKEHOLDER PARTICIPATION AND PARTNERSHIP ARRANGEMENTS

The project was characterized by a high level of stakeholder involvement in its design and implementation. Key implementing stakeholders were the Ministry of Ecology, Spatial Planning and Urbanism – MoESPU (formerly it was the Ministry of Sustainable Development and Tourism (MoSDT)), and the two industry partners KAP and CEDIS. The project identified a broad range of stakeholders from national and local government, private sector, civil society and academia at its start (Table 5). Most of these attended the kick-off workshop, after which several of them left the Project Board, as the project was not their main focus. After the MTR, the PMU sought a stronger inclusion of academic stakeholders and involvement of the Institute of Public Health into the project, effectively addressing MTR recommendations 8 and 7 respectively, and strengthening connections to secondary (supporting and peripheral stakeholders) that were indirectly affected by the project activities. This also aimed at raising the general support for the project's interventions.

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The project's website informed the wider public about the main objective and components of the project, identified partners and stakeholders, contained information about the environmental and health risks posed by PCBs, and referenced relevant legislating and frameworks. Some of the project's outputs (e.g. the Guidelines for environmental management of PCBs) were posted on the site. In parallel, the project appeared in national and online media, particularly in the beginning of its implementation period<sup>16</sup>. The project was occasionally mentioned in relation to Montenegro's obligations as an EU candidate country, by which it is obliged to close the negotiation chapter 27- Environment. It states that the UNDP PCB management project will "completely solve the problem that Montenegro has with PCB in a way to permanently dispose of about 700 tons of waste and equipment containing it and about 200 tons of contaminated soil." Furthermore "the harmonization and application of the acquis of the EU is a priority in the process of European integration"<sup>17</sup>. Other online news mostly mentioned project in the context of relevance to the waste management strategies and action plans. Finally, several of the participating institution also reported on the project<sup>18</sup>.

Table 9 presents actual stakeholder engagement during the project.

Altogether five training workshops were organized by the project, each involving a broad group of stakeholders. These took place in October 2017, February, September and December 2018, and in June 2022. The project hence organized one extra workshop, compared to what was foreseen in the ProDoc. In addition, two study visits were organized, one to Skopje in 2018 and one to the Czech Republic in 2022.

Judging by the workshop and study visits attendance lists, as well as by the interviews, the project succeeded in keeping stakeholders onboard throughout the project.

In its capacity building of relevant partners and stakeholders and in the dissemination of information, the project paid attention to the impact that PCBs have on both men and women. From interviews and from the reporting on core indicator 11 transpires that the project furthermore ensured the participation of women in all workshops and events<sup>19</sup>, so that relevant women's knowledge on harmful effects of the POPs is increased, and in line with the UN policies on equal opportunities and the GEF policy on Gender Mainstreaming.

***To what extent were effective partnership arrangements established for implementation of the project with relevant stakeholders? How would you describe the relationship between UNDP and Montenegrin organizations involved in the project?***

As identified by most interviewees, and according to the notes of several PBM meetings, the project initially struggled to establish an efficient working relationship with CEDIS. This was overcome by efforts from the PMU and the RTA, who on several occasions explained the rationale behind the distribution of efforts and funds in the project.

<sup>16</sup> E.g. reporting on the kick-off workshop in Portal Analitika, CDM portal

<sup>17</sup> Mina News, Radio and Television Montenegro, and daily press Pobjeda

<sup>18</sup> Government of Montenegro: <https://www.gov.me/cyr/clanak/172714--najava-uvodni-sastanak-na-projektu-sveobuhvatno-ekoloski-prihvatljivo-upravljanje-otpadom-koji-sadrzi-polihlorovane-bifenile-pcb>  
Institute for Public Health: <https://www.ijzcg.me/me/projekti/sveobuhvatno-ekoloski-prihvatljivo-upravljanje-polihlorovanim-bifenilima-pcb-u-crnoj-gori>

University Donja Gorica: Case Study – PCB contamination in KAP <https://ftbhe.udg.edu.me/obavjestenja/arhiva/2022/06>

CEDIS on its participation in the project: <http://cedis.me/wp-content/uploads/2022/04/lzvje%C5%A1taj-o-poslovanju-za-2017-godinu.pdf>

<sup>19</sup> 47 women benefitted from the GEF investment, and 54 men did.

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All institutions interviewed expressed their appreciation for the project's focus on continued stakeholder involvement, identifying it as one of the first projects in the field to have involved all relevant national institutions in all project steps (design, implementation, communication). The interviewed institutions said the project had strengthened collaborations between the different stakeholders involved, giving them practical experience on the (joint) implementation of this type of project, and resulting in a better cooperation under other nationally implemented projects. Interviewees also identified the crucial role played by the MoESPU in facilitating project activities, and stakeholder interaction throughout the project.

***Did the project consult with and make use of the skills, experience and knowledge of the appropriate government entities, NGOs, community groups, private sector entities, local governments and academic institutions in the design, implementation and evaluation of project activities?***

Interviewees confirmed the involvement of all relevant stakeholders in the country in the project. The project was able to identify those national institutions that possessed the initial skills and knowledge for the technical aspects of the project:

- CETI performed all sampling. This lab remains the only institution familiar with this type of sampling of PCB and analysis in Montenegro. Originally skilled in applying the more elaborate sampling method, the lab gained accreditation for the fast screening method under the project, subsequently performed all analyses, and was assigned the management of the inventory. These activities have considerably raised the lab's skills, making it an attractive partner for similar activities in the region.
- Hemosan was involved in all decontamination activities. Having a turnover too small to directly apply for tenders under the project, Hemosan was associated and engaged as the local subcontractor for all packaging and decontamination activities and remained the only company having the license to work with this type of waste in the country. Some interviewees were also of the opinion that collaboration with international companies has raised Hemosan's profile in the region.
- The Institute of Public Health conducted a bio tracing study. As mentioned in the PIR 2021, the IPH has been implementing a national project on the impact of selected pollutants on human health. The mentioned project has been the 1<sup>st</sup> epidemiological study of its kind conducted in Montenegro, looking at the impact of heavy metals (polycyclic aromatic hydrocarbons (PAHs) and PCBs) on human health. The PCB sub-component of this study is now linked with the PCB project at hand through an assessment of workers' health from the two participating PCB holders (CEDIS and KAP), and from the company Hemosan which worked on draining and packaging PCB transformers and waste during the project's temporary storage and export operations. During the interviews, the IPH expressed would have liked to have been involved earlier on in the project (e.g. design stage), so that a larger bio tracing study could have been planned for. IPHs newly acquired skills were said to have raised the interest of similar projects in Croatia and Serbia.

From the above transpires that the project identified appropriate Montenegrin partners for the implementation of its activities (including capacity building).

With respect to MoESPU involvement, interviewees noted that even though the project involved the relevant unit and staff in capacity building activities, actual available staff time was limited, and therefore the gains from the capacity building were found to be relatively small (as staff could not always attend the capacity building or apply it).

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The MTR recommended a better engagement of university stakeholders, something the PMU has successfully addressed by inviting these stakeholders to the last (and extra) workshop in June 2022. However overall, student demonstrated relatively little interest in PCB issues.

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Table 9. Overview of the actual involvement of stakeholders

Name of institution	Foreseen role	Actual involvement and role
<b>INSTITUTIONAL STAKEHOLDERS</b>		
Ministry of Ecology, Spatial Planning and Urbanism - MoESPU  (former Ministry of Sustainable Development and Tourism)	Direct role- Project's national implementing institution	Project Board  Participated in all WS and in the study visit to Skopje
Ministry of Finance - MoF	Institutional partner (development of Public-private partnership, state financial assistance)	Planned, but was not involved in the project.
Ministry of Economic Development and Tourism (former Ministry of Economy)	Institutional partner  (Key partner for the main PCB holders such as EPCG and KAP companies)	Planned, but was not involved in the project. UNDP directly contacted the companies.
Ministry of Interior	Institutional partner (emergency preparedness during hazardous waste handling and transportation, and PCB dehalogenation technology operation time, supervision on implementation of prevention and protection safety measures during (re) construction of objects and capacity building beneficiary)	Planned, but was not involved in the project. Licensed companies were contracted for hazardous waste handling and transportation
Ministry of Ministry of Transport and Maritime Affairs	Institutional partner (transportation of hazardous substances)	Planned, but was not involved in the project
The State Administration for Inspection Affairs of Montenegro  Ecological Inspection Agency	Secondary role- Institutional partner (supervision and enforcement) and capacity building beneficiary	Participated in all WS and in the study visit to Skopje
Environment Protection Agency of Montenegro	Secondary role -Institutional partner (regulatory aspects, monitoring, data management) and capacity building beneficiary	Issued all the licenses for exporters of waste, as well as license to Hemosan for management of hazardous waste on their field.  Participated in all WS (except one) and in the study visit to Skopje
<b>LOCAL SELFGOVERNMENTS</b>		
Municipality Golubovci	Indirect role- Beneficiary (environmentally impacted by management of temporary PCB storage at KAP)	Not involved
Municipality Bar	Indirect role- Beneficiary (environmentally impacted by	Not involved

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	management of temporary PCB storage at Luka Bar)	
<b>INDUSTRIAL STAKEHOLDERS</b>		
Electric Power Industry of Montenegro (EPCG)	Contributed to the project preparation. The contribution to project implementation was then delegated to the affiliated companies CGES and CEDIS.	
Aluminum Factory (KAP)	Direct role – PB member, and secondary role -Beneficiary (owner of PCB contaminated equipment and waste)	Participated in all WS and in the study visit to Skopje
Montenegrin Electricity Transmission System (CGES)	Indirect role - EPCG affiliated company	
Montenegrin electricity distribution system (CEDIS)	Direct role - PB member, and secondary role-Beneficiary (owner of PCB contaminated equipment	Participated in all WS and in the study visit to Skopje
Port of Bar	Secondary role- Capacity building beneficiary	Participated in two WS
Hemosan	Secondary role- Beneficiary (protection of the sea from pollution, ports, marinas and hazardous waste; reception, transport, storage and export of all types of hazardous and non-hazardous waste)	Participated in all WS
Port of Adria	Secondary role- Capacity building beneficiary	Participated in three WS
Coal mine in Pljevlja	Potential direct beneficiary in case contamination was encountered  Secondary – trainings	Participated in trainings – 8-9 Oct 2017, 14 Feb 2018, 6 Sep 2018. Involved in the inventory, & equipment was tested
<b>CIVIL SOCIETY AND ACADEMIC SECTOR</b>		
NGO Ozone	Awareness raising, information dissemination.  take part in capacity building trainings	Involved at inception workshop. Not their area of interest. Focus on communal waste.  Did not attend capacity building WS:
NGO Green Home	Awareness raising, information dissemination.  Capacity building recipient	Did not attend capacity building WS.
Center for EcoToxicological Research (CETI)	Direct role - Research and analysis in project preparation and implementation phase, and	Participated in two WS and in the study visit to Skopje

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	secondary role as a capacity building beneficiary	
Institute for public health	Direct role – Research and analysis in project implementation, and secondary role as a capacity building beneficiary	Their involvement started last year. Not involved in project preparation phase. Could then have requested a more ambitious study.  Did not attend any trainings.  Did not contribute to UNDP guidelines
Faculty of Mechanical Engineering	Advisory function	<i>Faculty of Metallurgy and Technology, University of Montenegro</i> Participated in 2 WS
<i>Faculty of Food Technology, Food Safety and Ecology, UDG</i>		Participated in the kick-off WS
Montenegrin Academy of Sciences and Arts	Advisory function	

### 3.2.3. PROJECT FINANCE AND NCE

The project was approved for implementation as a full-size GEF project on 14 October 2016 for the duration of 60 months. The approved GEF project grant amounts to US\$ 3,500,000 with a total 19,803,691 US\$ pledged as parallel co-financing commitment by the main project stakeholders, and US\$ 50,000 pledged as co-financing by UNDP TRAC resources. To date, there is an underspending of the project. However, the project plans to use all remaining resources by the end of project.

The available data on the co-financing is presented in tables 10 and 11. The PMU is working with KAP and CEDIS to get the updated numbers for 2022.

Of the GEF funds, all except US\$ 241,193 have been spent or committed, according to the available evidence. An outstanding tender for equipment for the IPH is estimated to amount to US\$ 100,000, and some extra funds will be required to take care of the last amounts of soil to be removed from the KAP site. It is expected that all GEF funds will have been used by the end of project.

Table 10: Co-financing table

Co-financing (type/source)	UNDP financing (US\$)		Government (US\$)		Private sector partners (US\$)		Total (US\$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
Grants	50 000	50 000					50 000	<b>50 000</b>
Loans/Concessions								
In-kind support			200 000	n.a.	1 648 555	1 398 000	1 848 555	<b>1 398 000</b>
Other – direct investments					17 905 136	14 255 000	17 905 136	<b>14 255 000</b>
<b>Totals</b>	<b>50 000</b>	<b>50 000</b>	<b>200 000</b>	<b>0</b>	<b>19 553 691</b>	<b>15 653 000</b>	<b>19 803 691</b>	<b>15 703 000</b>

Table 11: Confirmed sources of Co-financing at TE Stage

Sources of co-financing	Name of financier	Type of Co-financing	Investment mobilized	Planned (US\$)	Amount (US\$)
Donor Agency	UNDP	Grants	Recurrent expenditures**	50 000	50 000
Private Sector	EPCG FUD	Grants	Investment mobilized*	11 176 296	9 020 000
Private sector	EPCG FUD	In Kind	Recurrent Expenditures	975 555	835 000
Private sector	KAP	Grants	Investment mobilized	6 728 840	5 235 000
Private Sector	KAP	In Kind	Recurrent expenditures	673 000	563 000
Recipient government	MoSDT	In Kind	n.a.	200 000	0
<b>Totals</b>				<b>19 803 691</b>	<b>15 703 000</b>

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*\*Investment Mobilized means Co-Financing that excludes recurrent expenditures (Different governments, companies and organizations may use different terms to refer to “recurrent expenditures”, such as “current expenditures” or “operational/ operating expenditures”).<sup>32</sup>*

*\*\*Recurrent expenditures can generally be understood as routine budgetary expenditures that fund the year-to-year core operations of the entity (they are often referred to as ‘running costs’ - they do not result in the creation or acquisition of fixed assets). They would include wages, salaries and supplements for core staff; purchases of goods and services required for core operations; and/or depreciation expenses. Some of the typical government co-financing we have previously included (such as routine budgetary expenses for Ministry of Environment operations) will no longer meet this new definition of investment mobilized for these specific countries.<sup>33</sup>*

**Table 12: Overview of the use of GEF resources**

Expense post	Planned in CEO End.	Actual expense by 15 August 2022	Commitment	Estimated % by the end of project
Component 1	283.000	215,535.47	6,338.35	78.4
Component 2	350.000	333,553.54	1,709.20	95.8
Component 3	2.550.000	1,691,274.16	771,131.95	96.6
Component 4	150.350	57,157.95	31,071.71	58.7
Sub-total	3.333.350	2,297,521.12	810,251.21	93.2
PMU	166.650	125,963.86		75.6
Total	3.500.000	2,423,484.98	810,251.21	92.3

***Is there any variance between expected and actual co-finance? What effect does co-financing have on project performance/effectiveness?***

The co-financing model of the project was key to get the two main PCB holders in the country committed to the project. The project components supported by the PCB holders were well integrated into the overall project. However, even though co-financing commitments were discussed and described in the ProDoc, notes from the PBM testify to CEDIS questioning or requesting clarification on financing arrangements at several points in time, something which was also confirmed and highlighted by several interviewees from other institutions. The co-financing figures available suggest that the private sector stakeholders did commit to the financing, though exact figures from KAP as well as the most recent figures from CEDIS are yet to be submitted or confirmed. As KAP needed to replace the equipment that was removed by project activities, expectations are investment is larger than the figure in table 11.

The actual extent of materialization of co-financing has been sufficient for all project outcomes to be achieved.

There is no evidence of additional, leveraged resources that have been committed because of the project. A recent discovery of large historical soil contamination at the KAP facilities presents unanticipated extra costs for this private stakeholder. As the project had an underspending, major part of the costs for this decontamination could be covered from project resources. It is however not clear how and when KAP will be able to finance the additional cleanup from its own resources. It seems that KAP has spent resources committed under the project and hence does not have a budget remaining, to address this remaining (lower grade) contamination within the framework of the project.

The notes of the 8<sup>th</sup> PBM seem to suggest a potential risk for the upgrading/construction of a storage facility at the CEDIS site. Due to some delays in documentation, it may not be possible anymore to finish the construction of the storage within the project timeframe.

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#### 3.2.4. MONITORING & EVALUATION: DESIGN AT ENTRY (\*), IMPLEMENTATION (\*), AND OVERALL ASSESSMENT OF M&E (\*)

##### 3.2.4.1. Design at entry

Monitoring responsibilities were attributed as follows in the ProDoc:

- The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP-GEF RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted. The Project Manager will develop annual work plans based on the multi-year work plan included in Annex A, including annual output targets to support the efficient implementation of the project.
- The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year.
- The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR.
- Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

The TE team finds the roles and responsibilities well-articulated.

A specific M&E Plan was developed and described in section VII of the ProDoc, and a specific M&E budget calculated. Compared to the RF, the Monitoring Plan (MP) is more basic and does not include indicators for the gender study under output 1.1, or the company PCB management plans under output 1.2 or output 2.2. Like the RF, the MP also identifies assumptions and risks, but not as such for achieving the (targets) of the indicators, but rather related for being able to monitor processes. Baseline conditions were described in the RF, not in the M&E plan. The M&E plan does not include evaluation studies to assess results. The M&E plan identified responsibilities, appropriate time frames, data sources and collection methods. The indicators in the M&E plan run parallel to those in the RF and are discussed in section 3.1.1.

The M&E budget in the project document was sufficient to perform the M&E tasks.

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In addition to the RF and the MP, a Multi Year Work Plan (MYWP) was developed. The MYWP identifies detailed targets by year for each indicator. These targets are informed by the RF. However, the indicators in the MYWP and the RF are not aligned:

- the MYWP only includes concrete indicators and targets at output level, and not at project objective level.
- the MYWP (like the MP) does not include indicators for the gender study or the company level PCB management plans.
- The TE team noticed that indicators for output 2.3 are entirely missing from the MYWP in the ProDoc.
- the MYWP deviates from the RF in terms of targets itself. The target for the number of trainees under output 1.1., for example, amounts to 155 in the RF and to 150 in the MYWP. The target for upgraded storage facilities under output 3.1. is expressed in number of facilities (2) in the RF, whereas it is expressed in overall tons of storage (250) in the MYWP (and MP).

The Evaluation Plan in the ProDoc only identifies and budgets for the TE and not the MTR.

The Monitoring Plan and the Evaluation plan are only one part of the set of mandatory GEF M&E requirements. Further requirements are captured in Table 13, below.

Based on the above, we **rate the design of the monitoring plan at Moderately Satisfactory**.

#### 3.2.4.2. Implementation

The ProDoc stipulates that the project results as outlined in the project RF will be monitored annually and evaluated periodically during project implementation to ensure the project effectively achieves these results.

From the minutes of the Project Board, it seems that the Multi-Annual Work Plan was used as a tool for monitoring project progress towards results, rather than the RF. Though deviating from the UNDP POPP and the UNDP Evaluation Policy, this seems a sensible choice, considering baselines and targets are formulated more clearly in the work plan compared to in the RF, and the fact that the MP is aligned with the MYWP. It does however mean that less indicators were monitored (see discussion under 3.2.4.1).

The RF was used as a tool to inform the PIRs. The PIRs were jointly prepared by the PMU and the RTA and give a good systematic and detailed description per (RF) indicator of project progress towards targets. During the interviews, the PMU indicated that the PIR format was challenging.

A detailed status of monitoring activities is given in Table 13.

**Table 13: Status of the mandatory GEF M&E requirements**

GEF M&E requirements	Primary responsibility	Time frame	Status and assessment
<b>Inception Workshop</b>	UNDP Country Office	Within two months of project	The project's Inception Workshop (IW) was conducted on 26 May 2018. It was delayed several times due to institutional changes in the Ministry of

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GEF M&E requirements	Primary responsibility	Time frame	Status and assessment
		document signature	Sustainable Development and Tourism that occurred in that period.
<b>Inception Report</b>	Project Manager	Within two weeks of inception workshop	An inception report was drafted in June 2017.
<b>Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP</b>	UNDP Country Office	Quarterly, annually	See comments above
<b>Monitoring of indicators in project results framework</b>	Project Manager	Annually	See comments above
<b>GEF Project Implementation Report (PIR)</b>	Project Manager and UNDP Country Office and UNDP-GEF team	Annually	Altogether five PIRs were prepared and submitted (2018, 2019, 2020, 2021 & 2022), each covering an annual period from July until June the following year.  Apart from 2021, none of the PIRs has filled out the Critical Risk Management section.
<b>DIM Audit as per UNDP audit policies</b>	UNDP Country Office	Annually or other frequency as per UNDP Audit policies	The audit was performed. The project was part of selected group of projects that were audited by the UNDP internal audit. It was not external audit, or audit related to DIM
<b>Lessons learned and knowledge generation</b>	Project Manager	On-going	Foreseen at the last PBM
<b>Monitoring of environmental and social risks, and corresponding management plans as relevant</b>	Project Manager UNDP CO	On-going	22 site/field visits were conducted:  Apart from in the annual PIRs, Social and Environmental Standards were monitored in the two Quality Assurance Reports (2017; 26.10.2019)
<b>Addressing environmental and social grievances</b>	Project Manager UNDP Country Office BPPS as needed		No environmental or social grievances were reported in the PIRs
<b>Project Board meetings</b>	Project Board UNDP Country Office Project Manager	At minimum annually	Eight (8) PBM have been held to date :  26.05.2017; 1.12.2017; 18.06.2018; 14.12.2018 (only via email exchange); 10.07.2019; 24.03.2020; 26.11.2020; 1.04.2022

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GEF M&E requirements	Primary responsibility	Time frame	Status and assessment
<b>Supervision missions</b>	UNDP Country Office	Annually	Supervision missions took place on site during 2018 and 2019, and after Covid-started all communication was performed online
<b>Oversight missions</b>	UNDP-GEF team	Troubleshooting as needed	Supervision meetings by the RTA were conducted annually for the first two years of the project
<b>Knowledge management as outlined in Outcome 4</b>	Project Manager	On-going	
<b>GEF Secretariat learning missions/site visits</b>	UNDP Country Office and Project Manager and UNDP-GEF team	To be determined.	These did not happen
<b>Mid-term GEF Tracking Tool to be updated by (add name of national/regional institute if relevant)</b>	Project Manager	Before mid-term review mission takes place.	Updating was performed
<b>Independent Mid-term Review (MTR) and management response</b>	UNDP Country Office and Project team and UNDP-GEF team	Between 2 <sup>nd</sup> and 3 <sup>rd</sup> PIR.	The MTR was performed between March and October 2019, and a management response formulated in November 2019.
<b>Terminal GEF Tracking Tool to be updated by (add name of national/regional institute if relevant)</b>	Project Manager	Before terminal evaluation mission takes place	Updating was performed
<b>Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response</b>	UNDP Country Office and Project team and UNDP-GEF team	At least three months before operational closure	The TE is ongoing
<b>Translation of MTR and TE reports into English</b>	UNDP Country Office		The MTR is available in English

Based on the above information, we rate the implementation of the monitoring and evaluation as **Highly Satisfactory**.

#### 3.2.4.3. Overall assessment

From the above transpires that, even though not always filling out all (sections of) required monitoring documents, the PMU was de facto closely and effectively monitoring project activities and progress, and kept the Project Board, as well as the UNDP hierarchy informed in a transparent and detailed way. This is further substantiated by interviewees praising the close management and the responsiveness of the PMU to any issues arising.

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The notes of the PBM testify that the Project Board fulfilled its supervisory and guidance function.

We therefore **overall assess the M&E of the project as Satisfactory.**

**Table 14: TE Ratings of M&E plan**

Monitoring & Evaluation	TE Rating
M&E design at entry	Moderately Satisfactory (MS)
M&E plan at implementation	Highly Satisfactory (HS)
<b>Overall quality of M&amp;E</b>	<b>Satisfactory (S)</b>

### 3.2.5. UNDP IMPLEMENTATION/OVERSIGHT (\*) AND IMPLEMENTING PARTNER EXECUTION (\*), OVERALL PROJECT IMPLEMENTATION/EXECUTION (\*), COORDINATION, AND OPERATIONAL ISSUES

The project has been implemented following UNDP's Direct Implementation Modality (DIM), in line with the Standard Basic Assistance Agreement (SBAA, 2006) between the UNDP and the Government of Montenegro, and the Country Programme Document (CPD) for 2017-2021. The UNDP Country Office in Montenegro as the Implementing Partner is responsible and accountable for managing the project, achieving the planned project outcomes, monitoring and evaluation of project interventions, as well as for effective use of project resources. The Ministry of Sustainable Development and Tourism (MoSDT), now the Ministry of Ecology, Spatial Planning and Urbanism (MoESPU) assumed the role of the Senior Beneficiary, representing the interests of those who will ultimately benefit from the project. The Project Board was established to give oversight and advice to the project implementation. The Project Management Unit (PMU) was established and consists of the Programme Manager of the Economy and Environment Cluster, the National Project Coordinator and the Administrative Assistant. The PMU assumes overall responsibility for the implementation of project activities, achievement of planned project outputs, and reporting in accordance with the administrative procedures of UNDP and GEF. The technical support for the project is provided by the UNDP-GEF Regional Technical Advisor at UNDP Chemicals based in the Istanbul Regional Hub (IRH). He also carries out independent project oversight and monitoring functions. UNDP Montenegro is a small office, and hence does not have an oversight unit. However, the Programme Analyst (Team Leader) in the office is also an M&E officer, and he provides an oversight of the projects/programmes. Oversight was provided by the RTA, the UNDP Team Leader (M&E officer) and expert support by the consultant.

From the information and documents available to the TE team, the above-mentioned institutions and units all performed their duties diligently during the entire course of the project.

Even though the Montenegrin government had already taken several actions towards PCB management, interviewees said **a direct implementation by UNDP was an advantage** due to the following:

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- At the time of the project conception, only the UN agency showed an advanced interest in managing projects in the field of chemicals.
- It was easier administratively for the government if the UNDP handled project management and the public procurement procedure.
- There was no UNEP residence presence in Montenegro.

As mentioned before in this report, interviewees expressed their appreciation for the management team of the project, as exemplified by one interviewee stating:

*'Happy with UNDP management? Very happy yes: completely satisfied. All the process: good experts, good lecturers, very good. The PM was excellent'*

The PMU team was said to communicate in a timely, transparent and effective way to the project board, and to put in considerable effort to facilitate smooth operation and collaboration between the project partners. From the available evidence, the TE team assesses that there was an appropriate focus on results and timeliness, and an appropriate use of funds, procurement and contracting of goods and services. Risks were managed appropriately, and timely, and the PIRs testify to candor and realism in annual reporting. Management of environmental and social risks as identified through the UNDP SESP and implementation of associated safeguards requirements (assessments, management plans; if any) was done appropriately, as further discussed in the following section.

Based on the above, we rate the **UNDP implementation** as **Highly Satisfactory**, the **implementing partner execution** as **Highly Satisfactory** and hence the **overall project implementation/execution** as **Highly Satisfactory**.

**Table 15. Overview of UNDP implementation, oversight and execution**

UNDP Implementation/Oversight & IP Execution	TE Rating
Quality of Implementing Partner Execution	Highly Satisfactory (HS)
Quality of UNDP Oversight	Highly satisfactory (HS)
Overall quality of Implementation/Oversight and Execution	Highly Satisfactory (HS)

### 3.2.6. RISK MANAGEMENT, INCLUDING SOCIAL AND ENVIRONMENTAL STANDARDS (SAFEGUARDS)

As per standard UNDP requirements, the Project Manager had to monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office then recorded progress in the UNDP ATLAS risk log. Risks had to be reported as critical when the impact and probability are high (i.e. when impact is rated as 5, and when impact is rated as 4

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and probability is rated at 3 or higher). Management responses to critical risks also had to be reported to the GEF in the annual PIR.

#### ***Were the risks systematically checked and or monitored?***

In analyzing the available project documents, the TE team noticed that the Critical Risk Management section was only filled out for the PIR 2021, but not for the other ones, something the MTR also commented on. The documentation at the TE's disposal contains one Atlas log excerpt from 12.04.2021, covering the period from 01.01.2019, and presenting the most updated risk log. The PMU mentioned that the UN SESP framework was used at project design, which identified the project having one high social/environmental risk: *'Release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts, and risk to communities' health and safety posed by the improper handling of hazardous waste during transport, storage and disposal*'. Judging by the available project documentation, most management responses to these risks (An environmental assessment (EA) and environmental management plan (EMP); Proper procedures for operational activities and tendering; Training of relevant staff; GEF STAP Guidance on international standards) were indeed implemented. As ultimately no waste treatment took place within the country, there was no need for an Environmental Assessment or Environmental Management Plan under the project, and none was conducted.

The project suffered some delays due to the non-existence of a PPP law, and slow progress of the feasibility study for disposal options. Neither risk was identified at project design (see Table 7), but they were also not identified as new risks in either the Atlas tool or in the PIRs.

Finally, it seems that a risk existed with respect to the co-financing arrangement of the project, as CEDIS experienced initial difficulties obtaining a bank loan for their part and questioned the co-financing setup at several PBM.

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#### ***Management of social and environmental standards and risks***

The project at hand builds awareness on the links between waste management and public health (including occupational exposures), with a special focus on the health implications of exposure to the chlorinated PCB wastes for particularly vulnerable populations, such as female workers, pregnant women, and children who could live nearby these industrial areas. The MTR recommended that a bio tracing study should be performed accordingly, to assess any past exposure of vulnerable populations. This was addressed by the PMU and a study was performed by the IPH.

The historical soil contamination discovered at the KAP facility (2,500 m<sup>3</sup> of soil found as PCB contaminated) posed an environmental risk and required immediate attention. At the same time of discovery, the project was not designed to remediate such volumes with the required technology driven and economically expensive methods. According to the 2021 PIR, the discovery prompted a defensive reaction from KAP, and an alternative way of managing the situation was found. The 2022 PIR reports that additional site investigations resulted in a tender for the removal of 1,050 tons of contaminated soil and a capping of the location. The quantities of the removed contaminated soil were five (5) times larger than those planned in the project document. In choosing the contractor, the project ensured that all required international standards are considered and work executed in safe manner. It seems hence that the project has managed this unexpected environmental risk well and moreover that it used remaining budgets efficiently in doing so. By removing the majority of contaminated soil,

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the danger to people and environment presented by PCBs in the soil and groundwater has been reduced.

## 3.3. PROJECT RESULTS AND IMPACTS

### 3.3.1. PROGRESS TOWARDS OBJECTIVE AND EXPECTED OUTCOMES (\*)

The project has managed to establish a full online dynamic inventory of PCB in the country, develop guidelines for ESM of PCB, train relevant stakeholders, adjust and complement national legislation, and draft a national PCB management plan. Targets for sampling have been exceeded, as well as those for waste disposal. The target for upgrading storage facilities has only partially been achieved, as are the targets for company specific PCB management plans.

As noted in section 3.2.4.1, the project's M&E system is not adequate to measure its results, and the TE team used the RF as a reference. The RF includes three (3) indicators at **project objective level**, and 22 at outcome level. The **achievement of two of the three project objective targets has been highly satisfactory and satisfactory for the remaining one.** At **outcome level, the overall achievement of targets is satisfactory.** The achievement of targets was highly satisfactory for 7 out of 9 targets under component 1, and (highly) satisfactory for 5 out of 6 targets under component 2. The achievement under component 3 was on average satisfactory. Table 16 presents the analysis for each indicator, justifying the ratings.

It is worth noting here that interviewees expressed their overall (high) satisfaction with the project, and especially with the capacity building outcomes. The MoESPU expressed their disappointment that some PCB owners did not manage to have all of their PCB contamination dealt with under the project due to their own slow progress, but this seems to fall outside of the scope of the project.

Based on the above, and on table 16, we assess the progress towards objective and expected outcomes as **Satisfactory.**

Table 16. Progress towards results matrix

Description of Indicator	Baseline	End of project target	End of project status	Rating	TE comments
Project objective: Comprehensive identification and disposal/treatment of PCB contaminated equipment and waste in the country					
Evidence that a National environmentally sound management (ESM) system of PCB chemicals and waste is drafted and implemented	<p>Current PCB management regulation has some deficiencies and requires appropriate capacity and cooperation from PCB equipment/waste owners to be enforced</p> <p>No national plan prepared and comprehensively implemented</p> <p>No comprehensive ESM system is in place to address the national PCB situation, and power equipment is exposed to continuous cross-contamination</p>	<p>ESM implemented.</p> <p>Local firms / institutions benefitting from the establishment of a public-private partnership on PCB management.</p>	<p>National PCB Management Plan developed, based on completed inventory</p> <p>Waste removed; plan identified for equipment that is still in use</p> <p>All remaining equipment been properly labeled. Workers have been educated about safety measures required</p> <p>Environmentally Sustainable Management (ESM) guidance materials have been developed and presented at a dedicated workshop</p> <p>The owners of the PCB contaminated equipment implement the guideline</p> <p>Storage in KAP being upgraded, to be finalized in September 2022</p> <p>CEDIS to build its own storage site, using their in-house resources, but will not be achieved before project end</p> <p>PPP study conducted but no PPP established. Alternative: Project Board to remain partially in function after project</p>	S	<p>The target has been achieved for most part</p> <p>However, the storage facility at CEDIS remains to be built and management plans of KAP and CEDIS remain to be formulated or updated</p> <p>CEDIS wishes to use Hemosan's storage for exportation of waste when discovered as their inventory was not as high in PCB oil volume as at the KAP. PMU has prepared a design of their future storage, if they go the way of having a separate storage.</p>

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Tons of pure PCB and low concentrated waste managed and processed	People and workers are currently exposed to the risk posed by PCB containing equipment stored or online. Financial resources were used to buy disposal service abroad without creating job opportunities in the country	The risk for the population surrounding plant and storage facilities containing PCBs is minimized through the sound disposal of at least 700 + 200 tons of PCB contaminated equipment and waste	PCB waste was identified, inventoried, and removed. 1.6T of waste will have been exported and disposed of by sept 2022 PCB equipment that is still in use (or not disconnected from the grid) is properly labeled and plan for disposal developed training and guidance given to workers in Aluminum (KAP) plant on how to continue to use and maintain PCB equipment that is on-grid and will remain in the Aluminum (KAP) plant in order to reduce to a minimum risk that equipment represents, both to humans and the environment. Bio tracing study performed by IPH, and environmental health risk assessment performed to provide information to risk managers, specifically policymakers and regulators, so that the best possible decisions are made in order to protect health of population living in the area of potential contamination	HS	After disposal of priority highly contaminated soil from the KAP site in October 2022, this target will be exceeded by 78%
Amount of PCB contaminated equipment and waste treated or disposed of (the TE team has regarded this indicator together with the previous one as they are almost identical)	Around 173 tons of equipment containing PCBs sent abroad for disposal from 2007 to 2009. Around 36 tons of PCB contaminated soil sent abroad or disposal  No PCBs disposal/decontamination technology available in the country	At least 700 tons of equipment containing PCB (in pure and contaminated forms) and at least 200 tons of PCB containing waste or soil are treated or disposed of in compliance with Stockholm Convention and Basel Conventions' requirements. Disposal/cleaning certificates obtained	1.6T of solid waste, oil and contaminated equipment and soil disposed of by end of project 1 <sup>st</sup> export: 248 tons of PCB waste oil and equipment were exported to France actual quantities exceeded with 15% compared to TORs 2 <sup>nd</sup> export: 225 tons of PCB equipment and waste was disposed in last quarter of 2021 59 transformers (82 tons) were exported (to be decontaminated and returned to the owner (CEDIS) for further usage in last quarter of 2021 555T total amount of PCB equipment and waste removed from the country and disposed. Corresponding to 85% of PCB equipment	HS	After disposal of priority highly contaminated soil from the KAP site in October 2022, this target will be exceeded by 78%

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			<p>identified in Montenegro being removed and 79% of the project goal for PCB equipment</p> <p>1,050 tons of contaminated soil was excavated and packed. To be transported (exported) for disposal by end of October 2022.</p> <p>All disposal certificates have been obtained for the first two exports</p>		
<p>Amount of PCB equipment identified and listed in the PCB inventory and included in the national management plan</p>	<p>A systematic PCB inventory, including PCB identification and labelling is missing.</p>	<p>At least 3,000 pieces of equipment tested to verify their PCB content.</p> <p>PCB containing equipment is identified and labelled for future treatment or disposal out of which PCB containing equipment is stored or secured for disposal under the GEF project. Measures to prevent release of PCBs in the environment are in place.</p>	<p>Rapid testing methodology was approved</p> <p>5000 pieces of equipment sampled</p> <p>Sampling and analyses performed by CETI and through contractor for CEDIS</p> <p>PCB inventory established</p> <p>Remaining equipment properly labeled</p> <p>Regular monitoring of the process of labeling of the power equipment and of the PCB database entries performed by project</p> <p>ESM guidelines developed and presented to the operators, now being implemented when routinely handling the PCB equipment</p> <p>No spillage or accidents during project operations/activities (packaging, excavation, transportation)</p> <p>Bio tracing study performed by IPH, and environmental health risk assessment performed to provide information to risk managers, specifically policymakers and regulators, so that the best possible decisions are made in order to protect health of population living in the area of potential contamination</p> <p>Training and guidance given to workers in Aluminum (KAP) plant on how to continue to use and maintain PCB equipment that is on-grid and will remain in the Aluminum (KAP) plant in order to reduce to a minimum risk that equipment represents, both to humans and the environment.</p>	HS	<p>Sampling target exceeded with 67%</p>

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Outcome 1 Capacity strengthening on PCB management.					
Output 1.1: Operators of the electric sector and of the environmental control authority are trained on the ESM of PCBs					
Number of operators of the electric sector and of the environmental control authority trained on and feel confident in practically applying the ESM system for PCBs	No training issued	Two training sessions covering at least 20 equipment operators	<p>Trainings organized:</p> <ul style="list-style-type: none"> <li>- <u>sampling of transformer oil and soil</u> (first step for ESM of PCB), use of rapid test kits - Clor-N-Oil 50 ppm (only showing presence or absence of PCBs), and a portable L2000DX Analyzer (measuring approximate PCB content in positive samples). Podgorica, 8&amp;9.10.2017 20 participants (7 w, 13m ) from the energy sector and industry</li> <li>- <u>waste management procedures</u>. Hemosan, KAP and CEDIS staff (2 w, 10 m).</li> <li>- <u>contaminated sites investigation</u> 20-22.06.2022. 21 participants (13 w, 8 m)</li> </ul>	HS	Target reached and participants expressed their appreciation for the trainings during the interviews
Number of guidance documentation for sampling of online and offline equipment, handling storage and disposal of PCB containing waste and equipment completed and approved	No or insufficient technical level guidance materials on ESM for PCB management exists	Guidance documentation developed and adopted	<p>A guidance document for sampling of online and offline equipment, handling, storage, transportation and disposal of PCB containing waste and equipment was drafted and finalized.</p> <p>It is applied in all project activities and recognized as a very useful tool by project partners and beneficiaries.</p> <p>In total, 7 guidance documents have been finalized</p>	HS	Target reached and participants expressed their appreciation for the materials
Number of technical and procedural guidance documents compliant with Stockholm Convention and national regulation completed and endorsed		Procedural and guidance documents for environmental authorities on Stockholm and Basel convention, EU regulation on POPs and PCBs, BAT and BEP for PCB treatment and disposal adopted	<p>Guidance on ESM of PCB waste incorporated requirements from the Stockholm (POPs controls) and Basel (transboundary movement and disposal) conventions, relevant EU regulations on POPs and PCBs management, and international guiding elements on Best Available Technology (BAT) and Best Environmental Practices (BEP) for PCB treatment and disposal.</p> <p>The PMU reports that the guidance was very useful for the additional monitoring during the preparation of PCB waste for the export and</p>	HS	Target reached and participants expressed their appreciation for the materials

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			export itself and are being used continuously by the equipment operators.		
Number of officers from the relevant line ministries and research institutions trained	Only staff at the central level in MoSDT and research institutions is knowledgeable	Two training sessions for at least 20 officers from the relevant ministries and institutions	<p><u>2017 training activities on ESM of PCB:</u> identification of PCBs as part of a country-wide inventory process.</p> <p><u>Study visit to North Macedonia</u> in march 2018 in a similar project from GEF-UNIDO 14 participants, 7 from the industry and 7 from environmental authorities (6 women, 8 men).</p> <p><u>Training</u> organised (4.12.2018) for the representatives of relevant institutions, and students from the University Donja Gorica who study chemistry and environment protection in their curriculum. 24 participants, five (5) from the industry, seven (7) from environmental authorities, and twelve (12) students (16 women, 8 men).</p> <p><u>Training on Remediation of contaminated sites</u> – case study area around PCB storage at the KAP site, was organized on 20-22 June 2022. 21 participants, eight (8) from the industry, eight (8) from the environmental authorities and five (5) from Universities, (8 males, 13 females).</p> <p><u>Study visit</u> to the Stockholm Convention Regional Centre for Capacity Building and the Transfer of Technology in Brno, Czech Republic (RECETOX) will be carried out on 19-23 September 2022. Ten (10) participants are from the national laboratories, researchers and postgraduate students from the relevant study programmes</p>	HS	Target reached, participants expressed their appreciation for the trainings during the interviews, MTR recommendations were taken into account
Number of strategies for gender mainstreaming developed	No gender dimension study ever carried out on POPs in Montenegro	Gender study completed	Gender study completed, strategies for mainstreaming identified in the study. No concrete strategies developed so far. Biomonitoring study performed by IPH	MS	No concrete strategies developed so far.
Number of dissemination activities, with enhancement on gender issues		Dissemination of project achievements through regular updating of	The project established a website with clear and relevant information about the project as well as the environmental and health impacts of PCBs. Several	HS	The project spent considerable

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		website content, broadcasting, workshop, with enhancement on gender related issues	media reported on the project, especially in the beginning.		effort communicating From the available evidence it is not clear that gender related issues were systematically enhanced
Output 1.2. Enforcement of the Montenegro law on PCB management strengthened					
% of participating companies that have drafted company-wide PCB management plans and submitted them  (also see indicator under output 2.2)	Individual company specific PCB management plans and logbooks required are not submitted		This is an ongoing activity and is on track. KAP (Aluminum plant) has been working on updating its PCB management plan, based on the data from their PCB inventory and with the project's assistance. Part of the PCB waste disposal process (first batch of 248 tons) focused on KAP and this is the actual implementation of its initial plan. After the disposal of additional quantities of PCB equipment, the plan is to be updated. CEDIS (power utility company) started to regularly revise their plan based on the inventory as the company has a very extensive network of power equipment installed across the country (coastline, towns and in the mountains). Estimated progress: 80% The project is providing companies with the support to update their PCB management plans until the end of project. The target may be fully achieved by end of project.	MU	Company management plans were drafted (KAP) or PCB issues were taken into consideration in waste management plans (CEDIS). The KAP plan has not been endorsed yet by KAP. There is small possibility that PCB are still in some Cedis electric power distribution company. According to the PIRs, the project did not manage to do sampling of all these, The PIRs state it was complicated to

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					turn them off for sampling. If there is still PCBs in those large transformers, it will need to be treated in the future.
The national regulation on PCB is not enforced. The current penalty policy is not applied or not effective due to the low enforcement level.		Advisory support and required technical assistance in the implementation of the country technical regulations and guidance on PCB and POS in view of alignment with EU regulation	<p>Legal gap analysis carried out leading to development of legal acts to strengthen the current legal requirements governing the area of PCB management in Montenegro: (1) Rule-book on methods for testing hazardous waste (introducing the use of fast screening methods for testing of PCB oils during field works) adopted on 07 June 2018; (2) Rule-book on handling the waste and equipment containing PCBs (aligned with the Stockholm Convention and current EU regulations) adopted on 17 October 2018; and (3) Decree on the parameters and conditions for waste storage (aligned with the Stockholm Convention and current EU regulations) still pending to be adopted. Although this Decree was not yet adopted, the project incorporated all new requirements from that document into the designs for PCB storages developed by the project.</p> <p>Practical trainings provided to various stakeholders on supporting the implementation of the comprehensive PCB management approach <u>representatives of the national environmental authorities participated in all trainings and the study tour to North Macedonia organized by the project</u>, and they will continue to be active in the overall structure designed to oversee and control the PCB management processes in Montenegro.</p>	HS	Target reached and participants expressed their appreciation for the assistance by the project

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			<p><u>A set of checklists was prepared for the Environmental Inspection to be used when going to a site inspection and dealing with the PCB equipment.</u> The checklists are intended to facilitate the work of inspectors in identification, operation, stocktaking, phasing out, packing, transportation, disposal of the PCB waste in the future. This will also ensure a sustainable transfer of knowledge to new inspectors in case of personnel rotation.</p>		
Number of joint participations of project staff and government representatives in site inspections and related assessments		Joint participation in at least 10 site inspections followed by an assessment of the cases	<p>22 site/field visits were conducted:  15.10.2018 – KAP (EI participated)  23.11.2018 – Politropus (EI participated)  6.02.2019 – Hemosan, Port of Adria, Luka Bar  6.03.2019 – Hemosan  27.03.2019 – CEDIS, CETI (EI participated)  11.04.2019 – Shipyard Bijela  3.06.2019 – CETI  4.07.2019 – Hemosan, Port of Bar  25.07.2019 – CEDIS  31.07.2019 – CETI  23.09.2019 – CETI  21.11.2019 - CEDIS, CETI (EI participated)  12.12.2019 – Luka Bar, Port of Adria  29.01.2020 – CEDIS  6.02.2020 – CEDIS  14.10.2020 – IPH  10.03.21 – KAP (EI participated)  8.04.21 – KAP (EI participated)  9.06.21 – Hemosan, CEDIS (EI participated)  24.06.21 – KAP (EI participated)  20.07.21 – Hemosan, CEDIS (EI participated)  5.07.22 - KAP (EI participated)</p>	HS	All joint site visits were performed

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			10 accompanied site visits according to PIR 2022, 9 according to the site visit reports A set of checklists was prepared for the Environmental Inspection to be used when going to a site inspection and dealing with the PCB equipment		
<b>Outcome 2: PCB inventory, planning and establishment of public-private partnership</b>					
<b>Output 2.1. One consolidated country-wide PCB inventory updated and completed</b>					
Existence of a dynamic PCB inventory available to the authorities and PCB holders through a dedicated website with access policies	An incomplete inventory report developed by MoSDT without analytical data and not including electric equipment from the electric power sector No central database	A dynamic inventory has been established and made available to authorities and PCB holders through a dedicated website with access policy	5000 pieces of equipment sampled (3400 by CETI and 1600 by a subcontractor for CEDIS) Equipment from electric power sector included Inventory established online and managed by CETI. Access granted to CEDIS and KAP.	HS	Target fully achieved, including more items than originally envisaged
% of originally envisioned sampling of pieces of equipment completed		At least 3000 equipment oil samples have been taken and analysed for PCB	5000 pieces of equipment sampled (3400 by CETI and 1600 by a subcontractor for CEDIS) using rapid-testing methodology	HS	Target exceeded by 67%
<b>Output 2.2. PCB national management plan drafted and approved</b>					
Existence of a PCB national management plan	No national management plan	National PCB management plan reviewed and adopted	Finalized inventory informed the first version of National PCB management Plan.	S	Plan has been formulated, not updated yet at time of TE
Number of revisions and improvements		Second upgrade of national management plan	After checking consistency of inventory (ongoing), the national PCB plan will be updated at the end of the project Expected to be achieved by end of project	HS	Revision ongoing at TE stage and to be achieved by end of project
% of participating companies with PCB equipment or waste that have drafted individual PCB management plans	No industry action	Two individual PCB management plans drafted by participating countries	This is an ongoing activity and is on track. KAP (Aluminum plant) has been working on updating its PCB management plan, based on the data from their PCB inventory and with the project's assistance. Part of the PCB waste disposal process (first batch of 248 tons) focused on KAP and this is the actual implementation of its initial plan. After the disposal of additional quantities of PCB equipment, the plan is to be updated.	MU	No plans available for inspection yet

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			<p>CEDIS (power utility company) started to regularly revise their plan based on the inventory as the company has a very extensive network of power equipment installed across the country (coastline, towns and in the mountains).</p> <p>Estimated progress: 80%</p> <p>The project is providing companies with the support to update their PCB management plans until the end of project. The target may hence be fully achieved by end of project.</p>		
Output 2.3. Establishment of an innovative PPP for the management of PCB contaminated equipment and waste					
<p>Existence of an innovative public-private partnership for the management of PCB contaminated equipment</p> <p>Existence of a business plan and sustainability plan for the PPP</p>	<p>No PPP</p> <p>Cooperation with private sector is not strong to support effective PCB disposal or decontamination</p>	<p>Business plan and sustainability plan for the public/private partnership verified and amended based on experience gathered in the 1st and 2nd years of project's activities</p>	<p>A Law on Public Private Partnership (PPP) in Montenegro was adopted in December 2019. In 2020, the project was in the second half of its implementation phase, and it has been decided to do an assessment of possible organizational models for future management of PCBs, to be applied mainly after the project closure and in case there are remaining PCBs in the country reported after the current PCB waste disposal round. The assessment with the recommendations was developed and it showed that legally it is not possible to establish a PPP for the management of hazardous waste or chemicals. In addition, as only one company (KAP) will have remaining grid-connected PCB equipment after the project closure, there is <u>no residual value left for such an entity to be established for longer term. As an alternative, the PIR 2021 and 2022 state that it was agreed that the Project board (with members both, from the public and private sectors) continue to have some specific functions that the PPP would have</u>, like the overall coordination with the private sector, including on inventory and temporary storage opportunities before disposal; consultation and advisory support on financial and technical transition opportunities away from aging PCB</p>	S	<p>As there is no possibility to establish PPP for PCB management <u>this target will not be reached.</u> However, as only one company will be in a possession of PCB contaminated equipment the project will provide them with guidance material that would help them to reduce to a minimum the possible risks that equipment represents.</p> <p>The continued role of the project board is not consolidated in a</p>

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			equipment; information exchange on legal and safety requirements on ESM scheme; national capacity growing in the private sector for the handling of the PCB equipment and waste - Hemosan company.		MoU or other document, and company PCB management plans are still outstanding.
<b>Outcome 3: ESM of PCB</b>					
<b>Output 3.1. Selected storage facilities upgraded for the safe storage of PCB equipment pending disposal or decontamination</b>					
% of storage facilities that are upgraded and monitored under the project for the safe storage of PCB equipment/oils/waste pending final disposal or decontamination procedures	Storage facilities need checking and upgrading	At least 2 storage facilities have been upgraded to ensure safe storage of PCB equipment and waste in fulfilment of national and international rules on PCBs.	<p>Current storage in KAP empty since PCB waste exported. The design for upgrade has been developed, construction company contracted and works will be finalized in September 2022</p> <p>The project developed a main design sketch (blueprint) for the construction of a PCB storage facility that CEDIS will build with their own financial resources. The design includes all required features that this kind of storage must have. Tender for the construction of this storage was stopped because of change in the investment policy of CEDIS caused by the Covid-19. They continued to rent storage within company Hemosan that has licenses to storage hazardous waste.</p> <p>All the technical and legal documents necessary for reconstruction have been developed but CEDIS still did not initiated the construction of the storage. Having in mind that the second storage will not be reconstructed or built until the end of project as that is now the obligation of the CEDIS, this target will not be reached.</p>	MS	<p>CEDIS storage not constructed within project period.</p> <p>CEDIS will opt for Hemosan's storage since PCB volumes are uncertain and low</p>
% of storage facilities that are upgraded and monitored under the project for the safe storage of PCB equipment/oils/waste pending final disposal or	Some industrial companies plan dismantling of storage facilities after all identified PCBs are removed from their industrial territories	Monitoring by authorities	The Administration for Inspection Affairs regularly monitors the current storage facility in KAP (near Podgorica), as well as the storage in Hemosan (port of Bar) that CEDIS is using for their PCB equipment.	S	The storage sites are regularly monitored by the authorities

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decontamination procedures					
Output 3.2. Identification, assessment and procurement of environmentally sound PCB disposal technologies or services					
Stage of advancement in the identification, assessment and procurement of PCB disposal/dehalogenation services	<p>No PCB disposal technology available in the country to address pure PCB oil or waste</p> <p>No PCB dehalogenation technology available in the country to address cross-contamination</p>	PCB dehalogenation technology is rented or installed	<p>The absence of inventory data on PCBs at the beginning of project's implementation caused a delay in identification and technical-economic feasibility analysis of disposal options based on the amount of pure and low-concentration PCBs.</p> <p>The first option was to enter into a procurement process for the selected technology that would be operated locally for the decontamination of lightly contaminated transformer oils. An EIA would be mandatory for this technology, prior to the installation. CEDIS would be a prime stakeholder for placing such technology at its storage facility in the future.</p> <p>The second option was to export equipment to a facility outside of Montenegro for decontamination and to return it for further usage in the country. In this case, there will be no need for EIA, and essential time for the implementation of the project will be saved. Since the cost-benefit analysis showed that the second option has more cost-efficient, it was decided to pursue that option.</p> <p>decontamination of 59 transformers, total weight 82 tons, owned by CEDIS</p>	HS	Study performed, decision taken based on study, waste treated
Output 3.3. Equipment and waste containing or contaminated by PCB disposed or treated in an environmentally sound way					
Amount of equipment or waste containing or contaminated by PCB disposed in an Environmental Sound Way	173 tons of equipment sent abroad between 2007 and 2009, and 36 tons of soil	700 tons of pure PCB and 200 tons of low concentrated waste	The inventory showed that around 650 tons of PCB waste and contaminated equipment were present in the country when the project started, and site investigation around storage in KAP showed that the estimated amount of contaminated soil is 2,200 – 3,000 m <sup>3</sup> .	HS	Exceeding target. Due to efficient management of project resources, the project could accommodate

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			<p>1<sup>st</sup> export: 248 tons of PCB waste oil and equipment were exported to France actual quantities exceeded with 15% compared to TORs</p> <p>2<sup>nd</sup> export: 225 tons of PCB equipment and waste was disposed in last quarter of 2021</p> <p>59 transformers (82 tons) were exported to be decontaminated and returned to the owner (CEDIS) for further usage in last quarter of 2021</p> <p>555T total amount of PCB equipment and waste removed from the country and disposed. Corresponding to 85% of PCB equipment identified in Montenegro being removed and 79% of the project goal for PCB equipment removal being reached.</p> <p>Additional: Around 1,050 tons of contaminated soil was excavated and packed. To be transported (exported) for disposal. by end of October 2022.</p> <p>Total 1,605 tons of PCB equipment, waste and soil will be removed and disposed of.</p> <p>Disposal certificates are received for the first two exports,</p> <p>All the procedures mentioned above were followed and no incidents occurred.</p>		partial removal of a higher volume of contaminated soil that originally foreseen in the ProDoc.
% of necessary EIA processes carried out			<p>No EIA mandatory as low concentration waste exported rather than treated within country, but EIA may be required for the storage facilities.</p> <p>Based on cost-benefit analysis of possible models for decontamination of low PCB content equipment.</p>	S	It is not entirely clear whether EIA will be needed or not for the storage facilities.
<b>Outcome 4: Knowledge Management and M&amp;E</b>					
Number of pre-identified management and M&E activities carried out or completed			<p>Inception workshop was organized in the first implementation year of the programme.</p> <p>Project team was set in place with daily support from UNDP-Montenegro office, and</p>	HS	All interviewees expressed their appreciation for the efficient management of

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			<p>technical oversight and advisory help from UNDP Technical Advisor operating from Istanbul Regional Hub.</p> <p>The project team is also backed by an internationally recruited technical expert. The expert originates from North Macedonia where a similar GEF-funded and UNIDO implemented programme on PCB management and low PCB content equipment decontamination was recently implemented, which gives an important region-based knowledge on best practices in PCB handling.</p> <p>The Project Board continues to review and approve work plans for each year of the project implementation, review and adopt project reports, advise the Project Management Unit on the project strategy. Due to changes in the Government and new appointments in the relevant Ministry and CEDIS, new members of the Project Board were appointed. This caused a delay in organization of regular Project Board meetings.</p>		<p>the PMU, its transparent and timely communication, as well as its efforts to facilitate successful collaboration of all partners.</p>
•			<p>PMU prepares reports for the Project Board (PB) every six (6) months, as well as annual plans. These are approved by the PB. Internal quality control documentation prepared and submitted to UNDP-Montenegro, at start of project, in 2017 and in 2019. Annual funds allocation for the project's needs is reviewed and approved by the regional technical advisor in Istanbul. Five PIRs were prepared, each covering the period July-June</p> <p>MTR was conducted in 2019 and a management response formulated (also in 2019) All recommendations were taken onboard and are under implementation as reported.</p> <p>TE is being conducted.</p>	MS	<p>Documentation was not always updated on time, but overall oversight and management of UNDP PMU was highly satisfactory</p>

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			An audit was conducted.		
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### 3.3.2. RELEVANCE (\*)

As confirmed in section 2.3.2. the project is in line with national priorities. The project remained relevant throughout its implementation period, and indeed provided substantial technical and financial support to the Government of Montenegro for the more effective and timely enforcement of national regulation on PCBs and waste, which requires the phasing out and disposal of PCB containing equipment by 2025 now. It also allowed further alignment with relevant EU legislation.

From what TE found and describes under section 3.1.3. lessons from other relevant projects were incorporated into the project design.

All interviewees emphasized the relevance, importance, and the timeliness of the project for the country. One interviewee said:

*'We requested this project as we adopted the NIP in 2014 and realized the PCB issues in our country. The project has been very useful because in NIP we had to make an estimation of PCB amounts but we had no inventory, only data from inspection. Now we have the inventory, concrete amounts, including PCB contaminated soil. Yes, the project was very useful.'*

A legal gap analysis was carried out under the project, and an expert hired to work with the government on developing legal acts to strengthen PCB management in Montenegro:

- (1) Rule-book on methods for testing hazardous waste (introducing the use of fast screening methods for testing of PCB oils during field works) which was adopted on 07 June 2018;
  - (2) Rule-book on handling the waste and equipment containing PCBs (aligned with the Stockholm Convention and current EU regulations) which was adopted on 17 October 2018; and
  - (3) Decree on the parameters and conditions for waste storage (aligned with the Stockholm Convention and current EU regulations) still pending to be adopted.
- Although this Decree was not yet adopted, the project incorporated all new requirements from that document into the designs for PCB storages developed by the project.

Due to efficient management of funds for the policy work, the project managed to fund work on a **strategy for waste management**. Some funds remaining were reallocated for a consultant helping the ministry to develop the new strategy for waste management, which goes further than PCBs only.

Section 3.2.2. on actual stakeholder engagement reveals that: a) the project succeeded in keeping stakeholders onboard throughout the project, b) effective partnership arrangements were established for implementation of the project with relevant stakeholders, c) the relationship between UNDP and Montenegrin organizations involved in the project was successfully managed and facilitated by the PMU, d) the project consulted with and make use of the skills, experience and knowledge of the appropriate Montenegrin government and other entities in the design, implementation and evaluation of project activities. Interviewees from the project board said they had tried to involve local communities and civil society but that these did not show any interest. A number of NGOs attended the first workshop but then dropped out as it was not their focus area of activity. This also meant that the project, in spite

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of putting in efforts to mobilize the media, had little influence on how local populations understand health related issues with PCB contamination.

Considering the above, we rate the relevance of the project as **Highly Satisfactory**.

#### 3.3.3. EFFECTIVENESS (\*)

As identified in section 3.3.1, the project achieved almost all of its targets and exceeded several of them. The project was effective in establishing the inventory and managing disposal of almost all waste in an environmentally safe way. Of the 650 tons of PCB oil and equipment in the country, 85% has been removed by the project. The project effectively assisted the main PCB owners, KAP and CEDIS, in sampling and inventorying their equipment, something which they would not have managed without the project according to interviewees. Some online equipment remains in the KAP facility. Remaining equipment in the KAP factory, but a plan developed for their disposal after use has been developed. There is a small possibility that PCB are still in some online equipment of the CEDIS electric power distribution company, that could not be sampled. The project was also said to be very effective in raising awareness for PCB issues with PCB owners.

Several pieces of legislation were developed, and these strengthened the national PCB management. A National PCB plan was formulated, operators and government staff trained, and practical guidelines developed and implemented.

The risks that emerged during project implementation (e.g. related to (the results of) the national elections in 2020) were managed effectively, as testified by the findings described under section 3.2.6. Though generally well monitored, not all potential risks were identified at project design, and the risk register was not regularly updated during project implementation. Environmental and Social risks were well mitigated, and the project showed effective adaptive management throughout. One target that the project will not reach before its end is the establishment of a storage facility at the CEDIS site, due to slow progress on the company side. Waste continues to be stored in an environmentally safe way at the HEMOSAN site however.

Finally, almost all interviewees expressed appreciation for the capacity building received under the project. The study trips were highlighted as especially useful, as was the remediation workshop conducted at the KAP site in June 2022, and the bio tracing study.

The workshops and trainings made sure to include women systematically and hence can be seen as contributing to gender equality and the empowerment of women working in and with PCB issues or material.

Based on the above, we rate the effectiveness of the project as **Highly Satisfactory**.

#### 3.3.4. EFFICIENCY (\*)

The ProDoc states that cost effectiveness will be ensured at each stage of the project by adoption of tender-based (quality for affordable costs) UNDP procurement procedures for all the activities, including the selection of PCB management services and decontamination

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equipment rental/establishment based on the best quality/cost ratio. From the available documentation it appears that the tendering procedures were respected and appropriate sub-contractors were selected. Considering the achievements of the project outcomes, as well as the high satisfaction expressed by the interviewees, we assess the cost/quality ratio of these tenders high.

To catch up with delays, the project requested a 11.5 month extension, and by all available evidence it looks as it will achieve all targets except one. The extension has not affected overall efficiency. Efficient management of funds (tenders, fast sampling, in-house expert, less than anticipated contaminated equipment) enabled the project to treat a higher volume of contaminated soil than originally budgetted for, as well as to provide assistance to the government in developing a national strategy for waste management.

Judging by the available evidence, the project will use up all its resources by the end of December 2022, the end date of the project.

The institutional setup worked well throughout the project and the PMU managed to keep all relevant stakeholders onboard during the entire implementation period.

From section 3.2.4. transpires that, even though not always filling out all (sections of) required monitoring documents, the PMU was de facto closely and effectively monitoring project activities and progress, and kept the Project Board, as well as the UNDP hierarchy informed in a transparent and detailed way. This is further substantiated by interviewees praising the close management and the responsiveness of the PMU to any issues arising.

The notes of the PBM testify that the Project Board fulfilled its supervisory and guidance function. Overall, M&E activities performed by the PMU ensured an effective and efficient project management.

Based on the above, we rate the efficiency of the project as **Highly Satisfactory**.

### 3.3.5. OVERALL OUTCOME (\*)

Table 17 gives an overview of the outcome-related ratings of the project. Considering these, as well as the high appreciation for the project, expressed by all interviewees, we rate the overall outcome of the project as **Highly Satisfactory**.

**Table 17. Overview of outcome related ratings**

Aspect	Rating	Comments
Progress towards objective and expected outcomes	S	Out of 18 targets, 9 were rated as highly satisfactory, 4 as satisfactory, 1 as marginally satisfactory and 4 as marginally unsatisfactory.  The MU ratings are related to the only partial achievement of the targets for company PCB plans as well as the upgrading of storage facilities.
Relevance	HS	The project was highly relevant for the country and connected well with ongoing efforts on the government and the industry's behalf. In spite of spending considerable effort, the general public showed little interest in the project or PCB/chemical issues in general.
Effectiveness	HS	The management of the project, project activities, and the collaboration between all institutions involved was very effective.

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Efficiency	HS	Resources were managed very efficiently, budget saved on some activities was repurposed for financing extra activities.
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### 3.3.6. SUSTAINABILITY: FINANCIAL (\*), SOCIO-ECONOMIC (\*), INSTITUTIONAL FRAMEWORK AND GOVERNANCE (\*), ENVIRONMENTAL (\*), AND OVERALL LIKELIHOOD (\*)

#### Financial

The project provided a comprehensive solution to the PCB issue in Montenegro. It effectively cleaned up almost all PCBs in the country and put in place a framework and process for dealing with (and destruction of) the residual PCB waste. An exhaustive and online dynamic PCB inventory was established. Only very little amounts remain, and hence funding needs to deal with these are small compared to the project. As funds were managed very efficiently overall under the project, the project was able to take care of the most contaminated segments of the soil contamination at the KAP site. This leaves only minor amounts of low contaminated soil to be treated for KAP after the end of the project. Assessments of the interviewees about whether KAP will be able to finance the remediation or export of waste on its own, are mixed, with some interviewees identifying a need for additional external funding or an additional (smaller) GEF project. An enabling institutional, legal and technical environment to deal with any remaining contamination has been created by the project (e.g. national laboratories and companies competent in sampling and dealing with PCB waste). EU accession however means that some financial resources might become available for Montenegro to deal with remaining environmental issues. The TE team therefore rates the **financial sustainability** as **Likely**.

#### Socio-economic

The project effectively cleaned up almost all PCBs in the country, and hence there are very few social or political risks that can undermine the longevity of project outcomes. From all available evidence the risk that the level of stakeholder ownership (including ownership by governments and other key stakeholders) will be insufficient to allow for the project outcomes/benefits to be sustained seems very low. A framework and process for dealing with (and destruction of) the residual PCB waste has been put in place. An exhaustive and online dynamic PCB inventory was established. The participating PCB holders participated in all training and committed fully to the co-financing during the project, they have expressed their appreciation of the project and see that it is in their interest that the project benefits continue to flow and that the long-term objectives of the project should be supported.

The project has planned to document lessons learned before the end of the project. The TE does find that even though the project spent considerable efforts communicating about activities during the implementation period, the project could gear up efforts to transfer the project's successful aspects and outcomes to appropriate parties, potential future beneficiaries, and others who could learn from the project and potentially replicate and/or scale it in the future. Interviewees from the project board stated they tried to involve local

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communities and civil society but that these did not show any interest. A number of NGOs attended the first workshop but then dropped out as it was not their focus. This also meant that the project, in spite of putting in efforts to mobilize the media, had little influence on how local populations understand health related issues with PCB contamination. Finally, women were consistently involved in project activities (e.g. training) and a specific study with gender sensitive recommendations is available. There is hence potential for both short and longer terms sustained gender results.

the TE team therefore rates the **socio-economic sustainability Likely**.

#### **Governance and institutional framework**

Official guidance documents were put in place by the project, as well as different pieces of relevant legislation. Governmental actors were trained, and capacities built, relevant Montenegrin companies were associated with the project. The legal frameworks, policies, governance structures and processes pose opportunities (and certainly no threats) to the continuation of project benefits and have created mechanisms for accountability, transparency, and technical knowledge transfer after the project's closure. The project didn't necessarily identify and involve champions (i.e. individuals in government and civil society) who can promote sustainability of project outcomes, but the involvement of the key PCB holding companies and the public-private collaborative nature of the project certainly set standards for future projects in similar areas (e.g. hazardous waste) in the country. With the establishment of a continued supervisory role of the project board after project closure, the project achieved stakeholders' (including government stakeholders') consensus regarding courses of action on project activities after the project's closure date. In terms of the project developing appropriate institutional capacity (systems, structures, staff, expertise, etc.) that will be self-sufficient after the project closure date, TE found the following: The project built the capacity of a wide group of members of the Montenegrin administration, but several interviewees indicated that overall, and due to the size of the country, limited human resources in the administration are covering a plethora of different topics. Radical changeover of staff in governmental institutions after landslide election further pose a challenge for these institutions to deal with complex waste issues such as PCBs. Considering the above, the question poses itself as to what national institution would take the lead on similar projects in the future. That said, the conceptual approach and the institutional collaboration example set by the project have great potential to inform future projects dealing with hazardous waste or chemicals in the country. The TE team therefore deems the **sustainability of institutional framework and governance as Likely**.

#### **Environmental**

The project's outcomes guarantee a solid framework for dealing with any residual PCB waste remaining in the country. The workers of the residual PCB holding company (KAP) have been trained and apply the guidelines, company PCB management plans are being drafted, and the online inventory, guidance documents for and training of inspectors enables effective follow-up by the government. No accidents or spillages occurred during project activities. There are no environmental factors that could undermine the future flow of project environmental benefits. The TE team judges the **environmental sustainability as Likely**.

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#### Overall sustainability

Based on the above, the TE team rates the **overall sustainability** of the project as **Likely**.

#### 3.3.7. COUNTRY OWNERSHIP

As testified by the interviewees, country ownership was and remained very high throughout the project. The project's activities effectively leveraged ongoing in-country activities in PCB management, both at private sector level as well as at governmental level. The two main PCB holders were effectively involved in the project, and the co-financing model was performant. The Montenegrin legal framework was strengthened, and a national PCB management plan approved. Relevant country representatives (the MoSDT/MoESPU, Ecological Inspection) were actively involved in project planning and/or implementation. MoSDT/MoESPU was part of the Project Board. The recipient government has maintained financial commitment to the project. Several policies and/or modified regulatory frameworks in line with the project's objectives were approved during project time, by the recipient country's government.

#### 3.3.8. GENDER EQUALITY AND WOMEN'S EMPOWERMENT

The Prodoc highlights the different and higher susceptibility of women's bodies to the exposure to POPs, and states that attention will be given to the exposure of female staff at PCB holding facilities, as well as to the exposure of any women involved in project activities. Furthermore, the project commits itself to ensuring that the project supports women's capabilities and their equal and meaningful participation as actors, leaders and decision makers.

Addressing these commitments, a study on the gender dimensions of PCB issues in Montenegro was conducted under the project, and recommendations for more effective gender mainstreaming both in the short and longer run were identified. Some of these were (1) to include a session on gender dimension of POPs in future trainings; (2) where applicable, ensure introduction of gender considerations in individual company's PCB equipment/waste management plans; (3) within awareness raising for the general public on issues related to PCBs and POPs, include gender related issues; (4) encourage stakeholders to introduce systematic bio-monitoring of exposures of workers to chemicals and to produce regular reporting; (5) introduce systematic analysis and identify areas for the improvement in the following areas: a) potential workplace risks for women and men exposed to high level of hazardous chemicals in companies; b) implement a more systematic approach to monitoring of chemicals in the companies, including bio-monitoring of exposures, and keeping updated records; c) introduce special measures for pregnant or lactating women.

In a short-term response to the study's findings, the project engaged with the Institute of Public Health for the biomonitoring of exposure to hazardous chemicals of their workers, both males and females. This monitoring showed that some (older) workers that were exposed to PCB in previous years had PCB in their bodies. As almost all PCB handling staff was male, the results of the study remain however more theoretical, and no specific strategies were developed by the government in this domain.

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In its capacity building of relevant partners and stakeholders and in the dissemination of information, the project paid attention to the impact that PCBs have on both men and women. The project furthermore ensured the participation of women in all workshops and events, so that relevant women's knowledge on harmful effects of the POPs is increased, and in line with the UN policies on equal opportunities and the GEF policy on Gender Mainstreaming. This improved the participation and decision-making of women in natural resource governance. Using the Gender Results Effectiveness Scale (GRES), TE finds that the project was gender responsive.

#### 3.3.9. CROSS-CUTTING ISSUES

The project had a positive effect on local populations as the risk of exposure to PCBs now has been eliminated and guidelines and decrees are in place for the safe handling and removal of any remaining PCBs. The project outcomes have hence contributed to better preparations to mitigate PCB exposure risk. Women working in PCB holding companies benefited from the project as they now are aware of the risk and have gained knowledge how to safely handle potential PCB contaminated equipment and areas.

#### 3.3.10. GEF ADDITIONALITY

The outcomes of the project can be directly attributed to the GEF contribution as originally anticipated and can be related to incremental reasoning (Table 18). There is quality quantitative and verifiable data demonstrating the incremental environmental benefits, and the available evidence speaks to the outcomes creating a more supportive environment as envisaged at the endorsement stage. Outcomes moreover are sustainable and there is evidence that project outcomes, both environmental and otherwise, are likely to be sustained beyond the project end (as discussed in section 3.3.6).

**Table 18. Assessment of how the six areas of GEF's additionality were addressed by the project**

Type of additionality	Question	Evaluation
Environmental	Has the project generated the Global Environmental Benefits that would not have happened without GEF's intervention?	<p>Yes.</p> <p>555 tons of solid waste, oil and contaminated equipment and 1050 tons PCB contaminated soil was disposed of (destroyed) by end of project.</p> <p>This was mostly funded by the participating industry actors. However, the co-financing by the GEF (US\$ 2.550 Mio – component 3) ensured that suitable and cost-effective technologies and disposal options compliant with Stockholm convention were used, allowing for cost-saving on treatment of especially low-contaminated waste. Exposure of nature or humans to PCBs is significantly reduced after the project.</p>

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Legal and regulatory	Has the project led to legal or regulatory reforms that would not have occurred in the absence of the project?	Yes.  The legal expert hired under the project has assisted the government in the formulation of new legislation or in updating the existing one.
Institutional and governance	Have institutions been strengthened to provide a supportive environment for achievement and measurement of environmental impact as a result of the project?	Yes  The project conducted extensive capacity building activities of governmental staff. Relevant laboratories and institutes have been associated with the project to measure and monitor environmental impact, and the continued project board will ensure supervision of the environmentally sound management of PCBs in the country, according to the national PCB management plan.
Financial	Has the involvement of the GEF led to greater flows of financing than would otherwise have been the case from private or public sector sources?	Yes.  Total cost = US\$ 23.303 691  GEF grant= US\$ 3.500.000  Co-financing = US\$ 19.803.691  The GEF funding enabled the substantial co-funding from private PCB holders, as well as contributions in kind by the government (US\$ 200.000)
Socio-economic	Can improvements in living standard among population groups affected by environmental conditions be attributed to the GEF contribution?	Yes.  Exposure of the general population to PCB contamination was already low but is now virtually eliminated through the project. The risk of exposure to PCB by workers has been reduced through the introduction of and training on guidelines for waste handling.
Innovation	Has the GEF involvement led to a fast adoption of new technologies, or the demonstration of market-readiness for technologies that had not previously demonstrated their market viability?	No.  The project however examined the technological methods to treat or destroy PCB contaminated waste and chose to use the most cost effective one.  The innovation for Montenegro can rather be found in the collaborative and inclusive way in which the project was conducted, together with industry partners and

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		involving relevant research institutions and laboratories.
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### 3.3.11. CATALYTIC/REPLICATION EFFECT

#### 3.3.11.1. Production of public goods

The project introduced new technologies or methodologies, as well as accreditations and business opportunities for the organizations involved:

- A fast screening method for PCBs was introduced, and the CETI laboratory was accredited to apply these for the screening of PCB equipment in the country. This gave CETI a new competency, and they have since been able to sell this expertise to surrounding countries. According to the CETI interviewees, the project not only provided the laboratory with jobs during the project, but the new competence also contributes to the longer terms sustainability of the company.
- The Institute of Public Health said to have built their capacity and to have acquired relevant equipment for analyzing PCBs through the project, a competence they are applying in a bigger scientific project and for which colleagues from neighboring countries have shown an interest.
- HEMOSAN's turnover was too small to make them eligible for the waste handling and disposal tenders issued under the project. However, by associating HEMOSAN as the local sub-contractor to all waste handling activities, capacity and experience was built at the company, putting them in a more favorable position to be contracted for similar activities both within the region and beyond.

#### 3.3.11.2. Mainstreaming, replication and scaling up

As PCBs are not the only waste management challenge Montenegro is facing, lessons and successful approaches under the PCB project can inform the design and management of future projects handling other types of waste (e.g. chemicals) in the country. They also show potential for scaling up.

The PMU mentioned that they are applying the knowledge they gained under the project to assist similar PCB projects in Serbia and Bosnia, not all of which are implemented by UNDP itself.

One potential threat to mainstreaming, replication and scaling up at national level is that in spite of the capacity building success of the project, a potential turnover of staff in governmental institutions (e.g. due to election results) would lead to a loss of know-how here.

### 3.3.12. PROGRESS TO IMPACT

The project has progressed substantially towards its intended impact: the reduced exposure of the local and global environment and people to PCBs.

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Guidelines and legal obligations are now in place and are, judging by the available evidence, much better respected and implemented than before the project.

Most of the PCB waste in the country has been destroyed and national management plans are in place for dealing with residual waste. The removal of the PCB sources has prevented the contamination of the environment and a potential exposure of the larger public to PCBs.

The association of several Montenegrin companies, laboratories and institutes has positioned these for further assignments related to hazardous substance testing, (bio) tracing, and handling.

With respect to the discovered historical contamination at the KAP site, the project tried its best to extract the most of contaminated parts of soil. This may reduce the cost of remediation of the site in the future. The project hopes that the KAP will be able to remediate the full site, in cooperation with the government, in the near future.

## 4. MAIN FINDINGS, CONCLUSIONS, RECOMMENDATIONS & LESSONS

### 4.1. MAIN FINDINGS

#### Relevance

The project is in line with national priorities and remained **relevant** throughout its implementation period. It provided technical and financial support to the Government of Montenegro and facilitated effective and timely enforcement of the national regulations on PCBs and waste, which requires the phasing out and disposal of PCB containing equipment by 2025. It also allowed further alignment with relevant EU legislation as well as the Stockholm and Basel Conventions.

#### Design

Overall, the project was **well-designed**. The Results Framework was well integrated, outputs lead to the expected outcomes and contributed to the overall objective of the project. The indicators provided in the RF were relevant, but several of them were not SMART.

Initially planned over 5 years, the time seemed to be sufficient for the achievement of the project objectives. However, the project needed to be no-cost extended in June 2021, by 11.5 months. The extension allowed the project to deliver and catch up effectively on the delayed and extra identified activities.

#### Stakeholder involvement and partnership arrangements

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The project identified a broad range of **stakeholders** from national and local government, private sector, civil society and academia at its start. Most of these attended the kick-off workshop, after which some dropped out, as the project was not their main focus.

Altogether five training workshops and two study visits were organized by the project. Judging by the workshop and study visits attendance lists, as well as by the interviews, the project succeeded in keeping stakeholders interested and onboard throughout the project. After a recommendation in the MTR, the PMU sought to strengthen connections to secondary (supporting and peripheral) stakeholders that were indirectly affected by the project activities and to raise the general support for the project's interventions. The second half of the project therefore saw a stronger inclusion of academic stakeholders as well as the involvement of the Institute of Public Health.

The project was able to identify those national institutions that possessed the initial skills and knowledge for the technical aspects of the project (CETI, Hemosan, IPH) and managed to build their capacity and international network.

Not all stakeholders were clear on their roles at the beginning of the project. Considerable time and effort were spent clarifying roles, responsibilities, and budgetary issues with the two private companies, and more particularly with CEDIS<sup>20</sup>. However, all interviewees acknowledged that stakeholder relationships worked fine after these initial challenges had been overcome. Interviewed institutions said that overall, the project had strengthened collaborations between the different stakeholders involved, giving them practical experience on the (joint) implementation of this type of project, and resulting in a better cooperation under other nationally implemented projects.

### Management

Even though the Montenegrin government had already taken several actions towards PCB management, interviewees said **a direct implementation by UNDP had been a major advantage**, as it considerably relieved stretched government resources from managing complex tenders for waste handling, export and disposal. The PMU team was said to have communicated in a timely, transparent, and effective way to the Project Board, and to have put in considerable effort to facilitate smooth operation and collaboration between the project partners. Adaptive management was implemented throughout the project.

The **Project Board** initially was composed of all interested parties/stakeholders. This proved slowed down decision processes, and the Board was slimmed down in June 2019, to the MoESPU, the two main PCB holders and the PMU, after which it was able to function more effectively. Several members of the project board were replaced after national elections reshuffled national politics and ministries in 2020. This temporarily delayed decisions by the board, and resulted in the delay of some activities, according to several interviewees.

Overall, the Project Board executed its supervisory and guidance function fine. The board also proved useful in securing political support for activities. It facilitated for example the (legal) clearance to use fast-screening kits for PCB oil thereby significantly reducing the costs of the national PCB inventory establishment process.

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<sup>20</sup> The notes of the PBM testify to CEDIS questioning or requesting clarifications on financial arrangements and commitments at several points in time

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#### Effectiveness

The project has been **very effective** in achieving its results and outcomes. The project has managed to establish a full online dynamic inventory of PCB in the country, develop guidelines for ESM of PCB, train relevant stakeholders, adjust national legislation, and draft a national PCB management plan. Targets for sampling were exceeded, as well as those for waste disposal. The target for upgrading storage facilities was only partially achieved, as were the targets for company specific PCB management plans. Staff of PCB holding companies, ministries, participating technical institutes as well as university students were capacity built on technical procedures, guidelines and general PCB management issues. Guidelines were said to have been immediately put in practice by all institutions involved. Interviewees expressed their overall (high) satisfaction with the project, and especially with the capacity building outcomes

#### Risk management

The ProDoc clearly identified the **risks** to achieving the results, rated associated risk levels, and identified mitigation strategies/measures as well as responsible entities for each. The overall project risk rating was considered as Medium. However, the initial risk matrix did not include and hence underestimated risks coming from the potential delay in project activities caused by a lack of commitment of PCB owners for final disposal of PCB contaminated equipment by 2020, potential larger (historical) contamination of soils at project sites, the impact of national elections, time needed for obtaining transportation permits for PCB waste, or risks related to co-financing commitments. Risks were not systematically reported on or updated in the Critical Risk Management section of the PIRs, but the available evidence suggests that management responses to reduce the main risk identified in the UN SESP framework were duly implemented. Social and environmental risks were monitored, and no accidents occurred during project activities.

#### Efficiency

Overall, the project was run **very efficiently**. The project ran an underspending during most of its implementation period. Volumes of waste were lower than originally estimated, and the project made very efficient use of tenders for waste export and disposal. The freed-up budget allowed the project to export more contaminated soil than initially foreseen, enabling the it to deal with a large historical contamination detected at one of the project sites in the meantime.

The placement of a technical expert at the PMU proved cost-efficient, as the expert was able to conduct the technical assessment for treatment and disposal of low-concentration contaminated equipment, eliminating the need to hire an additional consultant for this task. Finally, in the area of legal expertise the project went about efficiently, with the expert assisting the government on the drafting of several pieces of legislation.

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#### Monitoring and Evaluation

The design of the **monitoring** plan was basic and not very effective. The TE team found some inconsistencies between the Results Framework, the Monitoring Plan and the Multi Year Work Plan. The Results Framework was used to inform the annual Project Information reports, whereas the Project Board decisions were based on the Multi Year Work plan. From the evidence presented, the TE team concludes that the PMU was de facto closely and effectively monitoring project activities and progress, and kept the Project Board, as well as the UNDP hierarchy informed in a transparent and detailed way. This is further substantiated by interviewees praising the close management and the responsiveness of the PMU to any issues arising. The notes of the PBM testify that the Project Board fulfilled its supervisory and guidance function.

#### Impact and Sustainability

The project has progressed substantially towards its envisioned impact: the reduced exposure of the local and global environment and people to PCBs.

The TE team also deems the project very sustainable, across the board (financial, socio-economic, governance and institutional framework, environmental).

## 4.2. CONCLUSIONS

The project Comprehensive Environmentally Sound Management of PCBs in Montenegro was well designed, and was implemented in an adaptive, efficient, and effective way. Management by the UNDP team was praised by all interviewees during the field mission, who highlighted the substantial and successful efforts put in by the team to manage relationships with the two industry partners - the main PCB holding companies in the country. The team furthermore was said to communicate in a transparent and timely manner with all parties involved. Monitoring and evaluation functions were performed to a satisfactory level, and in spite of some membership changes related to the outcome of national elections in 2020, the ministry and the project board performed their oversight and advising functions well. Initial delays in project activities were effectively dealt with by the project management and board in applying for a no-cost 11.5-month extension. In terms of outcomes, even though the construction of one of the foreseen storage facilities might be completed after the project end date, at an overall level, the project achieved higher results than initially planned, with the budget and time foreseen. Finally, the project made effective use of the existing expertise and know-how in the country, by involving relevant national companies and laboratories in the testing (CETI), and handling (Hemosan) of the waste, and by involving the Institute of Public Health in conducting a bio tracing study. These involvements have created opportunities for these companies and institutes in other countries in the region.

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#### 4.3. LESSONS LEARNED

Several lessons can be learned from this project. In terms of design and management, the experiences under the project point towards the importance of establishing and maintaining good relationships and clear and transparent communication channels with the industry, for projects dealing with hazardous waste issues located on private industry property. Furthermore, in complex setups such as post-soviet economies and unclear historical ownership of sites and waste, involvement of both industry and government are necessary to deal with waste in a comprehensive way.

Another lesson learned through the project is that a smaller project board makes for more agile adaptive management and does not necessarily mean that other interested parties will lose interest. Again, good communication about project progress and results to all interested parties is essential and a good complement to a small Project Board.

Finally, the hiring of an in-house expert on PCB issues greatly facilitated the projects' activities and outcomes and allowed an efficient use of resources.

On a technical level, the main lessons to be learned from this project is that for smaller countries dealing with relatively small amounts of hazardous waste, it often is more cost effective to export waste compared to treating it in the country.

#### 4.4. RECOMMENDATIONS

The following recommendations can be issued for the final phase of the project, and for potential follow-up in the future:

**Table 19. TE recommendations**

Rec #	TE Recommendations	Entity Responsible	Time Frame
A	Category 1: Lessons learned		
A.1	Formulate lessons learned It would be very good if the project board could formulate the lessons they learned in jointly conducting the project. Apart from technical and practical lessons, it would also be very helpful if the board could elaborate on some of the challenges encountered during the project and how they were overcome. Considering the success of the project, these lessons learned will not only be valuable for the Montenegrin partners and public but stand a chance to resonate with a larger audience dealing with hazardous waste issues.	UNDP	Before project end
B	Category 2: Communication		
B.1	Better communicate the results of the project In connection with recommendation 1, the TE team recommends that the results of the project be widely presented	UNDP	Before project end

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	and communicated at relevant national, regional and international fora.		
C	Category 3: Risk identification		
C.1	Better assess risks related to co-financing of the polluter  Considering the initial challenges in engaging one of the private sector partners, it would be good if future project, designed with substantial co-financing commitment from the private sector (polluter), identify this as a potential risk and formulate risk mitigation measures accordingly.	UNDP	For future projects
D	Category 4: Risk identification		
D.1	For next similar projects, plan in some financial flexibility for historical soil contamination  The discovery of the historical contamination at one of the project sites leads the TE team to recommend that for next similar projects, some financial flexibility for historical soil contamination should be built in.	UNDP	For future projects

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### ANNEXES

Annex 1: TE ToR (excluding ToR annexes)

Annex 2: TE Mission itinerary, including summary of field visits

Annex 3: List of persons interviewed

Annex 4: List of documents reviewed

Annex 5: Evaluation Question Matrix (evaluation criteria with key questions, indicators, sources of data, and methodology)

Annex 6: Questionnaire used and summary of results

Annex 7: TE Rating scales

Annex 8: Signed UNEG Code of Conduct form

Annex 9: Signed TE Report Clearance form

Annex 10: Annexed in a separate file: Co-financing tables

Annex 11: Annexed in a separate file: TE Audit Trail

Annex 12: Annexed in a separate file: relevant terminal GEF/LDCF/SCCF Core Indicators and Tracking Tools

Annex 13: Annexed in a separate file: Management response table

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### ANNEX 1 : TE TOR

Link to the call [https://jobs.undp.org/cj\\_view\\_job.cfm?cur\\_job\\_id=106086](https://jobs.undp.org/cj_view_job.cfm?cur_job_id=106086)

#### Background

##### 1. Introduction

In accordance with UNDP and GEF M&E policies and procedures, all full- and medium-sized UNDP-supported GEF-financed projects are required to undergo a Terminal Evaluation (TE) at the end of the project. This Terms of Reference (ToR) sets out the expectations for the TE of the full-sized project titled Comprehensive Environmentally Sound Management of PCBs in Montenegro (PIMS #5562) implemented through the UNDP Montenegro. The project started on the 16th January 2017 and is in its 5th year of implementation. The TE process must follow the guidance outlined in the document 'Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects' ([http://web.undp.org/evaluation/guideline/documents/GEF/TE\\_GuidanceforUNDP-supportedGEF-financedProjects.pdf](http://web.undp.org/evaluation/guideline/documents/GEF/TE_GuidanceforUNDP-supportedGEF-financedProjects.pdf)).

##### 2. Project Background and Context

The project **Comprehensive Environmentally Sound Management of PCBs in Montenegro** intends to support the country with the necessary technical and financial assistance to ensure that all the remaining PCBs in the country (estimated in not less than 900 t of PCB contaminated equipment, waste and soil) are identified and disposed of. The project will be implemented side by side with the relevant institutional and industrial stakeholders, i.e. the Ministry of Ecology, Spatial Planning and Urbanism, private and state owned companies, holders of PCB containing equipment. Although the project expects to solve all remaining PCBs issues in the country, it will also ensure that enough capacity for the sound management of PCBs would have been built for the management of any further such hazardous waste identified in time after project's closure.

The disposal or decontamination of PCBs in Montenegro presents a number of issues and risks. First of all, the reliability of initial PCB inventory is very low and mostly limited to phased out equipment that needs to be disposed of. In Montenegro where most of information on PCBs from NIP inventory comes from disconnected equipment. This is due to the fact that electrical equipment (transformers, capacitors) when in good operating condition are usually not inspected for PCB content. The reasons are that:

- the cost of replacing transformer and capacitor is capital intense (very high), and
- the sampling and analysis of in-use equipment is a complex task requiring a significant coordination effort (for instance, coordination with maintenance schedule of electric equipment).

A second feature is that, being not immediately perceived as a hazard by the common public, the issue of PCBs is very often given a low priority from the authorities. Therefore, the existing legislation on PCB is not effectively enforced. As explained in the chapter above, although the Montenegrin legislation is well advanced and generally compliant with the Stockholm convention and the EU directive on PCBs management, and the government updated the inventory of PCB waste, the requirements related to the PCB management plans, and PCB "logbooks" are almost completely disregarded. In the absence of a sound level of enforcement of current legislation, even the industry's commitment to address the issue of PCBs – given the high costs related to the decontamination or

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disposal (with subsequent replacement) of contaminated equipment – is low. For this reason, the national PCB management situation can be effectively addressed only if the government's commitment and capacity are high.

A third feature is the lacking of PCB treatment technologies at local level. This is a common feature in many countries supported by UN/GEF projects in PCBs management. This usually results in industries undertaking substantial investment for shipping PCB contaminated equipment for abroad, typically EU, for disposal. In the case of Montenegro, there are no technologies for treatment of low PCB-contaminated equipment or disposal facilities available for high PCB contaminated equipment or waste, therefore until now only the highly PCB contaminated equipment has been to date treated by shipping and disposal abroad.

The project strategy is therefore designed to address simultaneously all these important aspects as outlined below.

1) Increasing national PCB management capacities and the enforcement of the legislation. This will require working side by side with the control authorities (mainly the Ministry of Ecology, Spatial Planning and Urbanism) and the key stakeholders (the electric power industry and other potential owners of PCB containing equipment) to:

- develop and implement a practical guidance on PCB environmentally sound management (ESM);
- provide assistance in fulfillment of legal obligations towards recording and reporting PCB related information;
- conduct inspections at sites where electrical equipment (transformers, capacitors) operates,
- train operators and officers on both sides – the governmental authorities and PCB equipment/waste owners.

2) Increasing the industry and general awareness. PCBs are very often a not very well known environmental issue. Except for extremely high pollution levels, resulting in acute and immediate health impacts, the toxic effect of PCBs (increase of cancer probability) is delayed in time and not associated to any “visible” pollution like black smoke from open burning or factories’ stacks or turbidity in water. Therefore, the PCB hazard is usually not perceived as an immediate threat by many. However, an unsafe disposal of PCBs results in the contamination of food chain and other environmental media (like, for instance, sediments and soil) which may last for years. PCBs have been recently (March 2013) re-assessed by the IARC and are now classified as “known human carcinogens (class 1)” compared to the previous “probable human carcinogens (class 2)” category. There is therefore the need to inform the main stakeholders and the public at large on the benefit brought by the project so that the government and the industry are encouraged in undertaking necessary actions.

3) Engagement of stakeholders. As in other environmental programmes, only in case of key stakeholder's buy-in, the project's goals can be satisfactorily achieved. No major change in current practices can be achieved if there is little or no awareness of the risks posed by PCBs, and if stakeholders do not feel the need to address the PCB management issue once and for all. As previously described in more detail, the project had identified at PIF stage a number of important stakeholders which will be involved in all project activities during its implementation. Besides MoSDT, which will be the national implementing institution, key PCB holders, like EPCG (both for electricity generation and distribution) and KAP were informed on the project's related benefits and on the

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expected and required level of commitment towards it. As a result, they participated proactively in all the project development activities, including providing lists of their power equipment and facilitating oil sampling and analysis for PCB content. More stakeholder engagement, by involving other line Ministries, academic institutions and NGO sector is planned during the project implementation which will too include civil society associations, trade unions, and other beneficiaries.

4) Strengthening the reliability of information through updating of the PCB inventory. At PIF stage, the only available information was related to the list of phased-out PCB equipment and waste, a few pure PCB transformers, online or stored at KAP, oil tanks and contaminated material (sawdust, soil, waste) potentially contaminated by PCBs. Due to the low enforcement of the legislation, there was very little information available on the concentration of PCB online equipment. The information concerning the number, age and level of contamination of PCB equipment is indeed essential for both management purposes and identification of the proper treatment / disposal technologies. This situation was already evident at the PIF formulation stage, and therefore the main focus in the preliminary inventory carried out during preparation of the FSP project document concerned existing offline and online equipment at EPCG company. At same time, only limited PCB content in transformers stored or online at KAP was re-confirmed, including that data on PCB contaminated soil. The project will continue consolidating the PCB inventory by undertaking dielectric oil sampling and analytical determination of PCBs in 3,000 pieces of equipment during the first two years of its implementation.

5) Provide know-how and financial support on the technologies for the disposal of PCB equipment. Clearly, one of the central issues on the side of PCB ESM concerns the availability of technical and financial resources for PCB disposal. In the absence of a sound know-how related to disposal operations of PCB contaminated equipment, the cost / benefit ratio is always very high, for the following reasons:

- the options allowing the chemical destruction of the PCBs in the dielectric oil without destroying the oil itself are usually not considered, so that the dielectric oil, which is usually a very expensive asset, is lost;
- the planning of PCB equipment phasing out is not aligned with their residual value, so that very often a strategy aimed at minimizing the cost of disposal of PCB contaminated equipment is not pursued; and
- the legal aspects related to the storage of PCB containing equipment under maintenance versus PCB phased out equipment (to be considered waste) are usually neglected, exposing therefore owners of PCB equipment to a severe liability risk.

The project budget from the GEF Trust Fund is 3,5 mil USD, UNDP TRAC resources are 50,000 USD and total co-financing is 19,803,691 USD.

During 2020 and 2021 Covid-19 pandemic influenced implementation of the project. Namely, lockdowns throughout 2020 and beginning of 2021 interfered the work planned for contaminated site investigation, and delayed the work on site clean-up. Already arranged trainings on ESM of PCB had to be postponed. Montenegro had a large number of Covid cases during the two years of the pandemic, around 230,000 cases, which is 35% of the population. Also, around 2,700 Covid-19 related deaths were reported. The delays in project implementation caused by Covid-19 resulted with the no-cost extension being granted for one additional year.

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### Duties and Responsibilities

#### 3. TE Purpose

The TE report will assess the achievement of project results against what was expected to be achieved and draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming. The TE report promotes accountability and transparency and assesses the extent of project accomplishments.

The evaluation will cover all the activities undertaken by the project. In scoping and during the implementation of the evaluation, key stakeholders of the project will be involved, such as the members of the project steering committee including representatives from the government institutions (Ministry of Ecology, Spatial Planning and Urbanism, Center for Eco-toxicological Research- CETI, Institute for Public Health) and private sector (owners of PCB equipment). It also examines the efficiency and effectiveness of the project in terms of achieving expected results and evaluates the relevance and sustainability of achievements. An evaluation carried out through an analysis of results, should provide the basis for the follow-up to the project if there is a need for that.

Therefore, the main responsibility of the evaluation team is to examine the following elements: the project design, the objectives established and results achieved; different aspects of the project such as sustainability, monitoring and evaluation, and efficiency; the project strategy and development; the relationship among the different actors and their specific roles; the attainment of the results, objective and impacts of the project; the effectiveness of the strategy undertaken by the project; the financial, administrative and managerial aspects of the project; the project's compliance with the rules and procedures of the project's administrative, financial and reporting system, verify that all is in accordance with the rules and regulations of UNDP and GEF.

#### 4. TE Approach and Methodology

The TE report must provide evidence-based information that is credible, reliable and useful.

The TE team will review all relevant sources of information including documents prepared during the preparation phase (i.e. PIF, UNDP Initiation Plan, UNDP Social and Environmental Screening Procedure/SESP) the Project Document, project reports including annual PIRs, project budget revisions, lesson learned reports, national strategic and legal documents, and any other materials that the team considers useful for this evidence-based evaluation. The TE team will review the baseline and midterm GEF focal area Core Indicators/Tracking Tools submitted to the GEF at the CEO endorsement and midterm stages and the terminal Core Indicators/Tracking Tools that must be completed before the TE field mission begins.

The TE team is expected to follow a participatory and consultative approach ensuring close engagement with the Project Team, government counterparts (the GEF Operational Focal Point), Implementing Partners, the UNDP Country Office(s), the Regional Technical Advisor, direct beneficiaries and other stakeholders.

Engagement of stakeholders is vital to a successful TE. Stakeholder involvement should include interviews with stakeholders who have project responsibilities, including but not limited to Ministry of Ecology, Spatial Planning and Urbanism, Environmental Protection Agency, The Administration for Inspection Affairs, Companies that have PCB contaminated equipment, Center for Eco-toxicological Research; executing agencies, senior officials and task team/component leaders, key experts and consultants in the subject area, Project Board, project beneficiaries, academia, local government and CSOs, etc.

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Additionally, the TE team is expected to conduct field missions to Podgorica and Bar, including the following project sites UNIPROM-KAP and CEDIS in Podgorica and HEMOSAN in Bar.

The specific design and methodology for the TE should emerge from consultations between the TE team and the above-mentioned parties regarding what is appropriate and feasible for meeting the TE purpose and objectives and answering the evaluation questions, given limitations of budget, time and data. The TE team must use gender-responsive methodologies and tools and ensure that gender equality and women's empowerment, as well as other cross-cutting issues and SDGs are incorporated into the TE report.

The final methodological approach including interview schedule, field visits and data to be used in the evaluation must be clearly outlined in the TE Inception Report and be fully discussed and agreed between UNDP, stakeholders and the TE team.

The final report must describe the full TE approach taken and the rationale for the approach making explicit the underlying assumptions, challenges, strengths and weaknesses about the methods and approach of the evaluation.

#### 5. DETAILED SCOPE OF THE TE

The TE will assess project performance against expectations set out in the project's Logical Framework/Results Framework (see ToR Annex A). The TE will assess results according to the criteria outlined in the Guidance for TEs of UNDP-supported GEF-financed Projects ('Guidance for Conducting Terminal Evaluations of UNDP-Supported, GEF-Financed Projects').

The Findings section of the TE report will cover the topics listed below.

A full outline of the TE report's content is provided in ToR Annex C.

The asterisk "\*" indicates criteria for which a rating is required.

#### Findings

##### i. Project Design/Formulation

- National priorities and country driven-ness
- Theory of Change
- Gender equality and women's empowerment
- Social and Environmental Standards (Safeguards)
- Analysis of Results Framework: project logic and strategy, indicators
- Assumptions and Risks
- Lessons from other relevant projects (e.g. same focal area) incorporated into project design
- Planned stakeholder participation
- Linkages between project and other interventions within the sector
- Management arrangements

##### ii. Project Implementation

- Adaptive management (changes to the project design and project outputs during implementation)
- Actual stakeholder participation and partnership arrangements
- Project Finance and Co-finance
- Monitoring & Evaluation: design at entry (\*), implementation (\*), and overall assessment of M&E (\*)
- Implementing Agency (UNDP) (\*) and Executing Agency (\*), overall project oversight/implementation and execution (\*)

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- Risk Management, including Social and Environmental Standards (Safeguards)

#### iii. Project Results

- Assess the achievement of outcomes against indicators by reporting on the level of progress for each objective and outcome indicator at the time of the TE and noting final achievements
- Relevance (\*), Effectiveness (\*), Efficiency (\*) and overall project outcome (\*)
- Sustainability: financial (\*), socio-political (\*), institutional framework and governance (\*), environmental (\*), overall likelihood of sustainability (\*)
- Country ownership
- Gender equality and women's empowerment
- Cross-cutting issues (poverty alleviation, improved governance, climate change mitigation and adaptation, disaster prevention and recovery, human rights, capacity development, South-South cooperation, knowledge management, volunteerism, etc., as relevant)
- GEF Additionality
- Catalytic Role / Replication Effect
- Progress to impact

#### Main Findings, Conclusions, Recommendations and Lessons Learned

- The TE team will include a summary of the main findings of the TE report. Findings should be presented as statements of fact that are based on analysis of the data.
- The section on conclusions will be written in light of the findings. Conclusions should be comprehensive and balanced statements that are well substantiated by evidence and logically connected to the TE findings. They should highlight the strengths, weaknesses and results of the project, respond to key evaluation questions and provide insights into the identification of and/or solutions to important problems or issues pertinent to project beneficiaries, UNDP and the GEF, including issues in relation to gender equality and women's empowerment.
- Recommendations should provide concrete, practical, feasible and targeted recommendations directed to the intended users of the evaluation about what actions to take and decisions to make. The recommendations should be specifically supported by the evidence and linked to the findings and conclusions around key questions addressed by the evaluation.
- The TE report should also include lessons that can be taken from the evaluation, including best practices in addressing issues relating to relevance, performance and success that can provide knowledge gained from the particular circumstance (programmatic and evaluation methods used, partnerships, financial leveraging, etc.) that are applicable to other GEF and UNDP interventions. When possible, the TE team should include examples of good practices in project design and implementation.
- It is important for the conclusions, recommendations and lessons learned of the TE report to incorporate gender equality and empowerment of women.

The TE report will include an Evaluation Ratings Table, as shown below:

**ToR Table 2: Evaluation Ratings Table for the project *Comprehensive Environmentally Sound Management of PCBs in Montenegro***

Monitoring & Evaluation (M&E)	Rating
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M&E design at entry	
M&E Plan Implementation	
Overall Quality of M&E	
Implementation & Execution	Rating
Quality of UNDP Implementation/Oversight	
Quality of Implementing Partner Execution	
Overall quality of Implementation/Execution	
Assessment of Outcomes	Rating
Relevance	
Effectiveness	
Efficiency	
Overall Project Outcome Rating	
Sustainability	Rating
Financial resources	
Socio-political/economic	
Institutional framework and governance	
Environmental	

#### 6. Timeframe

The total duration of the TE will be approximately 25 working days over a time period of 18 weeks starting on 17th May 2021. The tentative TE timeframe is as follows:

Timeframe:	Activity
25 April 2022	Application closes
14 May 2022	Selection of TE team
17 May 2022	Preparation period for TE team (handover of documentation)
17 – 28 May 2022, 4 days	Document review and preparation of TE Inception Report
3 – 10 June 2022, 2 days	Finalization and Validation of TE Inception Report; latest start of TE mission
20-27 June 2022, 7 days	TE mission: stakeholder meetings, interviews, field visits, etc.
27 June 2022	Mission wrap-up meeting & presentation of initial findings; earliest end of TE mission
28 June – 20 July 2022, 10 days	Preparation of draft TE report
21 July – 12 September 2022	Circulation of draft TE report for comments
13 – 20 September 2022, 2 days	Incorporation of comments on draft TE report into Audit Trail & finalization of TE report
13 September 2022	Preparation and Issuance of Management Response
20 September 2022	Expected date of full TE completion

Options for site visits should be provided in the TE Inception Report.

#### 7. TE Deliverables

#	Deliverable	Description	Timing	Responsibilities
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1	TE Inception Report	TE team clarifies objectives, methodology and timing of the TE	No later than 2 weeks before the TE mission: <i>by 28 May 2022</i>	TE team submits Inception Report to Commissioning Unit and project management
2	Presentation	Initial Findings	End of TE mission: <i>by 27 June 2022</i>	TE team presents to Commissioning Unit and project management
3	Draft TE Report	Full draft report <i>using guidelines on report content in ToR Annex C</i> with annexes	Within 3 weeks of end of TE mission: <i>by 20 July 2022</i>	TE team submits to Commissioning Unit; reviewed by RTA, Project Coordinating Unit, GEF OFP
5	Final TE Report* + Audit Trail	Revised final report and TE Audit trail in which the TE details how all received comments have (and have not) been addressed in the final TE report. <i>See template in ToR Annex H</i>	Within 1 week of receiving comments on draft report: <i>by 20 September 2022</i>	TE team submits both documents to the Commissioning Unit

\*All final TE reports will be quality assessed by the UNDP Independent Evaluation Office (IEO). Details of the IEO's quality assessment of decentralized evaluations can be found in Section 6 of the UNDP Evaluation Guidelines.

#### 8. TE Arrangements

The principal responsibility for managing the TE resides with the Commissioning Unit. The Commissioning Unit for this project's TE is the Country Office Montenegro.

The Commissioning Unit will contract the evaluators and ensure the timely provision of per diems and travel arrangements within the country for the TE team. The Project Team will be responsible for liaising with the TE team to provide all relevant documents, set up stakeholder interviews, and arrange field visits.

### Competencies

#### 9. TE Team Composition and Required Qualification

A team of two independent evaluators will conduct the TE – one team leader (with experience and exposure to projects and evaluations in other regions) and one team expert, National Consultant. The team leader will lead the process of evaluation and be responsible for the overall design and writing of the TE report. The team expert will assist the team leader in data collection and analysis, assess emerging trends with respect to regulatory frameworks, budget allocations, capacity building, work with the Project Team in developing the TE itinerary.

The evaluator(s) cannot have participated in the project preparation, formulation and/or implementation (including the writing of the project document), must not have conducted this project's Mid-Term Review and should not have a conflict of interest with the project's related activities.

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#### Required Skills and Experience

The selection of evaluators will be aimed at maximizing the overall “team” qualities in the following areas:

##### Education:

- A Master’s degree in electrical/agriculture/environment/chemicals/engineering or economy, or other closely related field - 10%

##### Experience

- Relevant experience with results-based management evaluation methodologies; - 10%
- Experience applying SMART indicators and reconstructing or validating baseline scenarios; - 10%
- Competence in adaptive management, as applied to Chemicals/Waste GEF Focal Area; - 10%
- Experience in evaluating projects; - 20%
- Experience working in Montenegro, Western Balkans, CIS countries; - 10%
- Experience in relevant technical areas for at least 10 years; - 10%
- Demonstrated understanding of issues related to gender and Chemicals/Waste; experience in gender responsive evaluation and analysis; - 5%
- Excellent communication skills; - 3%
- Demonstrable analytical skills; - 2%
- Project evaluation/review experience within United Nations system will be considered an asset. – 5%

##### Language

- Team leader - fluency in written and spoken English. – 5%

#### 10. Evaluator Ethics

The TE team will be held to the highest ethical standards and is required to sign a code of conduct upon acceptance of the assignment. This evaluation will be conducted in accordance with the principles outlined in the UNEG ‘Ethical Guidelines for Evaluation’. The evaluator must safeguard the rights and confidentiality of information providers, interviewees and stakeholders through measures to ensure compliance with legal and other relevant codes governing collection of data and reporting on data. The evaluator must also ensure security of collected information before and after the evaluation and protocols to ensure anonymity and confidentiality of sources of information where that is expected. The information knowledge and data gathered in the evaluation process must also be solely used for the evaluation and not for other uses without the express authorization of UNDP and partners.

#### 11. Payment Schedule:

- 20% payment upon satisfactory delivery of the final TE Inception Report and approval by the Commissioning Unit
- 40% payment upon satisfactory delivery of the draft TE report to the Commissioning Unit

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- 40% payment upon satisfactory delivery of the final TE report and approval by the Commissioning Unit and RTA (via signatures on the TE Report Clearance Form) and delivery of completed TE Audit Trail

Criteria for issuing the final payment of 40% :

- The final TE report includes all requirements outlined in the TE TOR and is in accordance with the TE guidance.
- The final TE report is clearly written, logically organized, and is specific for this project (i.e. text has not been cut & pasted from other TE reports).
- The Audit Trail includes responses to and justification for each comment listed.

In line with the UNDP's financial regulations, when determined by the Commissioning Unit and/or the consultant that a deliverable or service cannot be satisfactorily completed due to the impact of COVID-19 and limitations to the TE, that deliverable or service will not be paid.

Due to the current COVID-19 situation and its implications, a partial payment may be considered if the consultant invested time towards the deliverable but was unable to complete to circumstances beyond his/her control.

#### 12. Application Process

Recommended Presentation of Proposal:

- a) Letter of Confirmation of Interest and Availability using the template provided by UNDP;
- b) CV and a Personal History Form (P11 form );
- c) Brief description of approach to work/technical proposal of why the individual considers him/herself as the most suitable for the assignment, and a proposed methodology on how they will approach and complete the assignment; (max 1 page)
- d) Financial Proposal that indicates the all-inclusive fixed total contract price and all other travel related costs (such as flight ticket, per diem, etc), supported by a breakdown of costs, as per template attached to the Letter of Confirmation of Interest template. If an applicant is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the applicant must indicate at this point, and ensure that all such costs are duly incorporated in the financial proposal submitted to UNDP.

All application materials should be submitted to the address UN Eco House, Stanka Dragojevic street bb, 81 000 Podgorica, Montenegro in a sealed envelope indicating the following reference "Consultant for Terminal Evaluation of the Project Comprehensive Environmentally Sound Management of PCBs in Montenegro" or by email at the following address ONLY: [vacancy.me@undp.org](mailto:vacancy.me@undp.org) by 30 April 2022. Incomplete applications will be excluded from further consideration.

Criteria for Evaluation of Proposal: Only those applications which are responsive and compliant will be evaluated. Offers will be evaluated according to the Combined Scoring method – where the educational background and experience on similar assignments will be weighted at 70% and the price proposal will weigh as 30% of the total scoring. The applicant receiving the Highest Combined Score that has also accepted UNDP's General Terms and Conditions will be awarded the contract.

#### 13. TOR Annexes

ToR Annex A: Project Logical/Results Framework

ToR Annex B: Project Information Package to be reviewed by TE team

ToR Annex C: Content of the TE report

ToR Annex D: Evaluation Criteria Matrix template

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ToR Annex E: UNEG Code of Conduct for Evaluators

ToR Annex F: TE Rating Scales

ToR Annex G: TE Report Clearance Form

ToR Annex H: TE Audit Trail

## ANNEX 2&amp;3: TE MISSION ITINERARY AND LIST OF PERSONS INTERVIEWED

Date	Time	Activity	People to meet/contacts
Saturday 25/06	16:20: Arrival of International consultant in Podgorica  17:30	Set in hotel  First meeting with national consultant	Ana Simonovic <a href="mailto:ana.simonovic@gmail.com">ana.simonovic@gmail.com</a> ; +38267309420.
Sunday 26/06	/		
Monday 27/06	9:00  12:00  14:00	Meeting with project team at UNDP premises  Meeting with Ministry of Ecology, Spatial Planning and Urbanism  Meeting with Environment Protection Agency of Montenegro	Maja Kustudic; Ana Dakovic; Vladan Bozovic  Ms. Jelena Kovacevic, Head of Department for Industrial Pollution Control and Chemicals Management  Mr. Igor Jovanovic, Head of Directorate for Waste Management and Communal Development  Ms. Stanislava Lazarevic, Senior Advisor at Licensing and Consent Sector
Tuesday 28/06	10:00  13:00	The State Administration for Inspection Affairs of Montenegro  KAP	Ms. Veselinka Zarubica, Ecological inspector  Mr. Ranko Pop, Electrical Engineer in Energy Sector

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			Ms. Marina Medojevic, Metallurgical Engineer in Ecology Department
Wednesday 29/06	10:00  13:30	Center for EcoToxicological Research (CETI)  Institute for public health	Ms. Danijela Sukovic, Advisor to the Executive Director for Laboratory Affairs  Mr. Vladimir Zivkovic, Advisor to the Director of the Laboratory for the Environment  Ms. Dijana Djurovic, Docent Doctor, Director of the Center for Health Ecology
Thursday 30/06	Trip to Bar 11:00, meeting at 12:00	Hemosan	Mr. Zoran Nikitovic, Owner of the company
Friday 1/07	9:00	Debriefing session with project team at UNDP premise	Maja Kustudic; Ana Dakovic; Vladan Bozovic
Saturday 2/07	10:00	International consultant flies back home	

29.06.2022\_ Interview online with Maksim Surkov, RTA  
UNDP Istanbul

17.08.2022 – Interview online with Aleksandar Mickovski,  
Project Technical Advisor

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## ANNEX 4: LIST OF DOCUMENTS REVIEWED

- 1 Project Identification Form (PIF)
- 2 UNDP Initiation Plan
- 3 Final UNDP-GEF Project Document with all annexes
- 4 CEO Endorsement Request
- 5 UNDP Social and Environmental Screening Procedure (SESP) and associated management plans (if any)
- 6 Inception Workshop Report
- 7 Mid-Term Review report and management response to MTR recommendations
- 8 All Project Implementation Reports (PIRs)
- 9 Progress reports (quarterly, semi-annual or annual, with associated workplans and financial reports)
- 10 Oversight mission reports
- 11 Minutes of Project Board Meetings and of other meetings (i.e. Project Appraisal Committee meetings)
- 12 GEF Tracking Tools (from CEO Endorsement, midterm and terminal stages)
- 13 GEF/LDCF/SCCF Core Indicators (from PIF, CEO Endorsement, midterm and terminal stages); for GEF-6 and GEF-7 projects only
- 14 Financial data, including actual expenditures by project outcome, including management costs, and including documentation of any significant budget revisions
- 15 Co-financing data with expected and actual contributions broken down by type of co-financing, source, and whether the contribution is considered as investment mobilized or recurring expenditures
- 16 Audit reports
- 17 Electronic copies of project outputs (booklets, manuals, technical reports, articles, etc.)
- 18 Sample of project communications materials
- 19 Summary list of formal meetings, workshops, etc. held, with date, location, topic, and number of participants
- 20 Any relevant socio-economic monitoring data, such as average incomes / employment levels of stakeholders in the target area, change in revenue related to project activities
- 21 List of contracts and procurement items over ~US\$5,000 (i.e. organizations or companies contracted for project outputs, etc., except in cases of confidential information)
- 22 List of related projects/initiatives contributing to project objectives approved/started after GEF project approval (i.e. any leveraged or “catalytic” results)

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23 Data on relevant project website activity – e.g. number of unique visitors per month, number of page views, etc. over relevant time period, if available

24 UNDP Country Programme Document (CPD)

25 List/map of project sites, highlighting suggested visits

26 List and contact details for project staff, key project stakeholders, including Project Board members, RTA, Project Team members, and other partners to be consulted

27 Project deliverables that provide documentary evidence of achievement towards project outcomes

## ANNEX 5: EVALUATION QUESTION MATRIX (EVALUATION CRITERIA WITH KEY QUESTIONS, INDICATORS, SOURCES OF DATA, AND METHODOLOGY)

Evaluative criteria	Evaluation questions	Indicators	Information Source	Data Collection Method
<b>A- Project Design / Formulation</b>				
Analysis of LFA/Results Framework (Project logic /strategy; Indicators)	<ul style="list-style-type: none"> <li>Were the project's objectives and components clear, practicable and feasible within its time frame?</li> <li>Were monitoring indicators from the project document effective for measuring progress and performance? Were they SMART?</li> </ul>	<ul style="list-style-type: none"> <li>Coherence/difference between stated objectives and progress to date</li> <li>Quality of monitoring indicators in the project document</li> <li>Implementing entities' staff understanding of objectives, components, timeframe</li> <li>Local implementing partners' understanding of objectives, components, timeframe</li> </ul>	<ul style="list-style-type: none"> <li>Project planning documents</li> <li>UNDP Staff (managers)</li> <li>Local (Montenegro) executing team and executing partners (at the national, regional and district levels)</li> </ul>	<ul style="list-style-type: none"> <li>Documentation Review: planning and strategy documents</li> <li><b>Interviews</b> with UNDP and project staff and executing partners</li> </ul>
	<ul style="list-style-type: none"> <li>Is the M&amp;E plan well-conceived and sufficient to monitor results and track progress toward achieving objectives?</li> </ul>	<ul style="list-style-type: none"> <li>Existence and quality of baseline assessment, performance measurement framework/logframe, methodology, roles and responsibilities, budget and timeframe/workplan in planning documents</li> </ul>	<ul style="list-style-type: none"> <li>Planning documents</li> <li>Monitoring and reporting documents</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Desk Review</li> <li><b>Interviews</b> with implementing and executing staff</li> </ul>
Assumptions and Risks	<ul style="list-style-type: none"> <li>Were the project assumptions and risks well articulated in the PIF and project document?</li> </ul>	<ul style="list-style-type: none"> <li>Assumptions and risks stated in planning documents, with corresponding response methods/measures</li> </ul>	<ul style="list-style-type: none"> <li>PIF and project document</li> <li>Review procedures/planning meeting minutes/emails</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> </ul>
	<ul style="list-style-type: none"> <li>Did stated assumptions and risks help to determine activities and planned outputs?</li> </ul>	<ul style="list-style-type: none"> <li>Quality of risk management system(s) in place at appropriate levels of reporting, accountability</li> <li>Use of assumptions or noted risks to tailor or adjust planned activities and outputs</li> </ul>	<ul style="list-style-type: none"> <li>Project planning documents</li> <li>Monitoring reports</li> <li>UNDP Staff</li> <li>Local executing team and executing partners</li> </ul>	<ul style="list-style-type: none"> <li>Documentation Review: planning and monitoring documents</li> <li><b>Interviews</b> with project staff and executing partners</li> </ul>
	<ul style="list-style-type: none"> <li>Have externalities (i.e. effects of climate change, global economic crisis, etc.) that are relevant to the findings been duly considered?</li> </ul>	<ul style="list-style-type: none"> <li>Degree and nature of influence of external factors on planned activities</li> <li>Extent to which planning documents anticipated or reflected</li> </ul>	<ul style="list-style-type: none"> <li>Project planning documents</li> <li>Monitoring reports</li> <li>UNDP Staff</li> <li>Local executing team and executing partners</li> </ul>	<ul style="list-style-type: none"> <li>Documentation Review: planning and monitoring documents</li> <li><b>Interviews</b> with project staff and executing partners</li> </ul>

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Evaluative criteria	Evaluation questions	Indicators	Information Source	Data Collection Method
		risks/externalities already faced during implementation to date		
Lessons from other relevant projects (e.g., same focal area) incorporated into project design	<ul style="list-style-type: none"> <li>Were lessons from other relevant projects properly incorporated in the project design?</li> </ul>	<ul style="list-style-type: none"> <li>Evidence of planning documents utilizing lessons learned/ recommendations from previous projects as input to planning/strategy process</li> </ul>	<ul style="list-style-type: none"> <li>Planning documents</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> </ul>
Planned stakeholder participation	<ul style="list-style-type: none"> <li>Were the partnership arrangements properly identified and roles and responsibilities negotiated prior to project approval?</li> </ul>	<ul style="list-style-type: none"> <li>Evidence of local partnership (lack of) understanding of roles and responsibilities prior to and following project approval</li> <li>Coherence between nature and extent of Project Steering Committee (SC) responsibilities and roles, and project needs and objectives</li> </ul>	<ul style="list-style-type: none"> <li>Local executing team (Project staff)</li> <li>UNDP staff</li> <li>Local executing partners (at the national, regional and district levels; governmental and non-governmental stakeholders)</li> <li>Planning documents</li> <li>Initial workshops/planning meetings</li> <li>Minutes of SC meetings</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> </ul>
Replication approach	<ul style="list-style-type: none"> <li>Was a replication approach clearly set?</li> </ul>	<ul style="list-style-type: none"> <li>Replication approach clearly stated in planning documents, and means of enhancing replication during implementation stated</li> </ul>	<ul style="list-style-type: none"> <li>Planning documents</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> </ul>
Linkages between project and other interventions within the sector	<ul style="list-style-type: none"> <li>Were other interventions within the sector clearly identified?</li> </ul>	<ul style="list-style-type: none"> <li>Other interventions within the sector duly described and their possible linkages with the project analysed</li> </ul>	<ul style="list-style-type: none"> <li>Planning documents</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> </ul>
UNDP comparative advantage	<ul style="list-style-type: none"> <li>Is UNDP comparative advantage clear on this project?</li> </ul>	<ul style="list-style-type: none"> <li>Extent to which UNDP comparative advantage is justified</li> </ul>	<ul style="list-style-type: none"> <li>Planning documents</li> <li>UNDP staff</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews</li> </ul>
Management arrangements	<ul style="list-style-type: none"> <li>Were the capacities of the executing institution and its counterparts properly considered when the project was designed?</li> </ul>	<ul style="list-style-type: none"> <li>Evidence of scoping activity or assessment of executing agency's capabilities with respect to executing this project</li> <li>Number, extent and types of gaps between planned and available capacities by executing agencies</li> </ul>	<ul style="list-style-type: none"> <li>UNDP staff</li> <li>Local executing team and executing partners</li> <li>Meeting minutes/emails leading to planning documents</li> </ul>	<ul style="list-style-type: none"> <li>Interviews with UNDP and project staff and executing partners</li> <li>Desk review</li> </ul>

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Evaluative criteria	Evaluation questions	Indicators	Information Source	Data Collection Method
	<ul style="list-style-type: none"> <li>Were counterpart resources (funding, staff, and facilities), enabling legislation, and adequate project management arrangements in place at project entry?</li> </ul>	<ul style="list-style-type: none"> <li>Coherence/extent of gap in timing between counterpart resource and institutional readiness and project commencement</li> </ul>	<ul style="list-style-type: none"> <li>Project staff</li> <li>UNDP staff</li> <li>Local executing partners (at the national, provincial and council levels; governmental and non-governmental stakeholders)</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews</li> <li>Field visit</li> </ul>
<b>B- Project Implementation</b>				
Adaptive management (changes to the project design and project outputs during implementation)	<ul style="list-style-type: none"> <li>What (if any) follow-up actions, and/or adaptive management taken in response to monitoring reports (PIRs)?</li> </ul>	<ul style="list-style-type: none"> <li>Evidence of management response/changes in project strategy/approach as a direct result of information in PRR(s) for AF and PIR(s) for LDCF</li> </ul>	<ul style="list-style-type: none"> <li>PRRs</li> <li>PIRs</li> <li>Workshops/Meeting minutes from technical group, steering committee, staff, stakeholders</li> <li>AF management responses</li> <li>LDCF management responses</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews with EA/IA Staff</li> </ul>
	<ul style="list-style-type: none"> <li>Did the projects undergo significant changes as a result of recommendations from workshops, the steering committee, or other review procedures?</li> </ul>	<ul style="list-style-type: none"> <li>Number and quality of mechanisms for feedback and re-adjustment of project strategy or approach</li> <li>Responsiveness of project team/ respective implementing bodies to recommendations made through review processes (including changes after the baseline report)</li> <li>Origins of suggestions for significant project changes (e.g. sources of recommendations)</li> </ul>	<ul style="list-style-type: none"> <li>Local executing team</li> <li>UNDP staff</li> <li>Local executing partners (particularly government stakeholders)</li> <li>Workshop/planning meeting minutes and action items</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews</li> </ul>
	<ul style="list-style-type: none"> <li>If the changes were extensive, did they materially change the expected project outcomes?</li> </ul>	<ul style="list-style-type: none"> <li>Nature and degree of change in project outcomes (activities, outputs) as a result of recommendations from review procedures</li> </ul>	<ul style="list-style-type: none"> <li>UNDP staff</li> <li>Local executing team</li> <li>Local executing partners (particularly government stakeholders)</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews</li> <li>Field Visit</li> </ul>

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Evaluative criteria	Evaluation questions	Indicators	Information Source	Data Collection Method
	<ul style="list-style-type: none"> <li>Were the project changes articulated in writing and then considered and approved by the project Steering Committee?</li> </ul>	<ul style="list-style-type: none"> <li>Number and type of approved project changes that were put in writing for Steering Committee consideration (number and type that were not put into writing and/or not approved)</li> </ul>	<ul style="list-style-type: none"> <li>Project monitoring and reporting documents (annual and quarterly reports)</li> <li>Workshop/planning meeting minutes and action items</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> </ul>
Partnership arrangements (with relevant stakeholders involved in the country/region) and stakeholders' engagement	<ul style="list-style-type: none"> <li>To what extent were effective partnership arrangements established for implementation of the project with relevant stakeholders involved in the country/regions/ districts?</li> </ul>	<ul style="list-style-type: none"> <li>Number and types of partnerships developed between project and local bodies/organizations</li> <li>Extent and quality of interaction/exchange between project implementers and local partners</li> </ul>	<ul style="list-style-type: none"> <li>Meetings/workshop minutes (Steering Committee)</li> <li>Local executing partners</li> <li>Project beneficiaries</li> <li>Local executing team</li> <li>UNDP Staff</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews with project staff, executing partners and communities</li> <li>Field Visit</li> </ul>
	<ul style="list-style-type: none"> <li>Did the project involve the relevant stakeholders through information sharing and consultation and by seeking their participation in project design, implementation, and M&amp;E? For example, did the project implement appropriate outreach and public awareness campaigns?</li> </ul>	<ul style="list-style-type: none"> <li>Number, type, and quality of stakeholder engagement at each stage of project design, implementation and M&amp;E</li> <li>Changes in public awareness as a result of outreach/ communication by project</li> </ul>	<ul style="list-style-type: none"> <li>Local executing partners, including community members and groups, government stakeholders and other local stakeholder groups (non-government)</li> <li>Local executing team</li> <li>UNDP staff</li> <li>Workshop/planning meeting minutes and action items</li> </ul>	<ul style="list-style-type: none"> <li>Desk Review</li> <li>Interviews</li> <li>Field Visit</li> </ul>
	<ul style="list-style-type: none"> <li>Did the project consult with and make use of the skills, experience, and knowledge of the appropriate government entities, nongovernmental organizations, community groups, private sector entities, local governments, and academic institutions in the design, implementation, and evaluation of project activities?</li> </ul>	<ul style="list-style-type: none"> <li>Quality of consultations / feedback mechanisms/ meetings/ systems in place for project implementers to learn the opinions of 1. Community groups 2. Local government 3. National government 4. Non-government groups 5. Other</li> <li>Number and frequency of engagement with local stakeholders for consultation</li> </ul>	<ul style="list-style-type: none"> <li>Local executing partners, including community members and groups, government stakeholders and other local stakeholder groups (non-government)</li> <li>Local executing team</li> <li>UNDP staff</li> <li>Workshop/planning meeting minutes and action items</li> </ul>	<ul style="list-style-type: none"> <li>Desk Review</li> <li>Interviews</li> <li>Field Visit</li> </ul>

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Evalutive criteria	Evaluation questions	Indicators	Information Source	Data Collection Method
	<ul style="list-style-type: none"> <li>Were the perspectives of those who would be affected by project decisions, those who could affect the outcomes, and those who could contribute information or other resources to the process taken into account while taking decisions (including relevant vulnerable groups and powerful supporters and opponents)?</li> </ul>	<ul style="list-style-type: none"> <li>Extent of beneficiary needs integrated into project design (appropriateness of strategies chosen, site selection, degree of vulnerability of targeted project sites, etc)</li> <li>Evidence of participation from a wide range of stakeholder groups (in support and opposed to the project)</li> </ul>	<ul style="list-style-type: none"> <li>Local executing partners, including community members and groups, government stakeholders and other local stakeholder groups (non-government)</li> <li>Workshop/planning meeting minutes and action items</li> </ul>	<ul style="list-style-type: none"> <li>Desk Review</li> <li>Interviews</li> <li>Field Visit</li> </ul>
Project Finance:	<ul style="list-style-type: none"> <li>What are annual costs for implementation and what proportion is co-financing?</li> </ul>	<ul style="list-style-type: none"> <li>Budget execution per year, activity</li> <li>Amount of co-financing per year, activity</li> <li>Amount of resources that project has leveraged since inception (and source(s))</li> </ul>	<ul style="list-style-type: none"> <li>Financial Audits</li> <li>Annual reports, quarterly reports</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews</li> </ul>
	<ul style="list-style-type: none"> <li>Is there any variance between planned and actual expenditures? If there is, what is the explanation?</li> </ul>	<ul style="list-style-type: none"> <li>Planned budget per year, activity</li> <li>Actual budget execution per year, activity</li> </ul>	<ul style="list-style-type: none"> <li>Financial Audits</li> <li>Annual reports, quarterly reports</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews</li> </ul>
	<ul style="list-style-type: none"> <li>Is there any variation between expected and actual co-financing? If there is, what is the explanation?</li> </ul>	<ul style="list-style-type: none"> <li>Planned co-financing per year, activity</li> <li>Actual amount of co-financing per year, activity</li> </ul>	<ul style="list-style-type: none"> <li>Financial Audits</li> <li>Annual reports, quarterly reports</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews</li> </ul>
	<ul style="list-style-type: none"> <li>What resources has the project leveraged since inception? (Leverage resources can be financial or in-kind and they may be from other donors, NGOs, foundations, governments, communities or the private sector)</li> </ul>	<ul style="list-style-type: none"> <li>Amount of resources that project has leveraged since inception (and source(s))</li> </ul>	<ul style="list-style-type: none"> <li>Financial Audits</li> <li>Annual reports, quarterly reports</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews</li> </ul>

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Evaluative criteria	Evaluation questions	Indicators	Information Source	Data Collection Method
	<ul style="list-style-type: none"> <li>What effect does co-financing have on project performance, effectiveness?</li> </ul>	<ul style="list-style-type: none"> <li>Number and extent of discrepancies between planned and actual executed activities, budget</li> <li>Degree of integration of externally funded components into overall project strategy/design</li> </ul>	<ul style="list-style-type: none"> <li>Financial Audits</li> <li>Annual reports, quarterly reports</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews</li> </ul>
Monitoring and evaluation: design at entry and implementation	<ul style="list-style-type: none"> <li>Was the logical framework used during implementation as a management and M&amp;E tool?</li> </ul>	<ul style="list-style-type: none"> <li>Extent of management use of the log frame (number and type of usage)</li> </ul>	<ul style="list-style-type: none"> <li>UNDP staff</li> <li>Local executing team and executing partners</li> </ul>	<ul style="list-style-type: none"> <li>Documentation Review: planning and monitoring documents</li> <li>Interviews with project staff and executing partners</li> </ul>
	<ul style="list-style-type: none"> <li>Was the M&amp;E plan sufficiently budgeted and funded during project preparation and implementation?</li> </ul>	<ul style="list-style-type: none"> <li>Proportion of executed M&amp;E budget against planned amount</li> <li>Degree of adherence of the implementation of the M&amp;E plan to intended timeline</li> <li>Evidence of external factors that have affected M&amp;E budget or timeline (and extent to which they were addressed in risk management plan)</li> </ul>	<ul style="list-style-type: none"> <li>Planning documents</li> <li>Planning meeting minutes/review procedures</li> <li>Monitoring and reporting documents (quarterly, annual reports)</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Desk Review</li> <li>Interviews with implementing and executing staff</li> </ul>
	<ul style="list-style-type: none"> <li>Was the logframe revised during the project period? Are monitoring indicators from the revised logical framework effective for measuring progress and performance?</li> </ul>	<ul style="list-style-type: none"> <li>Coherence between reported results (activities, outputs) and actual activities and outputs on the ground</li> </ul>	<ul style="list-style-type: none"> <li>Local executing staff and partners</li> <li>UNDP staff</li> <li>Community stakeholders</li> <li>Direct observation</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field Visit</li> </ul>
	<ul style="list-style-type: none"> <li>Does the project comply with the progress and financial reporting requirements/ schedule, including quality and timeliness of reports?</li> </ul>	<ul style="list-style-type: none"> <li>Proportion and types of reporting materials submitted a) correctly and b) on time</li> <li>Quality of M&amp;E/reporting materials</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring and reporting documents (quarterly, annual reports)</li> <li>UNDP staff</li> <li>Local executing team</li> <li>GEF/UNDP reporting requirements</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> </ul>
	<ul style="list-style-type: none"> <li>Were monitoring and evaluation reports discussed with stakeholders and project staff?</li> </ul>	<ul style="list-style-type: none"> <li>Number and quality of meetings, workshops or other mechanisms used to</li> </ul>	<ul style="list-style-type: none"> <li>UNDP staff</li> <li>Local executing team and partners</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> </ul>

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	<ul style="list-style-type: none"> <li>Was feedback from M&amp;E activities used for adaptive management?</li> </ul>	<ul style="list-style-type: none"> <li>share M&amp;E materials with stakeholders and project staff</li> <li>Number of stakeholder and staff aware of M&amp;E materials generated and/or lessons/findings they contain</li> <li>Uptake of M&amp;E/reporting information into management decision-making</li> <li>Consistency of APR/PIR self-evaluation ratings with MTR and TE findings</li> <li>Example of discrepancies identified by the project steering committee and addressed</li> <li>Examples of changes made to project implementation as a result of the MTR recommendations</li> </ul>	<ul style="list-style-type: none"> <li>Minutes and attendance list of project staff and stakeholders for meetings on M&amp;E</li> <li>Monitoring and reporting documents</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews with UNDP and project staff</li> </ul>
UNDP (Implementing Agency - IA) coordination and operational issues	<ul style="list-style-type: none"> <li>Has UNDP placed sufficient resources on achieving project results?</li> </ul>	<ul style="list-style-type: none"> <li>Differences in actual and planned amount of budget and staff time devoted to the project</li> <li>Quality of supervision of IA</li> <li>Difference in actual and planned timetable for project execution</li> </ul>	<ul style="list-style-type: none"> <li>Project team members</li> <li>UNDP staff</li> <li>Local executing partners</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Field Visit</li> </ul>
	<ul style="list-style-type: none"> <li>Have management teams provided quality and timely inputs/responses to the project team?</li> </ul>	<ul style="list-style-type: none"> <li>Perceived timeliness of management response to project team members' inquiries, needs</li> <li>Perceived quality of management response to project team members' inquiries, needs</li> <li>Perceived quality of risk management by IA</li> <li>Evidence of quality (candor and realism) in annual reporting</li> </ul>	<ul style="list-style-type: none"> <li>Project team members</li> <li>UNDP staff</li> <li>Local executing partners</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Field Visit</li> <li>Desk review</li> </ul>
<b>C- Project Results</b>				
<b>C1. Relevance: How does the project relate to the main objectives of the GEF focal areas, and to the environment and development priorities at the national level?</b>				

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Evaluative criteria	Evaluation questions	Indicators	Information Source	Data Collection Method
Is the project relevant for the GEF Chemicals and Wastes focal area?	<ul style="list-style-type: none"> <li>How does the project support the GEF Chemicals and Wastes focal area and strategic priorities</li> </ul>	<ul style="list-style-type: none"> <li>Existence of a clear relationship between the project objectives and GEF Chemicals and Waste focal area</li> </ul>	<ul style="list-style-type: none"> <li>Project documents</li> <li>GEF focal areas strategies and documents</li> </ul>	<ul style="list-style-type: none"> <li>Documents</li> <li>Analyses</li> <li>GEF website</li> <li>Interviews with UNDP and project team</li> </ul>
Is the project relevant to Montenegro's environment and sustainable development objectives? (see also C5)	<ul style="list-style-type: none"> <li>How does the project support the environment and sustainable development objectives of Montenegro?</li> <li>Is the project country-driven?</li> <li>What was the level of stakeholder participation in project design?</li> <li>What was the level of stakeholder ownership in implementation?</li> <li>Does the project adequately take into account the national realities, both in terms of institutional and policy framework in its design and its implementation?</li> </ul>	<ul style="list-style-type: none"> <li>Degree to which the project supports national environmental objectives</li> <li>Degree of coherence between the project and national priorities, policies and strategies</li> <li>Appreciation from national stakeholders with respect to adequacy of project design and implementation to national realities and existing capacities</li> <li>Level of involvement of government officials and other partners in the project design process</li> <li>Coherence between needs expressed by national stakeholders and UNDP-GEF criteria</li> </ul>	<ul style="list-style-type: none"> <li>Project documents</li> <li>National policies and strategies</li> <li>Key project partners</li> </ul>	<ul style="list-style-type: none"> <li>Documents analyses</li> <li>Interviews with UNDP and project partners</li> </ul>
Is the project addressing the needs of target beneficiaries at the local and regional levels?	<ul style="list-style-type: none"> <li>How does the project support the needs of relevant stakeholders?</li> <li>Has the implementation of the project been inclusive of all relevant stakeholders?</li> <li>Were local beneficiaries and stakeholders adequately involved in project design and implementation?</li> </ul>	<ul style="list-style-type: none"> <li>Strength of the link between expected results from the project and the needs of relevant stakeholders</li> <li>Degree of involvement and inclusiveness of stakeholders in project design and implementation</li> </ul>	<ul style="list-style-type: none"> <li>Project partners and stakeholders</li> <li>Needs assessment studies</li> <li>Project documents</li> </ul>	<ul style="list-style-type: none"> <li>Document analysis</li> <li>Interviews with relevant stakeholders</li> </ul>
Is the project internally coherent in its design?	<ul style="list-style-type: none"> <li>Are there logical linkages between expected results of the project (log frame) and the project design (in terms of</li> </ul>	<ul style="list-style-type: none"> <li>Level of coherence between project expected results and project design internal logic</li> </ul>	<ul style="list-style-type: none"> <li>Program and project documents</li> <li>Key project stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Document analysis</li> <li>Key interviews</li> </ul>

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Evaluative criteria	Evaluation questions	Indicators	Information Source	Data Collection Method
	<p>project components, choice of partners, structure, delivery mechanism, scope, budget, use of resources etc)?</p> <ul style="list-style-type: none"> <li>Is the length of the project sufficient to achieve project outcomes?</li> </ul>	<ul style="list-style-type: none"> <li>Level of coherence between project design and project implementation approach</li> </ul>		
How is the project relevant with respect to other donor-supported activities?	<ul style="list-style-type: none"> <li>Was the GEF funding support activities and objectives not addressed by other donors?</li> <li>How do GEF-funds help to fill gaps (or give additional stimulus) that are necessary but are not covered by other donors?</li> <li>Is there coordination and complementarity between donors?</li> </ul>	<ul style="list-style-type: none"> <li>Degree to which program was coherent and complementary to other donor programming nationally and regionally</li> </ul>	<ul style="list-style-type: none"> <li>Documents from other donor supported activities</li> <li>Other donor representatives</li> <li>Project documents</li> </ul>	<ul style="list-style-type: none"> <li>Documents analyses</li> <li>Interviews with project partners and relevant stakeholders</li> </ul>
Does the project provide relevant lessons and experiences for other similar projects in the future?	<ul style="list-style-type: none"> <li>Has the experience of the project provided relevant lessons for other future projects targeted at similar objectives?</li> </ul>		<ul style="list-style-type: none"> <li>Data collected throughout evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Data analysis</li> </ul>
<b>C2. Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved?</b>				
Has the project been effective in achieving the expected outcomes and objectives?	<ul style="list-style-type: none"> <li>Has the project been effective in achieving its expected outcomes? <ol style="list-style-type: none"> <li>Montenegro's PCB management capacity is strengthened</li> <li>Montenegro has an up-to-date and complete PCB inventory as well as a PPP that manages PCB contamination</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>Evidence that a nationally ESM of PCB chemicals and waste is drafted and implemented</li> <li>Tons of pure PCB and low concentrated waste managed and processed</li> <li>Number of operators of the electric sector and of the environmental control authority trained on and feel confident in practically applying the ESM system for PCBs</li> <li>Number of technical and procedural guidance documents compliant with</li> </ul>	<ul style="list-style-type: none"> <li>Project documents</li> <li>Project team and relevant stakeholders</li> <li>Data reported in project annual and quarterly reports</li> </ul>	<ul style="list-style-type: none"> <li>Documents analysis</li> <li>Interviews with project team</li> <li>Interviews with relevant stakeholders</li> </ul>

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	3. Montenegro manages PCBs in an environmentally sound way  4. The project's results are sustained and replicated	Stockholm Convention and national regulation completed and endorsed <ul style="list-style-type: none"> <li>• Existence of a gender dimension study (and move this under outcome 1.2)</li> <li>• Number of strategies for gender mainstreaming developed</li> <li>• % of participating companies that have drafted company-wide PCB management plans and submitted them</li> <li>• Existence of a dynamic PCB inventory available to the authorities and PCB holders through a dedicated website with access policies</li> <li>• Existence of a PCB national management plan</li> <li>• Existence of an innovative public-private partnership for the management of PCB contaminated equipment</li> <li>• % of national PCB storage capacity at selected storage facilities that is available and up to international standards</li> <li>• % of storage facilities that are upgraded and monitored under the project for the safe storage of PCB equipment/oils/waste pending final disposal or decontamination procedures</li> <li>• Stage of advancement in the identification, assessment and procurement of PCB disposal/dehalogenation services</li> <li>• Number of pre-identified management and M&amp;E activities carried out or completed</li> </ul>		
How is risk and risk mitigation being managed?	<ul style="list-style-type: none"> <li>• How well are risks, assumptions and impact drivers being managed?</li> </ul>	<ul style="list-style-type: none"> <li>• Completeness of risk identification and assumptions during project planning and design (see A)</li> </ul>	<ul style="list-style-type: none"> <li>• Project documents</li> <li>• UNDP, project team, and relevant stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Documents analysis</li> <li>• Interviews</li> </ul>

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	<ul style="list-style-type: none"> <li>• What was the quality of risk mitigation strategies developed? Were these sufficient?</li> <li>• Are there clear strategies for risk mitigation related with long-term sustainability of the project?</li> </ul>	<ul style="list-style-type: none"> <li>• Quality of existing information systems in place to identify emerging risks and other issues</li> <li>• Quality of risk mitigations strategies developed and followed</li> </ul>		
What lessons can be drawn Regarding effectiveness for other similar projects in the future?	<ul style="list-style-type: none"> <li>• What lessons have been learned from the project regarding achievement of outcomes?</li> <li>• What changes could have been made (if any) to the design of the project in order to improve the achievement of the project's expected results?</li> </ul>		<ul style="list-style-type: none"> <li>• Data collected throughout evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Data analysis</li> <li>• Interviews</li> </ul>
<b>C3. Efficiency: Was the project implemented efficiently, in-line with international and national norms and standards?</b>				
Was project support provided in an efficient way?	<ul style="list-style-type: none"> <li>• Was adaptive management used or needed to ensure efficient resource use?</li> <li>• Did the project logical framework and work plans and any changes made to them use as management tools during implementation?</li> <li>• Were the accounting and financial systems in place adequate for project management and producing accurate and timely financial information?</li> <li>• Were progress reports produced accurately, timely and responded to reporting requirements including adaptive management changes?</li> </ul>	<ul style="list-style-type: none"> <li>• Availability and quality of financial and progress reports Timeliness and adequacy of reporting provided</li> <li>• Level of discrepancy between planned and utilized financial expenditures</li> <li>• Planned vs. actual funds leveraged</li> <li>• Cost in view of results achieved compared to costs of similar projects from other organizations</li> <li>• Adequacy of project choices in view of existing context, infrastructure and cost</li> <li>• Quality of results-based management reporting (progress reporting, monitoring and evaluation)</li> <li>• Occurrence of change in project design/ implementation approach (i.e. restructuring) when needed to improve project efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Project documents and Evaluations</li> <li>• UNDP Project team</li> </ul>	<ul style="list-style-type: none"> <li>• Document analysis</li> <li>• Interviews</li> </ul>

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	<ul style="list-style-type: none"> <li>• Was project implementation as cost effective as originally proposed (planned vs. actual)</li> <li>• Did the leveraging of funds (cofinancing) happen as planned?</li> <li>• Were financial resources utilized efficiently? Could financial resources have been used more efficiently?</li> <li>• Was procurement carried out in a manner making efficient use of project resources?</li> <li>• How was results-based management used during project implementation?</li> <li>• Is the project implementation delayed? If so, has that affected cost-effectiveness?</li> </ul>	<ul style="list-style-type: none"> <li>• Cost associated with delivery mechanism and management structure compare to alternatives</li> <li>• Project milestones in time</li> <li>• Planned results affected by delays</li> <li>• Required project adaptive management measures related to delays</li> </ul>		
How efficient are partnership arrangements for the project?	<ul style="list-style-type: none"> <li>• To what extent partnerships/linkages between institutions/organizations were encouraged and supported?</li> <li>• Which partnerships/linkages were facilitated? Which ones can be considered sustainable?</li> <li>• What was the level of efficiency of cooperation and collaboration arrangements?</li> <li>• Which methods were successful or not and why?</li> </ul>	<ul style="list-style-type: none"> <li>• Specific activities conducted to support the development of cooperative arrangements between partners</li> <li>• Examples of supported partnerships Evidence that particular partnerships/linkages will be sustained</li> <li>• Types/quality of partnership cooperation methods utilized</li> </ul>	<ul style="list-style-type: none"> <li>• Project documents and evaluations</li> <li>• Project partners and relevant stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Document analysis</li> <li>• Interviews</li> </ul>
Did the project efficiently utilize local capacity in implementation?	<ul style="list-style-type: none"> <li>• Was an appropriate balance struck between utilization of international expertise as well as local capacity?</li> </ul>	<ul style="list-style-type: none"> <li>• Proportion of expertise utilized from international experts compared to national experts</li> </ul>	<ul style="list-style-type: none"> <li>• Project documents and evaluations</li> <li>• UNDP</li> <li>• Beneficiaries</li> </ul>	<ul style="list-style-type: none"> <li>• Document analysis</li> <li>• Interviews</li> </ul>

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Evaluative criteria	Evaluation questions	Indicators	Information Source	Data Collection Method
	<ul style="list-style-type: none"> <li>Did the project take into account local capacity in design and implementation of the project?</li> <li>Was there an effective collaboration between institutions responsible for implementing the project?</li> </ul>	<ul style="list-style-type: none"> <li>Number/quality of analyses done to assess local capacity potential and absorptive capacity</li> </ul>		
What lessons can be drawn Regarding efficiency for other similar projects in the future?	<ul style="list-style-type: none"> <li>What lessons can be learnt from the project regarding efficiency?</li> <li>How could the project have more efficiently carried out implementation (in terms of management structures and procedures, partnerships arrangements etc...)?</li> <li>What changes could have been made (if any) to the project in order to improve its efficiency?</li> </ul>		<ul style="list-style-type: none"> <li>Data collected throughout evaluation</li> </ul>	<ul style="list-style-type: none"> <li>Data analysis</li> </ul>
<b>C4- Country Ownership (relevance)</b>				
Does the project fit within stated sector development priorities?	<ul style="list-style-type: none"> <li>Was the project concept in line with development priorities and plans of the country? (see C1)</li> </ul>	<ul style="list-style-type: none"> <li>Coherence between project objectives and national development objectives</li> </ul>	<ul style="list-style-type: none"> <li>Government strategy and planning documents relative to DRR, adaptation, land-use/land management, development, MDGs</li> <li>Project planning documents</li> <li>Government partners</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews</li> </ul>
	<ul style="list-style-type: none"> <li>Were the relevant country representatives from government and civil society involved in project implementation, including as part of the project steering committee?</li> </ul>	<ul style="list-style-type: none"> <li>Coherence between project objectives and community-level (voiced) needs</li> <li>Number and titles of representatives from a) government, b) civil society, present at workshops, planning meetings</li> </ul>	<ul style="list-style-type: none"> <li>Local executing partners, particularly community members, CSOs and local non-government stakeholders, and local government stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Desk Review</li> <li>Interviews</li> <li>Field Visit</li> </ul>

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		Proportion of steering committee members who represent a) government, b) civil society	<ul style="list-style-type: none"> <li>Project monitoring and reporting information (workshop summaries, attendance lists, action items etc)</li> </ul>	
	<ul style="list-style-type: none"> <li>Was an intra-governmental committee given responsibility to liaise with the project team, recognizing that more than one ministry should be involved</li> </ul>	<ul style="list-style-type: none"> <li>Existence of a communications/coordination body within the government to oversee and link various government offices relevant to project planning, implementation and intended outcomes</li> <li>Extent of influence and control of coordinating body to prompt/encourage convening or decision-making</li> </ul>	<ul style="list-style-type: none"> <li>Local executing partners, particularly governments partners</li> <li>Project monitoring and reporting information (workshop summaries, attendance lists, action items etc)</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Desk Review</li> <li>Interviews</li> <li>Field Visit</li> </ul>
	<ul style="list-style-type: none"> <li>Has the government enacted legislation, and/or developed policies and regulations in line with the project's objectives?</li> </ul>	Number and type of regulations, policies or other government initiatives that support project activities/objectives	<ul style="list-style-type: none"> <li>Local executing partners, particularly governments partners</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> <li>Interviews</li> </ul>
<b>C5- Mainstreaming (relevance)</b>				
Project terminal evaluations must assess how these projects are successfully mainstreaming other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and women's empowerment				
Does the project successfully mainstream other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and women's empowerment.	<ul style="list-style-type: none"> <li>Is it possible to identify and define positive or negative effects of the project on local populations?</li> </ul>	<ul style="list-style-type: none"> <li>Clear links between project's intended outcomes and (potential) changes in local population perception of the links between health and CC</li> <li>Evidence that intended outcomes (could/will) contribute to communities' ability to deal with natural disasters</li> </ul>	<ul style="list-style-type: none"> <li>Local communities, partners</li> <li>UNDP staff</li> <li>Local executing team</li> <li>Monitoring and reporting docs</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field Visit</li> </ul>
	<ul style="list-style-type: none"> <li>Is there evidence that the project outcomes have contributed to better preparations to cope with environmental pollution by POPs?</li> </ul>	<ul style="list-style-type: none"> <li>Examples of disease outbreaks mitigated as a result of project activities and outcomes</li> </ul>	<ul style="list-style-type: none"> <li>Local communities, partners</li> <li>UNDP staff</li> <li>Local executing team</li> <li>Monitoring and reporting docs</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field Visit</li> </ul>

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	<ul style="list-style-type: none"> <li>Does the project sufficiently incorporate gender issues?</li> </ul>	<ul style="list-style-type: none"> <li>Proportion of executing partners, and participants of workshops, trainings or knowledge exchange who are female</li> <li>Disaggregation of appropriate indicators by gender/sex</li> <li>Evidence of activities that uptake gender issue into community or national level planning or activities as a result of the project</li> </ul>	<ul style="list-style-type: none"> <li>Agendas, attendance lists and other documentation from workshops, planning meetings and trainings</li> <li>Project planning documentation</li> <li>Monitoring and reporting docs</li> <li>Local executing partners</li> <li>Workshop/training participants</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field Visit</li> </ul>
	<ul style="list-style-type: none"> <li>Does the project align with the priorities set in the UNDAF in Montenegro, and the UNDP Country Programme Action Plan (CPAP) and its evaluation plan? (see C1)</li> </ul>	<ul style="list-style-type: none"> <li>UNDAFF/CPAP priorities</li> <li>Project objective and outcomes</li> </ul>	<ul style="list-style-type: none"> <li>Project planning documentation</li> </ul>	<ul style="list-style-type: none"> <li>Desk review</li> </ul>
<b>C6- Sustainability</b>				
Sustainability is considered to be the likelihood of continued benefits after the GEF project ends. Consequently the assessment of sustainability considers the risks that are likely to affect the continuation of project outcomes. The GEF Guidelines establish four areas for considering risks to sustainability: Financial risks; socio-economic risk; institutional framework and governance risks; and environmental risks. Each should be separately evaluated and then rated on the likelihood and extent that risks will impede sustainability.				
To what extent are there financial, institutional, social-economic, and/or environmental risks to sustaining long-term project results?	<ul style="list-style-type: none"> <li>Did the project devise a robust sustainability strategy (in the planning stages)? Did it include a specific exit strategy?</li> </ul>	<ul style="list-style-type: none"> <li>Existence of a plan for managing each: Financial risks; socio-economic risk; institutional framework and governance risks; and environmental risks</li> <li>Number and extent of unforeseen barriers to sustainability that arose during implementation</li> <li>Existence of an exit strategy</li> </ul>	<ul style="list-style-type: none"> <li>Project planning documents</li> <li>UNDP staff</li> <li>Local executing team</li> <li>Local executing partners</li> <li>Project monitoring and reporting docs/data (quarterly and annual reports)</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field visit</li> </ul>
	<ul style="list-style-type: none"> <li>Did the project implement its sustainability strategy?</li> </ul>	<ul style="list-style-type: none"> <li>Degree of coherence between actions taken during implementation to avert sustainability risks and intended plan</li> </ul>	<ul style="list-style-type: none"> <li>Project planning documents</li> <li>UNDP staff</li> <li>Local executing team and partners</li> <li>Project monitoring and reporting docs/data</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field visit</li> </ul>

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Evaluative criteria	Evaluation questions	Indicators	Information Source (quarterly and annual reports)	Data Collection Method
	<ul style="list-style-type: none"> <li>What factors are in place that are likely to enable or hinder achievement of sustainable outcomes?</li> </ul>	<ul style="list-style-type: none"> <li>Number and type of institutional arrangements, regulations, or policy changes that support the continuation of project activities or results</li> <li>Extent of project outcomes' incorporation into community/household activities/planning</li> <li>Use of expertise of trained individuals/workshop participants/ implementation partners</li> <li>Evidence of follow-on champions, funding or other sources of continuation</li> </ul>	<ul style="list-style-type: none"> <li>Project planning documents</li> <li>UNDP staff</li> <li>Local executing team</li> <li>Local executing partners (workshop participants, community members, etc.)</li> <li>Project monitoring and reporting docs/data (quarterly and annual reports)</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field visit</li> </ul>
<b>C7- Catalytic Role</b>				
The evaluator should consider the extent to which the project has demonstrated: a) production of a public good, b) demonstration, c) replication, and d) scaling up. Replication can have two aspects, replication proper (lessons and experiences are replicated in different geographic area) or scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources).				
Production of public good (lowest level of catalytic result)	<ul style="list-style-type: none"> <li>Were any new technologies and approaches promoted?</li> <li>Was the catalytic effect left to 'market forces'?</li> </ul>	<ul style="list-style-type: none"> <li>Examples of new technologies and approaches promoted and used during project implementation</li> <li>Evidence of no action taken as regards the catalytic effect of the project</li> </ul>	<ul style="list-style-type: none"> <li>UNDP staff</li> <li>Local executing team</li> <li>Local executing partners (workshop participants, community members, etc.)</li> <li>Project monitoring and reporting docs/data</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field visit</li> </ul>
Demonstration	<ul style="list-style-type: none"> <li>Have any steps been taken to catalyse the public good, for instance through the development of demonstration sites, successful information dissemination and training?</li> </ul>	<ul style="list-style-type: none"> <li>Number and type of dissemination activities implemented</li> <li>Number of demonstration sites</li> <li>Number of trainings organised and number/type of participants in those trainings</li> </ul>	<ul style="list-style-type: none"> <li>Agendas, attendance lists and other documentation from workshops, planning meetings and trainings</li> <li>Project communications documentation</li> <li>Monitoring and reporting docs</li> <li>Local executing partners</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field visit</li> </ul>

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Evaluative criteria	Evaluation questions	Indicators	Information Source	Data Collection Method
Replication	<ul style="list-style-type: none"> <li>Are any activities, demonstrations, and/or techniques being repeated within or outside the project, nationally or internationally?</li> </ul>	<ul style="list-style-type: none"> <li>Examples of activities/projects/techniques used in the project and replicated in other projects/initiatives (other geographical areas and/or funded by other funding partners)</li> </ul>	<ul style="list-style-type: none"> <li>UNDP staff</li> <li>Local executing team</li> <li>Local executing partners (workshop participants, community members, etc.)</li> <li>Project monitoring and reporting docs/data</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field visit</li> </ul>
Scaling up	<ul style="list-style-type: none"> <li>Are any approaches developed through the project taken up on a regional / national scale, becoming widely accepted, and perhaps legally required?</li> </ul>	<ul style="list-style-type: none"> <li>Examples of laws and regulations inspired by project outcomes</li> <li>Examples of large scale initiatives building on project outcomes or methods</li> </ul>	<ul style="list-style-type: none"> <li>UNDP staff</li> <li>Local executing team</li> <li>Local executing partners (workshop participants, community members, etc.)</li> <li>Project monitoring and reporting docs/data</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field visit</li> </ul>
<b>C8- Impact</b>				
The evaluator should discuss the extent to which projects are achieving impacts or are progressing toward the achievement of impacts among the project beneficiaries.				
Are there indications that the project has contributed to, or enabled progress toward, reduced exposure to PCBs?	<ul style="list-style-type: none"> <li>Is the project progressing toward achievement of intended impacts among project beneficiaries?</li> </ul>	<ul style="list-style-type: none"> <li>Number and extent of achievement of milestones toward achieving <b>process</b> indicators (regulatory, policy changes)<sup>21</sup>.</li> <li>Number and extent of achievement of milestones toward meeting <b>impact</b> indicators (reduction in vulnerability)<sup>22</sup></li> <li>Evidence and extent of barriers <i>or</i> enabling conditions toward achievement of each key outcome</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring and reporting documents (quarterly and annual work plans)</li> <li>UNDP staff</li> <li>Local executing team</li> <li>Local executing partners</li> <li>Local stakeholders</li> <li>Direct observation</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field visit</li> </ul>
	<ul style="list-style-type: none"> <li>Have there been any unintended results (positive or negative) and what were they?</li> </ul>	<ul style="list-style-type: none"> <li>Number and type of co-benefits and/or other unplanned consequences from project activities or outputs to date</li> <li>Extent and nature of external factors' influence on project progression toward intended results</li> </ul>	<ul style="list-style-type: none"> <li>Monitoring and reporting documents (quarterly and annual work plans)</li> <li>UNDP staff</li> <li>Local executing team</li> <li>Local executing partners</li> <li>Local stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field visit</li> </ul>

<sup>21</sup> All indicators defined in the results framework are process indicators.

<sup>22</sup> There are no impact indicators.

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Evaluative criteria	Evaluation questions	Indicators	Information Source	Data Collection Method
	<ul style="list-style-type: none"> <li>Were the project concepts in line with development priorities and plans of the country?</li> </ul>	<ul style="list-style-type: none"> <li>Coherence between project objectives and national development objectives</li> </ul>	<ul style="list-style-type: none"> <li>Direct observation</li> <li>Government strategy and planning documents relative to DRR, adaptation, land-use/land management, development, MDGs</li> <li>Project planning documents</li> <li>Government partners</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> </ul>
	<ul style="list-style-type: none"> <li>Were the relevant country representatives from government and civil society involved in project implementation, including as part of the project steering committee?</li> </ul>	<ul style="list-style-type: none"> <li>Coherence between project objectives and community-level (voiced) needs</li> <li>Number and titles of representatives from a) government, b) civil society, present at workshops, planning meetings</li> <li>Proportion of steering committee members who represent a) government, b) civil society</li> </ul>	<ul style="list-style-type: none"> <li>Local executing partners, particularly community members, CSOs and local non-government stakeholders, and local government stakeholders</li> <li>Project monitoring and reporting information (workshop summaries, attendance lists, action items etc)</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field visit</li> </ul>
	<ul style="list-style-type: none"> <li>Is there a functional intra-governmental committee to liaise with the project team and connect various ministries/government offices involved in or affected by the project?</li> </ul>	<ul style="list-style-type: none"> <li>Existence of a communications/coordination body within the government to oversee and link various government offices relevant to project planning, implementation and intended outcomes</li> <li>Extent of influence and control of coordinating body to prompt/encourage convening or decision-making</li> </ul>	<ul style="list-style-type: none"> <li>Local executing partners, particularly governments partners</li> <li>Project monitoring and reporting information (workshop summaries, attendance lists, action items etc)</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> <li>Field visit</li> </ul>
	<ul style="list-style-type: none"> <li>Has the government enacted legislation, and/or developed policies and regulations in line with the project's objectives?</li> </ul>	<ul style="list-style-type: none"> <li>Number and type of regulations, policies or other government initiatives that support project activities/objectives</li> </ul>	<ul style="list-style-type: none"> <li>Local executing partners, particularly governments partners</li> <li>UNDP staff</li> <li>Local executing team</li> </ul>	<ul style="list-style-type: none"> <li>Interviews</li> <li>Desk review</li> </ul>

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Evaluative criteria	Evaluation questions	Indicators	Information Source	Data Collection Method

## ANNEX 6: QUESTIONNAIRE USED AND SUMMARY OF RESULTS

The interview protocols presented below will be adjusted to each interviewee, taking into account his/her specific position vis-a-vis the project, his/her expertise and function. Each interview will aim to be limited to a maximum of 15 questions, with the exception of the project team, which will play a more significant role in providing information

### A. Project Formulation

1. In your opinion was the project designed realistically? (E.g. with respect to timeframe, objectives, indicators/M&E plan, other design elements)
2. What do you think are the main assumptions for the project to go well? What were the main risks (both external and internal) to the success of the project? Have these risks been anticipated and managed appropriately?
3. Were stakeholder partnership arrangements properly identified and roles and responsibilities negotiated prior to project start?
4. has the Steering Committee been responsive to the needs of the project? What would improve their respective contributions?
5. In your opinion, what was the comparative advantage of (direct) UNDP implementing this project?
6. How were the capacities of the local executing institution and partners (other national institutions, regional and district governments, etc) assessed? Were there any gaps between expected and actual capacities (or cases of exceeding expectations) needed for project execution?
7. Were counterpart resources (funding, staff, and facilities), enabling legislation, and adequate project management arrangements in place at project entry?
8. How do you understand your role in this project? Are you aware of any gaps reported between expected and actual capacities (or cases of exceeding expectations) needed for project execution or to fulfil your role?

### B. Project Implementation

9. How would you describe the relationship between UNDP and Montenegrin organizations involved in the project? How would you describe the nature and extent of interactions between the UNDP, the MoSDT, key PCB holders and wider stakeholder groups (e.g. civil society, NGOs trade unions)?
10. Do you think the UNDP sufficiently ensured that the project was implemented as planned? What is your opinion of its role and supervision (e.g. responsiveness, timeliness, quality of oversight, etc)? Did the UNDP use sufficient resources for achieving project results?
11. How well is the project managed by the team in place? Does it react appropriately to inquiries, difficulties, identified risks, and is it in a timely manner?

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12. Was the logical framework (RF) used during implementation as a management and M&E tool? Was it revised (e.g. after the MTR) and if so, did that help the (further) use for monitoring?
13. How would you describe this project's M&E system, and do you think it has been sufficient and appropriate to project needs? Do you think M&E has been used according to plans (timeline, budget)? If not, why?
14. How were monitoring and evaluation reports disseminated and discussed with stakeholders and project staff? Were there any meetings, workshops or other mechanisms used to share M&E material?
15. Do you think regular monitoring and reporting informed management decision-making? Can you give any examples of follow-up actions, and/or adaptive management taken in response to monitoring reports such as PIRs and MTR, for example?
16. Has the project prepared and submitted good quality reporting material, and to what extent has it been delivered on time?
17. Did the project undergo significant changes as a result of recommendations from workshops, the steering committee, or other review procedures (internal or external)? Why were these changes recommended? Have the expected project outcomes (or the likelihood of achieving them) been modified as a consequence of these changes?
18. Work session with finance officer and project team:
  - Fill in tables on budget execution per year and activity:
    - Where do we stand as regards initial plans? Is there a variance between planned and actual expenditures? What is the explanation?
    - Do you have any figures on co-financing? How are co-financed activities integrated into project strategy and implementation?
    - Is there evidence of resources leveraged since inception?
  - *Table of planned/achieved budget and staff time devoted to the project*
  - *Table of planned/achieved outputs*
19. What are the differences in the anticipated set of stakeholders identified at project design, and those actually involved in project implementation? Do you think the project has reached a sufficient number of relevant stakeholders?
20. Have you participated to any stakeholder engagement activities conducted? How many? What was the focus or the level of your involvement? Were your perspectives taken into account at different stages/points in time of the project? Can you think of examples of how public awareness (of risks posed by PCBs) has been improved by the project?

### C. Project Results

#### *Relevance/Country ownership/mainstreaming*

21. How does the project support the GEF Chemicals and Wastes focal areas?
22. Was the GEF funding support addressing activities that were not addressed already by other donors? How did GEF funds help fill the gap? Or how does it complement other donors' efforts?
23. In your opinion, was the project concept in line with development priorities and plans of the country? Does it respond to actual needs of the various categories of

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stakeholders (1. Community groups 2. Local government 3. National government 4. Non-government groups 5. Other donor-supported activities)? Does it reflect national realities in terms of institutional and policy frameworks?

24. Were relevant representatives from government and civil society consulted, engaged or involved in the project in any other way (implementation, steering committee)?
25. Was an intra-governmental committee established to liaise with the project, recognising that more than one ministry should be involved?
26. To your knowledge, has the government enacted any regulations, policies or other initiatives that support project activities or objectives? Could you please provide us with further details (name(s) of legislation, dates, purpose(s), etc)?
27. Do you think all relevant stakeholders were actually involved in project (design and implementation, including as part of the project steering committee)? How were they involved? Were the expressed needs of communities sufficiently addressed by the project? Were they affected by the project? In what way (positive or negative)?
28. Does the project make sense in terms of design, (project components, partners, scope, activities, results and impact) is the length of the project sufficient to achieve the outcomes?
29. How were lessons learned from other past or on-going projects in the region (or in a similar focal area) incorporated into this project's design or management?
30. Do you know of any examples of lessons learned from other past or on-going projects in the region (or in a similar focal area) that have been incorporated into this project's design or management?
31. Has the project contributed to better preparations, procedures and practices to deal with environmental pollution by POPs in Montenegro?
32. What body or persons are responsible for communication/coordination between the various project partners (among/between government entities/ministries, the project management team, etc) and can this body/person prompt convening and/or decision-making? How are the proceedings of ST meetings communicated to a wider set of project stakeholders?
33. In your opinion, what are the effects (+ or -) of the project on local populations in terms of understanding of the links between PCBs and health?
34. How are women and/or girls integrated into project design and implementation? (e.g. number of women in project team/workshops/trainings; examples of activities where gender issues are specifically considered). Are women affected differently by the problem the project is addressing?

#### *Effectiveness*

35. In your opinion, has the project been effective in achieving the expected outcomes and objectives?
36. How has risk and risk mitigation being managed
37. What lessons can be drawn regarding effectiveness for other similar projects in the future?

#### *Efficiency*

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38. In your opinion, was project support provided in an efficient way in terms of use of financial resources, project management and reporting?
39. Was project implementation as cost effective as originally proposed? Could financial resources have been used more efficiently? Have any delays substantially affected overall efficiency?
40. Which partnerships/linkages were facilitated? What was the level of efficiency of cooperation and collaboration arrangements? Which ones can be considered sustainable?
41. Did the project efficiently utilize local capacity in implementation?
42. How could the project have more efficiently carried out implementation (in terms of management structures and procedures, partnerships arrangements etc...)? what lessons can be learnt from the project in this respect?

#### *Sustainability*

43. What do you think are the main risks and barriers to sustainability of project results? Has the project sufficiently planned for and/or managed these variables/conditions? How/in what ways? (link with indicator: Evidence and extent of barriers or enabling conditions toward achievement of each key outcome)
44. Can you cite any examples of specific actions (institutional arrangements, regulations, incorporation of project activities into community/household activities/planning, identifying follow-on champions, financial allocations) taken to ensure sustainability of project activities or results?

#### *Catalytic role*

45. Were new technologies or approaches promoted under the project? For Montenegro and perhaps for the region?
46. Can you provide any examples of project activities or outputs that were replicated in a different geographic area, or scaled-up in close proximity to project sites?
47. Were there any capacity building activities for the purposes of replication? Have project-trained individuals, institutions, or companies participated in the replication of activities?

#### *Impact*

48. What major regulatory or policy changes can be reported as a result of project outcomes?
49. Can you cite any examples of a reduction of exposure to PCBs as a consequence of project activities? Have there been any other additional and perhaps unintended impacts?
50. Can you describe any other co-benefits and/or other unplanned consequences (+ or -) from project activities or outputs to date?

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## ANNEX 7: TE RATING SCALES

### Outcome Ratings Scale - Relevance, Effectiveness, Efficiency

Rating	Description
6 = Highly Satisfactory (HS)	Level of outcomes achieved clearly exceeds expectations and/or there were no shortcomings
5 = Satisfactory (S)	Level of outcomes achieved was as expected and/or there were no or minor shortcomings
4 = Moderately Satisfactory (MS)	Level of outcomes achieved more or less as expected and/or there were moderate shortcomings.
3 = Moderately Unsatisfactory (MU)	Level of outcomes achieved somewhat lower than expected and/or there were significant shortcomings
2 = Unsatisfactory (U)	Level of outcomes achieved substantially lower than expected and/or there were major shortcomings.
1 = Highly Unsatisfactory (HU)	Only a negligible level of outcomes achieved and/or there were severe shortcomings
Unable to Assess (UA)	The available information does not allow an assessment of the level of outcome achievements

### Sustainability Ratings Scale

Ratings	Description
4 = Likely (L)	There are little or no risks to sustainability
3 = Moderately Likely (ML)	There are moderate risks to sustainability
2 = Moderately Unlikely (MU)	There are significant risks to sustainability
1 = Unlikely (U)	There are severe risks to sustainability
Unable to Assess (UA)	Unable to assess the expected incidence and magnitude of risks to sustainability

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**Monitoring & Evaluation Ratings Scale**

Rating	Description
6 = Highly Satisfactory (HS)	There were no short comings; quality of M&E design/implementation exceeded expectations
5 = Satisfactory (S)	There were minor shortcomings; quality of M&E design/implementation met expectations
4 = Moderately Satisfactory (MS)	There were moderate shortcomings; quality of M&E design/implementation more or less met expectations
3 = Moderately Unsatisfactory (MU)	There were significant shortcomings; quality of M&E design/implementation was somewhat lower than expected
2 = Unsatisfactory (U)	There were major shortcomings; quality of M&E design/implementation was substantially lower than expected
1 = Highly Unsatisfactory (HU)	There were severe shortcomings in M&E design/implementation
Unable to Assess (UA)	The available information does not allow an assessment of the quality of M&E design/implementation.

**Implementation/Oversight and Execution Ratings Scale**

Rating	Description
6 = Highly Satisfactory (HS)	There were no shortcomings; quality of implementation/execution exceeded expectations
5 = Satisfactory (S)	There were no or minor shortcomings; quality of implementation/execution met expectations.
4 = Moderately Satisfactory (MS)	There were some shortcomings; quality of implementation/execution more or less met expectations.
3 = Moderately Unsatisfactory (MU)	There were significant shortcomings; quality of implementation/execution was somewhat lower than expected
2 = Unsatisfactory (U)	There were major shortcomings; quality of implementation/execution was substantially lower than expected
1 = Highly Unsatisfactory (HU)	There were severe shortcomings in quality of implementation/execution
Unable to Assess (UA)	The available information does not allow an assessment of the quality of implementation and execution



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**Evaluation Consultant Agreement Form**

**Agreement to abide by the Code of Conduct for Evaluation in the UN System**

**Name of Consultant:**   Ana Simonovic  

**Name of Consultancy Organization** (where relevant): /

**I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.**

Signed at Podgorica, Montenegro on 15/06/2022

Signature:



## ANNEX 9: SIGNED TE REPORT CLEARANCE FORM

Terminal Evaluation Report for *Comprehensive Environmentally Sound Management of PCBs in Montenegro (PIMS ID 5562)*

Reviewed and Cleared By:

Commissioning Unit (M&E Focal Point)

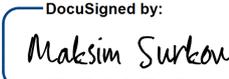
Name: Valbona Bogujevci

Signature:  Date: 12-Oct-2022  
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Regional Technical Advisor (Nature, Climate and Energy)

Maksim Surkov

Name: \_\_\_\_\_

Signature:  Date: 12-Oct-2022  
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ANNEX 10: ANNEXED IN A SEPARATE FILE: CO-FINANCING TABLES

ANNEX 11: ANNEXED IN A SEPARATE FILE: TE AUDIT TRAIL

ANNEX 12: ANNEXED IN A SEPARATE FILE: RELEVANT TERMINAL GEF/LDCF/SCCF CORE INDICATORS AND TRACKING TOOLS

ANNEX 13: ANNEXED IN A SEPARATE FILE: MANAGEMENT RESPONSE TABLE