

## **Terminal Evaluation of the UNEP/GEF Project:**

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### **Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury**

**GEF ID 5409**

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**Evaluation Office of the United Nations Environment Programme**

**July 2021**



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Front cover: Air monitoring of mercury in Mongolia (changing the filter in the Passive Air Sampler)

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Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury (GEF ID 5409)

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This Terminal Evaluation was prepared for UNEP by Ms. Sandra Molenkamp as independent consultant.

The evaluator would like to express her gratitude to all persons who contributed to this evaluation and to all persons interviewed for taking time to provide their valuable inputs, as listed in Annex III.

The evaluation team would like to thank the UNEP project team, and in particular Mr Victor Estellano, as UNEP's focal point for this evaluation, and Ms Jacqueline Alvarez, for their contribution and collaboration throughout the evaluation process. Sincere appreciation is also expressed to the respondents of a questionnaire on human biomonitoring; their inputs and feedback are highly appreciated.

Special acknowledgements go to Evaluation Managers Pauline Marima and Myles Hallin, as well as Evaluation Programme Assistant Mela Shah, for their continuous support and feedback.

The evaluation consultant hopes that the findings, conclusions, and recommendations will contribute to the formulation and continuous improvement of similar projects.

## BRIEF CONSULTANT BIOGRAPHY

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## ABOUT THE EVALUATION

**Joint Evaluation:** No

**Report Language(s):** English

**Evaluation Type:** Terminal Evaluation

**Brief Description:** This report is the Terminal Evaluation of the project "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury". The project objective was to harmonize approaches for monitoring mercury in humans and the environment, and strengthen the capacity for mercury analysis in humans and the environment to accurately determine their concentrations globally. The evaluation sought to assess project performance (in terms of relevance, effectiveness, and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UNEP and its project partners.

**Key words:** Mercury; mercury monitoring; human biomonitoring; chemicals; Minamata Convention; UNEP; WHO; GEF; Terminal Evaluation

## TABLE OF CONTENTS

<b>ACKNOWLEDGEMENTS</b> .....	<b>2</b>
<b>ABOUT THE EVALUATION</b> .....	<b>3</b>
<b>TABLE OF CONTENTS</b> .....	<b>4</b>
<b>LIST OF ACRONYMS</b> .....	<b>6</b>
<b>PROJECT IDENTIFICATION</b> .....	<b>7</b>
<b>EXECUTIVE SUMMARY</b> .....	<b>9</b>
<b>I. INTRODUCTION</b> .....	<b>13</b>
<b>II. EVALUATION METHODS</b> .....	<b>14</b>
<b>III. THE PROJECTS</b> .....	<b>17</b>
A. Context.....	17
B. Results framework .....	17
C. Stakeholders.....	19
D. Project implementation structure and partners.....	22
E. Changes in design during implementation .....	23
F. Project financing.....	24
<b>IV. THEORY OF CHANGE AT EVALUATION</b> .....	<b>25</b>
<b>V. EVALUATION FINDINGS</b> .....	<b>32</b>
A. Strategic Relevance.....	32
B. Quality of Project Design .....	34
C. Nature of the External Context .....	36
D. Effectiveness .....	36
E. Financial Management .....	45
F. Efficiency .....	49
G. Monitoring and Reporting.....	49
H. Sustainability.....	51
I. Factors Affecting Performance and Cross-Cutting Issues.....	52
<b>VI. CONCLUSIONS AND RECOMMENDATIONS</b> .....	<b>57</b>
A. Conclusions .....	57
B. Summary of project findings and ratings.....	61
C. Lessons learned.....	64
D. Recommendations .....	69
<b>ANNEX I. EVALUATION FRAMEWORK</b> .....	<b>72</b>
<b>ANNEX II. KEY DOCUMENTS CONSULTED</b> .....	<b>83</b>
<b>ANNEX III. PEOPLE CONSULTED DURING THE EVALUATION</b> .....	<b>85</b>
<b>ANNEX IV. QUESTIONNAIRE</b> .....	<b>86</b>
<b>ANNEX V. BRIEF CV OF THE EVALUATOR</b> .....	<b>88</b>
<b>ANNEX VI. EVALUATION TORS (WITHOUT ANNEXES)</b> .....	<b>89</b>
<b>ANNEX VII. QUALITY ASSESSMENT OF THE EVALUATION REPORT</b> .....	<b>109</b>

## LIST OF TABLES

Table 1: Project Identification Table .....	7
Table 2: Result Framework .....	18
Table 3: Overview of stakeholders .....	20
Table 4: Total planned and approved project financing .....	24
Table 5: Comparison table between ToC in ProDoc and reconstructed ToC: .....	27
Table 6: Ratings table .....	35
Table 7: Analysis of likelihood of impact.....	43
Table 8: Expenditure table per budget lines.....	46
Table 9: Co-finance table.....	47
Table 10: Rating of financial management components.....	47
Table 11: Summary of project findings and ratings.....	61

## LIST OF FIGURES

Figure 1: Decision making flowchart and organigram.....	23
Figure 2: Reconstructed ToC at Evaluation .....	31

## LIST OF ACRONYMS

CNR-IIA	National Research Council of Italy - Institute of Atmospheric Pollution Research
COP	Conference of Parties
COPHES	Consortium to Perform Human biomonitoring on a European Scale
EA	Executing Agency
GEF	Global Environment Facility
GMOS	Global Monitoring Observation System
IA	Implementing Agency
IAEA	International Atomic Energy Agency
MTS	(UNEP's) Medium-term Strategy
PIR	Project Implementation Review report
PoW	(UNEP's) Programme of Work
ProDoc	Project Document
SC	Steering Committee
SOPs	Standard Operating Procedures
TE	Terminal Evaluation
ToC	Theory of Change
ToR	Terms of Reference
UN	United Nations
UNEP	United Nations Environment Programme
WHO	World health Organization
BCRC-SCRC	Centro Coordinador Convenio Basilea - Centro Regional de Estocolmo América Latina y el Caribe (Uruguay)

## PROJECT IDENTIFICATION

**Table 1: Project Identification Table**

GEF Project ID:	5409	SB-000689.45	
Implementing Agency:	UNEP	Executing Agency:	UNEP Economy Division, Chemicals and Health Branch
Relevant SDG(s) and indicator(s):	Goal 3: Target 3.9 and Target 3.13 Goal 6: Target 6.3 Goal 12: Target 12.4 Goal 17: Target 17.6 and Target 17.18		
Sub-programme:	Chemicals, Waste and Air Quality	Expected Accomplishment(s):	- Countries increasingly have the necessary institutional capacity and policy instruments to manage chemicals and waste soundly including the implementation of related provisions of the multilateral environmental agreements; - Countries, including major groups and stakeholders, make increasing use of the scientific and technical knowledge and tools needed to implement sound chemicals management and the related multilateral environmental agreements.
UNEP approval date:	May 2014	Programme of Work Output(s):	Chemicals and Health Program of Work
GEF approval date:	November 2013	Project type:	Medium Size Project (MSP)
GEF Operational Programme #:	CHEM-3	Focal Area(s):	Persistent Organic Pollutants/Chemicals
		GEF Strategic Priority:	CHEMs-OBJ3: Pilot sound chemicals management and mercury reduction.
Expected start date:	May 2014	Actual start date:	November 2014
Planned completion date:	May 2016	Actual operational completion date:	December 2019
Planned project budget at approval:	USD 3,855,411	Actual total budget reported as of December 2020:	USD 4,679,974
GEF grant allocation:	USD 850,000	GEF grant expenditures reported as of June 2020:	USD 828,974
Project Preparation Grant - GEF financing:	0	Project Preparation Grant - co-financing:	0
Expected Medium-Size Project/Full-Size Project co-financing:	USD 3,005,411	Secured Medium-Size Project/Full-Size Project co-financing:	USD 3,851,000 [as of December 2020]
First disbursement:	May 2015	Planned date of financial closure:	31/12/2019
No. of formal project revisions:	3	Date of last approved project revision:	December 2018
No. of Steering Committee meetings:	4	Date of last/next Steering Committee	Last: Feb 2018    Next: n/a



Terminal Evaluation of the UNEP Project:  
 "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury"

		meeting:	
Mid-term Review/ Evaluation (planned date):	N/A	Mid-term Review/ Evaluation (actual date):	N/A
Terminal Evaluation (planned date):	January 2020	Terminal Evaluation (actual date):	November 2020 – June 2021
Coverage - Country(ies):	Global	Coverage - Region(s):	Global
Dates of previous project phases:	N/A	Status of future project phases:	N/A

## EXECUTIVE SUMMARY

1. This report presents the results of the Terminal Evaluation (TE) of the United Nations Environmental Programme (UNEP) project "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury", with Global Environment Facility (GEF) Project ID 5409. The project was implemented from November 2014 to December 2019. The total planned budget of the project was USD 3,855,411, and the GEF contribution was USD 850,000.
2. The overall project objective was "to harmonize approaches for monitoring mercury in humans and the environment and strengthen the capacity for mercury analysis in humans and the environment to accurately determine their concentrations globally".
3. The project was managed by UNEP. The GEF Team of the UNEP Economy Division was the Implementing Agency (IA) and the UNEP Chemicals and Health Branch of the Economy Division was the Executing Agency (EA). The co-executing partners were the World Health Organization (WHO) Regional Office for Europe and the National Research Council of Italy - Institute of Atmospheric Pollution Research (CNR-IIA). Other main project partners were the Research Centre for Toxic Compounds in the Environment (RECETOX), the Biodiversity Research Institute and the Jožef Stefan Institute.
4. The evaluation had two primary purposes: (i) provide evidence of results to meet accountability requirements, and (ii) promote operational improvement, learning, and knowledge sharing through results and lessons learned among the United Nations Environment Programme and its project partners.
5. The evaluation approach was in line with the scope as set out within the Terminal Evaluation's Terms of Reference that uses established evaluation criteria grouped within nine categories. The evaluation consultant has provided ratings for each evaluation criteria, together with a brief justification cross-referenced to the findings in this report. Additionally, the evaluation addresses three key strategic questions that are of interest to the United Nations Environmental Programme (UNEP) and to which the project was believed to be able to make a substantive contribution. The summary of project findings and ratings can be found in chapter VI, section B of this report.
6. The main intended users of the evaluation conclusions are the United Nations Environment Programme, the main co-executing partner organizations, and other project partners and stakeholders working on and interested in mercury monitoring.
7. The overall rating for the project's performance was '**Highly Satisfactory**'. The main strengths were related to the full delivery of outputs and outcomes within the criterion **Effectiveness**, to **Strategic relevance** and to **Factors affecting project performance**, specifically **Quality of project management and supervision**, as well as **Stakeholders' participation and cooperation**.
8. The projects were in line with national priorities as well as donor strategic priorities, existing interventions, and with regional and sub-regional priorities. All four outputs from the reconstructed Theory of Change were delivered. An interlaboratory assessment was made and knowledge on available mercury networks increased. A pilot study on air monitoring was implemented in ten countries, and a pilot study on human biomonitoring was conducted in six countries. Additionally, two extra matrices were researched, namely biota and soil. Based on these four studies, reports were prepared and distributed and a report on the Outcomes was shared with all relevant stakeholders. The four direct outcomes and project outcome were all achieved. The pilot projects on air monitoring and human biomonitoring not only led to an increase in knowledge on

mercury monitoring but also to an increase in capacity in the pilot countries. Continued capacity building activities and training will be needed to maintain and extend the knowledge on mercury monitoring in pilot and other countries. The reports that were prepared enabled stakeholders to define all elements that needed to be included in the development of mercury monitoring arrangements for Effectiveness Evaluation under the Minamata Convention. Expectedly, this monitoring guidance will be proposed at the next Conference of Parties of the Minamata Convention. The support and guidance provided by the United Nations Environment Programme (UNEP) was highly valued by all stakeholders. The level of stakeholder participation and cooperation was high. This active and broad cooperation has resulted in the outputs being delivered in a qualitative manner.

9. The weaker points of the project are related to **Completeness of project financial information**, to **Monitoring design and budgeting** and to **Financial sustainability**. The project document contained only a concise Monitoring & Evaluation Plan and no clear indicators were identified. Most relevant financial information was made available to the evaluation, except for one expenditure report. However, the expenditure reports contained several inconsistencies. Changes and adjustments were made from one to the next report without adjusting previous reports. Furthermore, the table with co-financing contained only total amounts of co-finance and did not give details on what was included in the co-finance. The lack of detail in both expenditure and co-finance reports made it difficult to analyse the finances and assess cost-efficiency. With regard to financial sustainability, it can be said that financial factors will play a role in developing countries and regions that will undertake mercury monitoring once the monitoring arrangements under Effectiveness Evaluation of the Minamata Convention are approved. There are financial mechanisms that may support mercury monitoring to a certain extent, but possibly countries and regions will need other funding sources to include mercury monitoring in their projects.
10. Based on the assessment of the evaluation criteria, the evaluation **conclusions** are the following:
  - i. UNEP and project partners have delivered high quality outputs related to monitoring of human exposure to and environmental concentrations of mercury. The project successfully implemented pilot studies on air monitoring and on human biomonitoring, as well as developed desk studies on biota and soil. These studies and pilot projects have contributed to an increased understanding on harmonized approaches to mercury monitoring.
  - ii. UNEP's constructive cooperation with experienced project partners has been essential for the effective delivery of project outputs, and an increase of knowledge and capacity on mercury monitoring in project countries.
  - iii. The project has provided important contributions to the development of monitoring guidance for Effectiveness Evaluation under the Minamata Convention. If these monitoring arrangements will be approved by the Parties to the Minamata Convention and if adequate cash funding and co-finance is available, it can be expected that long term results can be achieved.
  - iv. The project identified the main mercury networks and assessed laboratory capacity related to mercury analyses. The interlaboratory assessment showed that there is adequate capacity in all regions to analyse mercury. However, capacity in some countries or regions needs to be improved.
  - v. Aspects on human rights, gender and vulnerable groups are important in mercury. The Minamata Convention pays specific attention to these effects on women and mentions the need to establish strategies to prevent the exposure of vulnerable populations to mercury. In the component of human biomonitoring, gender and

- human rights aspects were taken into account; the Standard Operational Procedures and protocols, as well as the needed approval from the Ethics Committees, ensured that gender and human rights aspects were considered well.
- vi. Communication, awareness raising, and outreach activities were implemented regularly, also in the pilot studies on human biomonitoring. A more structural approach to communication and outreach could have enhanced the visibility of project results and ensured that all outreach activities that were planned were executed and monitored.
11. The answers to the **strategic questions** are as follows:
    - i. To what degree of success has the project improved coordination and harmonization of national approaches in monitoring environmental concentrations and human exposure to ensure all regions are able to provide reliable data for future effectiveness evaluation of the mercury treaty?
  12. The project had an important contribution to improving coordination on mercury. The project tested and researched the application of human biomonitoring and mercury monitoring in air, and additionally delivered two reports on biota and soil monitoring. The reports and studies were made available to the Minamata Convention and are the basis for the development of monitoring guidance for Effectiveness Evaluation under the Convention. Harmonization of approaches can be expected once the monitoring guidance has been approved.
    - ii. To what extent has the project contributed to ensuring adequate laboratory capacity is available/accessible in each region in order to provide accurate and comparable data on human exposure to and environmental concentrations of mercury?
  13. The interlaboratory assessment showed that there is adequate capacity in each region to analyse mercury. Respondents and interviewees noted that it is necessary to assess capacity of laboratories regularly, and that some pilot study countries needed extra support to analyse their samples accurately. Also, interviewees mentioned that it is important to have capacity in-country, and that it is not always enough to have adequate capacity in the region, as shipping samples within a region is not always straightforward. The project document states that capacity of laboratories in each region would be built. The United Nations Environment Programme explained that as the interlaboratory assessment showed there is adequate capacity in each region, the focus could be on other aspects of the project (such as the pilot studies and research on mercury monitoring). The project did directly contribute to capacity building within laboratories involved in the pilot projects.
    - iii. What main factors have been identified by the evaluation as having contributed to the project's success and which have presented the greatest challenge in attaining the goal to strengthen the capacity for global monitoring of mercury in humans and the environment?
  14. The main factors that contributed to the project's success were the commitment of all project organizations and stakeholders to realising and delivering high quality outputs. Additionally, cooperation with experienced project executing partners also played a significant role in achieving results, as well as the support and guidance provided by United Nations Environmental Programme (UNEP) and the main project partners. The level of cooperation and support from UNEP and the main project partners certainly had a positive impact on the project's performance.

15. Some of the challenges mentioned by interviewees and respondents were the time constraints and the delays at the start of the project. Another challenge was the fact that it was not fully clear what could be achieved when the project started, since the Minamata Convention was adopted in 2013 and entered into force only in 2017. It was therefore not realistic and feasible to already prepare a comprehensive Global Mercury Monitoring Plan. Another challenge that was repeatedly mentioned were the inadequate amounts of cash funding and therefore the need to generate large amount of co-finance. Of course, the co-finance ensured that activities could be implemented in a cost-effective way. On the other hand, some respondents indicated that the limited amounts of cash led to an undervaluation of experts and stakeholders, and made it at times more difficult to implement certain activities.
16. Considering that the project was rated as 'Highly Satisfactory', and all outputs and outcomes were achieved, the evaluation defined few recommendations for specific actions to be undertaken. Even so, the below **nine lessons learned** and **three recommendations** above provide an overview of what the project could achieve and what aspects need to be considered or improved in future activities on mercury monitoring or in future similar projects. The lessons learned are as follows:
  - i. The United Nations Environmental Programme partnered with experienced organizations during project implementation. This approach contributed greatly to achieve the expected outputs in a qualitative and timely manner.
  - ii. Continued strengthening of local capacities is vital for effective and sustainable mercury monitoring; long-term capacity building programmes are needed.
  - iii. Updates on monitoring and laboratory assessments are needed regularly to measure trends. Approach to monitoring needs to be methodical.
  - iv. Human biomonitoring projects should ensure that besides scientific/technical aspects also other aspects are considered; gender aspects, country involvement, community sensibilization and awareness raising are vital in such projects.
  - v. Finances are often limited in developing countries. Mercury monitoring can only be carried out if there is adequate external and/or internal funding.
  - vi. The cash resources were limited, and the project depended on large co-finance contributions from partners. In some cases, this led to a financial undervaluation of experts and more limited possibilities for implementing activities.
  - vii. The results of this project were important for the discussions on monitoring arrangements within the Minamata Convention to evolve.
  - viii. Communication and awareness raising are important to raise the profile and strengthen the results of the project. A more systematic approach to awareness raising and communication could potentially have increased the visibility and outreach of the project.
  - ix. It is important to make a realistic planning at project design, to ensure that activities such as pilot studies have an adequate timeframe for implementation.
17. The **recommendations** are:
  - i. UNEP/WHO/CNR-II to follow-up with countries involved in the pilot tests to see what may be further needs for support.
  - ii. UNEP should consider to start documenting co-finance of project activities at a more detailed level. This may help to raise the visibility/validity of partner contributions.
  - iii. UNEP should consider preparing a methodical/strategic communication strategy for future outreach projects including budget for the communication activities.

## I. INTRODUCTION

18. This report presents the results of the Terminal Evaluation (TE) of the United Nations Environmental Programme (UNEP) project "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury", with Global Environment Facility (GEF) Project ID 5409. The project was implemented from November 2014 to December 2019. The overall planned budget of the project was USD 3,855,411, and the GEF contribution was USD 850,000.
19. The project was managed by UNEP. The GEF Team of the UNEP Economy Division was the Implementing Agency (IA) and Chemicals and Health Branch of the UNEP Economy Division was the Executing Agency (EA). The main implementation partners were the World Health Organization (WHO) Regional Office for Europe and the National Research Council of Italy - Institute of Atmospheric Pollution Research (CNR-IIA). Other main project partners were the Research Centre for Toxic Compounds in the Environment (RECETOX), the Biodiversity Research Institute and the Jožef Stefan Institute.
20. The overall project objective was "to harmonize approaches for monitoring mercury in humans and the environment and strengthen the capacity for mercury analysis in humans and the environment to accurately determine their concentrations globally".
21. In line with the UNEP Evaluation Policy and the UNEP Manual, and according to the Terms of Reference (ToR) for the TE, attached in Annex VI, the TE is undertaken at completion of the projects to assess project performance (in terms of relevance, effectiveness and efficiency), and determine Outcomes and Impacts (actual and potential) stemming from the project, including their sustainability. The two main purposes of the evaluation are i) to provide evidence of results to meet accountability requirements; and ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UNEP and its main project partners WHO and the CNR-IIA.
22. The main target audience of the findings of the TE are UNEP and its implementing project partners WHO and CNR-IIA, and other main partners and stakeholders in the field of monitoring of mercury, such as the Parties to and the Secretariat of the Minamata Convention.
23. The project fits within the GEF Focal Area on Persistent Organic Pollutants and Chemicals of the GEF Operational Programme CHEM-3. The project is fully aligned with the Mid Term Strategy (MTS) 2010-2013, 2014-2017 and 2018-20121. The subprogramme "Chemicals and Waste" of the UNEP MTS 2014-2017 had as its objective to promote a transition among countries to the sound management of chemicals and waste, with a view to minimizing impacts on the environment and human health. The main Expected Accomplishments (EAs) were the following:
  - Countries increasingly have the necessary institutional capacity and policy instruments to manage chemicals and waste soundly including the implementation of related provisions of the multilateral environmental agreements;
  - Countries, including major groups and stakeholders, make increasing use of the scientific and technical knowledge and tools needed to implement sound chemicals management and the related multilateral environmental agreements.

## II. EVALUATION METHODS

24. The evaluation was carried out by an independent evaluation consultant, Ms. Sandra Molenkamp, under the guidance, supervision and in discussion with the UNEP Evaluation Manager, Ms. Pauline Marima and later on Mr. Myles Hallin. The UNEP Evaluation Manager, as well as the UNEP Implementing Agency, were kept informed throughout the evaluation process to ensure feedback, enhance data collection, and ensure triangulation of collected data.

### Evaluation criteria and key questions

25. The evaluation followed the ToR for the Terminal Evaluation (TE). An evaluation framework was prepared during the Inception Phase of the evaluation (see Annex I) based on established evaluation criteria grouped within nine categories, key questions, as well as detailed questions to assess the projects' performance.
26. In this report, the evaluation consultant provides ratings for the nine evaluation criteria, together with a brief justification cross-referenced to the findings in the report, according to the following 6-point scale: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability and Impact are rated on a 'likelihood scale' from Highly Likely (HL) down to Highly Unlikely (HU).
27. In addition to the evaluation criteria, the evaluation addresses the following three strategic questions that are of interest to UNEP and to which the project was believed to be able to make a substantive contribution:
- iv. To what degree of success has the project improved coordination and harmonization of national approaches in monitoring environmental concentrations and human exposure to ensure all regions are able to provide reliable data for future effectiveness evaluation of the mercury treaty?
  - v. To what extent has the project contributed to ensuring adequate laboratory capacity is available/accessible in each region in order to provide accurate and comparable data on human exposure to and environmental concentrations of mercury?
  - vi. What main factors have been identified by the evaluation as having contributed to the project's success and which have presented the greatest challenge in attaining the goal to strengthen the capacity for global monitoring of mercury in humans and the environment?

### Data collection and analysis

28. The phases of the evaluation were as follows:
- **Inception phase:** This included review of documents, development of the evaluation framework, and interviews with UNEP;
  - **Main evaluation phase:** During this phase, the evaluation consultant gathered and reviewed additional documents, as well as collected and analysed data (via interviews and questionnaires);
  - **Presentation of the preliminary findings** of the Terminal Evaluation to UNEP;
  - **Report writing;**
  - **Dissemination, feedback, and finalisation of the TE report.**
29. As the original project document (ProDoc) did not contain a Theory of Change (ToC), the evaluation consultant reconstructed a ToC during the Inception Phase, in discussion

with the UNEP Evaluation Manager. This ToC was included in the Inception Report which was validated by UNEP. Further information on the ToC is provided in chapter IV – Theory of Change at Evaluation. The evaluation consultant developed general and stakeholder-specific questions based on the ToR, evaluation framework, key questions, and the reconstructed ToC.

30. The TE adopted the following evaluation methods:

- **A desk review** of available project documentation, including the ProDoc, the ToR for the TE, Project Implementation Review (PIR) reports, output reports, financial reports, all available contracts and agreements, and communication materials. A detailed list of reviewed documents is provided in Annex II;
- **A review of UNEP strategic documents**, such as the Programmes of Work (PoW), Medium-term Strategies (MTS), and the Programme Manual;
- **Remote semi-structured interviews** with key project stakeholders and partners. In total 16 stakeholders (11 female, 5 male) were interviewed by the evaluation team. A list of people consulted is provided in Annex III;
- Organization of a small **questionnaire on human biomonitoring**. As the biomonitoring activities covered a longer process with involvement of many stakeholders (such as Ministries, the Ethics Committee in each country, health staff on local level to do the fieldwork, national laboratories and the pregnant women (up to 250 persons per country) who were asked to provide samples), the evaluation consultant considered it to be important to include feedback from the national coordinators. The questionnaire contained 11 open questions and was sent to the national coordinators of the countries where human biomonitoring pilot studies were organized; in six countries (China, Ghana, India, Kyrgyzstan, Mongolia, and the Russian Federation) the human biomonitoring activities were fully conducted and in one country (Costa Rica) the full component could not be implemented since the Standard Operating Procedures (SOPs) were not approved by the Ethics Committee. It was decided to also approach the national coordinator of Costa Rica to understand better why the project could not be implemented in this country. Out of the seven persons who received the questionnaire, five persons replied (71%). To ensure a good response rate, a response time of generally three weeks was provided to the potential respondents; initially two weeks, with a reminder granting an additional ten days' extension to respond. The questionnaire can be found in Annex IV.
- **Qualitative analysis:** The data and information gathered during the evaluation were qualitative, and therefore were analysed using a qualitative assessment whereby answers to the same questions from interviews and the questionnaires were compared by listing them in tables.

## Ethics

31. This evaluation was carried out in accordance with the principles set out in the UN Environment Programme Evaluation Policy, the United Nations Evaluation Group Norms and Standards and Ethical Code of Conduct, which includes the following key considerations: (a) all interviews and information were provided in confidence and anonymously and no information can be traced back to a direct source/individual, (b) those involved in the evaluation have had the opportunity to review the evaluation findings as well as the main evaluation report, and (c) the evaluator was sure to have empathy and sensitivity to different contexts and cultures in which stakeholders work throughout the course of the evaluation.

## Evaluation Limitations



32. Due to COVID-19 restrictions, no travel was possible, no face-to-face meetings could take place and thus the evaluation consultant had to rely solely on distance consultations for capturing and triangulating all information necessary for this evaluation. Some of the topics under discussion needed several efforts via online calls or email to clarify. Face-to-face meetings would probably have clarified these issues faster and more effectively.
33. The evaluation findings are based partly on the views of interviewees with a responsibility for implementation and execution of project activities who could be potentially biased in their responses. The following measures were taken to reduce the effect of respondent biases and validate interview results:
  - i. ensuring that respondents understood the confidentiality of responses;
  - ii. including interviewees who did not have a direct responsibility for implementation of project activities;
  - iii. asking respondents to provide a rationale for their judgments; and
  - iv. using the project documents and reports that were prepared to verify or validate responses of the respondents.
34. This evaluation was undertaken two years after the most crucial project activities were implemented. During the evaluation it became clear that some individuals had moved to another position or retired and therefore not available to the evaluation, and in some cases the interviewees could not recall all details or the chronological order of events.

### III. THE PROJECTS

#### A. Context

35. Mercury continues to be used in a variety of products and processes all over the world. Elemental mercury is used in activities such as artisanal and small-scale mining of gold and silver, chlor alkali production, manometers for measurement and control, thermometers, electrical switches, fluorescent lamp bulbs, back lights of computers, and dental amalgam fillings. Mercury is also present in various raw materials (such as coal, oil, wood, and various mining deposits) and can be released to the air or other media when these materials are extracted, burned, pro-cessed, or disposed.
36. The mercury emitted to the air from various types of sources transports through the atmosphere and eventually deposits onto land or water bodies. Since mercury can be distributed over long distances through the atmosphere and through oceans, even countries with minimal mercury emissions and areas situated remotely from dense human activity, may be affected. Many studies have documented the negative health and environmental impacts resulting from exposure to mercury, as well as the significant costs related to mercury mismanagement.
37. Although guidelines or protocols were developed by governmental and academic institutions before this project was initiated, the materials on mercury monitoring did not provide sufficient and specific guidance to countries that could adequately facilitate the establishment of national and regional monitoring systems. The limited knowledge of the links between mercury emissions, environmental concentrations and human exposure also made the adoption of adequate risk reduction measures and the assessment of their effectiveness more difficult.
38. These technical challenges were further complicated by significant geographical imbalances in the available data. The Chemicals Branch of UNEP, through this project, therefore proposed to strengthen capacity for mercury monitoring at the global level by combining existing mercury monitoring programmes and activities under the UN umbrella and to serve the Minamata Convention, its parties and the global community. Through its activities, it was anticipated that the project would help to harmonize approaches and methodologies, improve the quality and comparability of data generated globally, and therefore allow for monitoring of the global fate of mercury.

#### B. Results framework

39. The table below provides an overview of the project goal, project objective, outcomes, outputs and activities as presented in the narrative text of the ProDoc under "Expected outcomes and components of the project" and the Project Results Framework in Annex A. This overview is used as the basis for this TE. The outcomes and outputs as described in the ProDoc were found to not always be in line with the definitions of results used by UNEP. Outcomes and Outputs have been rephrased and combined accordingly by the evaluation consultant to form an adequate basis for assessing performance and better align them with the UNEP definitions. A comparison table between the ProDoc and the rephrased outcomes and outputs can be found in chapter IV. Theory of Change at evaluation.
40. As the ProDoc did not include a ToC (Theory of Change) diagram, the ToC has been reconstructed and will also be presented in chapter IV.

**Table 2: Result Framework**

<b>Project goal:</b>	The project goal is to strengthen the capacity for global monitoring of human exposure to and environmental concentration of mercury. Through its activities the project will assist countries in making informed decision for the selection of mercury risk management measures and in the assessment of their effectiveness.
<b>Project objective:</b>	To harmonize approaches for monitoring mercury in humans and the environment, and strengthen the capacity for mercury analysis in humans and the environment to accurately determine their concentrations globally.
<b>Component 1:</b>	Review of existing information on human exposure to and environmental concentrations of mercury.
<b>Outcome:</b>	Project technical and analytical baseline strengthened and information needs identified.
<b>Outputs:</b>	<ol style="list-style-type: none"> <li>1. Worldwide analysis of existing networks for mercury monitoring;</li> <li>2. Central mercury laboratory database established and first report on inter-laboratory assessment available.</li> </ol>
Activity 1.1:	Compile and assess existing networks on mercury in humans and air.
Activity 1.2:	Establish a mercury laboratory assessment databank and organize the first round of inter-laboratory assessment.
<b>Component 2:</b>	Development of the first global monitoring plan on presence of mercury in ambient air.
<b>Outcome:</b>	Enhanced understanding of mercury concentrations in ambient air through the strengthening of the Global Monitoring Observation System (GMOS) and the development of the complimentary passive air sampling (PAS) network for ambient air concentrations improves national capacity to analyze mercury in ambient air and to develop and apply sound mercury mitigation plans.
<b>Outputs:</b>	<ol style="list-style-type: none"> <li>1. Comprehensive network and stations for mercury atmospheric samples established and ready to be used.</li> <li>2. Results of one-year pilot test of the atmospheric network for mercury in ambient air available in a consolidated report.</li> <li>3. Draft proposal for a monitoring plan for mercury on ambient air includes active and passive sampling techniques and short-, medium- and long-term actions.</li> </ol>
Activity 2.1:	Establish a network for atmospheric samples by developing passive air samples to complement the GMOS work.
Activity 2.2:	Conduct a pilot testing of the atmospheric network for one year.
Activity 2.3:	Draft a proposal for a worldwide air monitoring plan, including interaction between active and passive sampling techniques.
<b>Component 3:</b>	Development of the first global monitoring plan on human exposure to mercury.
<b>Outcome:</b>	Capacity in developing countries to analyze total mercury in human samples improved and monitoring plan on human exposure to mercury developed.
<b>Outputs:</b>	<ol style="list-style-type: none"> <li>1. Standard Operating Procedures (SOP) for human biomonitoring of mercury in place and includes selected sample matrices and two additional matrices;</li> <li>2. Network for mercury biomonitoring established and harmonized protocols for national assessments available;</li> <li>3. Draft global plan for biomonitoring of mercury includes short-, medium- and long-term actions.</li> </ol>
Activity 3.1:	Select sample matrices for human biomonitoring of mercury exposure and development of Standard Operating Procedures (SOP) for human biomonitoring of mercury and inclusion of 2 additional matrices.
Activity 3.2:	Develop Network for biomonitoring surveys and harmonized protocols for national assessments, baseline data from national surveys, and report on body burden.

Activity 3.3:	Draft a results-based proposed plan for global human biomonitoring.
<b>Component 4:</b>	Lessons learned and formulation of GMP (Global Monitoring Plan).
<b>Outcome:</b>	Lessons learned and consolidated first global plan for monitoring human exposure to and environmental concentration of mercury enable countries to monitor mercury in a harmonized manner.
<b>Outputs:</b>	<ol style="list-style-type: none"> <li>1. Global mercury monitoring plan, including two additional SOPs for fish and shellfish, available and published in UNEP's website;</li> <li>2. Draft report on lessons learned includes recommendations on setting-up a mercury monitoring team, scope of mercury monitoring, and results interpretation;</li> <li>3. Monitoring and Evaluation plan fully implemented assess rate of project success.</li> </ol>
Activity 4.1:	Organize a science-based international workshop for review and finalization of the human exposure and environmental components of the global monitoring plan.
Activity 4.2:	Develop a report on lessons learned.
Activity 4.3:	Implement a Monitoring and Evaluation Plan.

### C. Stakeholders

41. UNEP was both implementation as well as executing agency; the GEF Team of UNEP was the Implementing Agency and the Science Team of the Chemicals and Health Branch was the Executing Agency. The main partner organizations of the project were WHO and CNR-IIA. WHO was responsible for component 3 of the project ("Development of the first global monitoring plan on human exposure to mercury") and CNR-IIA was responsible for component 2 of the project ("Development of the first global monitoring plan on presence of mercury in ambient air"). These organizations, together with other partner organizations, are considered to have a high influence and high interest in the project.
42. Other stakeholders have high interest in the projects and their results, though not always necessarily a high influence on project design and/or implementation. These organizations can be found in table 3 below.
43. For this main evaluation report, the evaluation consultant interviewed the stakeholders with a high influence and high interest in the project and results. These include UNEP, WHO, CNR-IIA, and other organizations that contributed directly to the project and that were identified during exchanges in the Inception Phase with UNEP: RECETOX, the Biodiversity Research Institute and the Jožef Stefan Institute. Additionally, the evaluation consultant consulted staff of the Secretariat to the Minamata Convention; the results of this project directly contributed to defining monitoring arrangements for the Effectiveness Evaluation under the Minamata Convention, and therefore the Convention and its Parties are a main stakeholder of this project
44. The evaluation consultant tried to capture the views of other stakeholders, who had a high interest in the project, but did not necessarily have a high influence on the project, such as laboratories and countries participating in the pilot studies. Specific stakeholder groups with a high interest but low influence that can be mentioned are countries, local groups (including vulnerable groups and women) and laboratories.
45. Specific countries were selected to participate in the pilot studies on air monitoring of mercury and human biomonitoring. However, countries in general are also stakeholders and beneficiaries of the project, as improved global mercury monitoring will support countries in meeting their obligations under e.g. the Minamata Convention. Laboratories were involved within component 1, 2 and 3 of the project and are an important

stakeholder group as they will directly be able to contribute to improved mercury monitoring systems.

46. The ProDoc mentions that "women and children are especially susceptible to mercury, and the project, through its role in underpinning national mercury management, contributes to the improving their well-being. The project will empower women in their responsibilities within the laboratory management and will be strengthened further through training activities at international level." During the main evaluation phase, the evaluation consultant explored if and to what extent gender and under-represented/marginalised groups were involved in, and informed about, project activities. This was done indirectly by interviewing key project partners and the national coordinators of the human biomonitoring component, as direct contact with these groups on a national level was not possible.
47. Below, a table is provided of all stakeholder groups, summarizing their roles and interest in and influence on the project. This stakeholder analysis uses the following four categories of stakeholders (the stakeholders for this project belong to either type A or C):
- Type A: High power / high interest = Key player
  - Type B: High power/ low interest over the project =Meet their needs
  - Type C: Low power/ high interest over the project= Show consideration
  - Type D: Low power /low interest over the project= Least important

**Table 3: Overview of stakeholders**

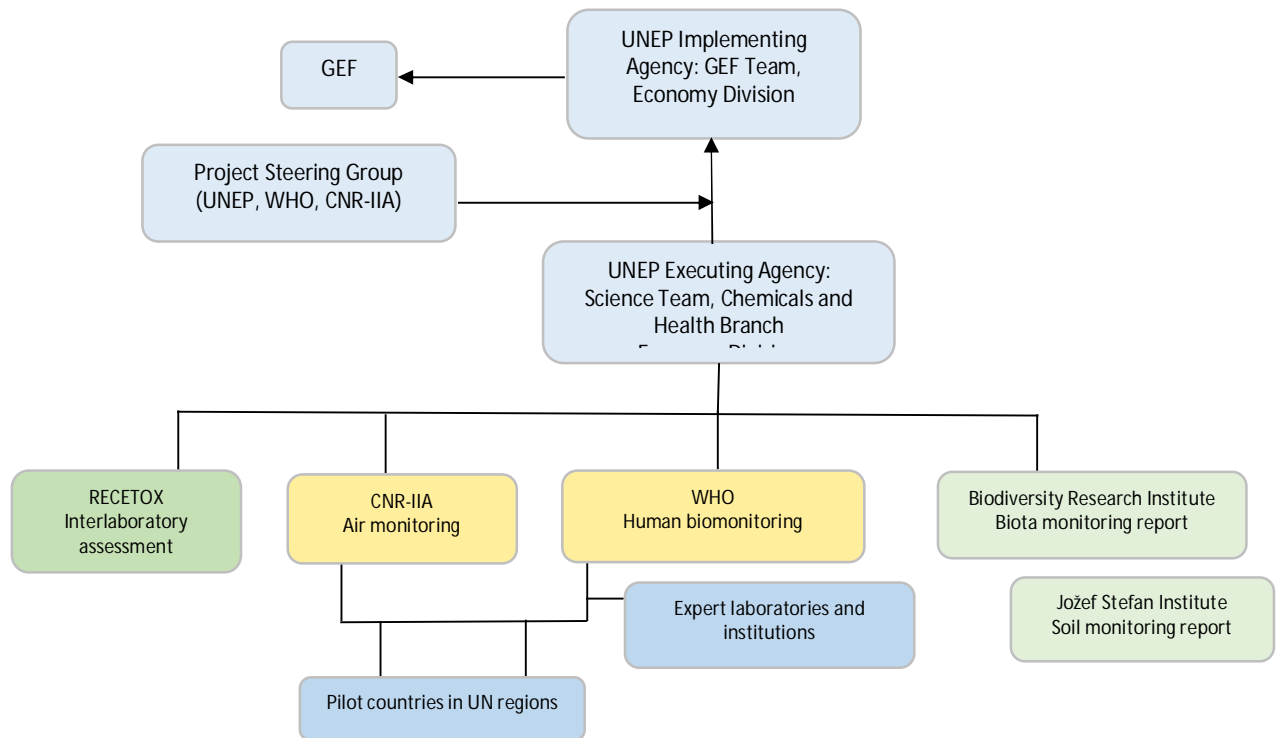
Stakeholders	Power over the project results/implementation and the level of interest	Participation in project design?	Roles and responsibilities in project implementation	Changes in their behaviour expected through implementation of the project
Type A: High power / high interest				
UNEP	As Implementing and Executing Agency UNEP had a strong influence on and a high interest in the project. Major decisions regarding progress of the project were made by the UNEP Chemicals and Health Branch.	Yes, development of project proposal.	UNEP was leading the project, and they were responsible for overall project management and supervision.	Continued and strengthened commitment to mercury monitoring.
WHO	The WHO Regional Office for Europe was the main responsible organization for the human biomonitoring component of the project. Therefore they had high influence on as well as high interest in the project.	Yes, they were the main responsible partner for component 3.	Based on WHO's expertise, they were asked to implement component 3 of the project.	Continued and strengthened commitment to mercury monitoring.
CNR-IIA	CNR-IIA was in charge of the air monitoring component. Therefore they had high influence on as well as high interest in the project.	Yes, they were the main responsible partner for component 2.	Based on CNR-IIA's expertise, they were involved to implement component 2 of the project.	Continued and strengthened commitment to mercury monitoring.

Stakeholders	Power over the project results/implementation and the level of interest	Participation in project design?	Roles and responsibilities in project implementation	Changes in their behaviour expected through implementation of the project
The Research Centre for Toxic Compounds in the Environment (RECETOX)	The Centre was directly involved in component 1 of the project and thus had a high interest and influence on the project.	No	The Centre organized the First Round of the interlaboratory assessment in collaboration with UNEP under component 1.	Continued and strengthened commitment to mercury monitoring.
Biodiversity Research Institute	They were involved directly in the project. Their interest was high, their influence was medium to high (they were involved in a smaller part than above mentioned organizations).	No	Development of the Technical Information Report on Mercury Monitoring in Biota.	Continued and strengthened commitment to mercury monitoring.
Jožef Stefan Institute	They were involved directly in the project. Their interest is high, their influence is medium to high (they were involved in a smaller part than above mentioned organizations).	No	Development of the Technical Information Report on Mercury Monitoring in Soil.	Continued and strengthened commitment to mercury monitoring.
(Secretariat of the) Minamata Convention	The results of the project were directly used by expert groups of the Minamata Convention, therefore their interest and influence are high.	No	The results of the project were used by the Convention in the discussion on Effectiveness Evaluation.	Strengthened commitment to mercury monitoring, and use of approved monitoring arrangements for Effectiveness Evaluation.
<b>Type C: Low power/ high interest over the project</b>				
Gender and minority groups	Low power, but high interest in understanding their health situation.	No	Providing samples for biomonitoring. Important beneficiary group of the project.	More awareness about the risks of mercury.
General population	Low power, but high interest in understanding their health situation.	No	Providing samples for biomonitoring. Important beneficiary group of the project.	More awareness about the risks of mercury.
Laboratories	Low power, but high interest. Laboratories were included in the Mercury Laboratory Databank and took part in a laboratory assessment.	No	Laboratories took part in a laboratory assessment, Laboratories were involved in sampling and analysis within component 2 and 3 of the project.	Strengthened capacity to undertake mercury monitoring, and increased awareness on mercury pollution.
(Partner) countries	Low power, but high interest to improve mercury monitoring in their countries.	No	Ten countries participated in air monitoring activities, and 6 countries in the human biomonitoring component. Important beneficiary group of the project.	Continued and strengthened commitment to mercury monitoring.

Stakeholders	Power over the project results/implementation and the level of interest	Participation in project design?	Roles and responsibilities in project implementation	Changes in their behaviour expected through implementation of the project
Global Mercury Partnership	High level of interest in the issue of mercury monitoring, but not directly involved as implementation organization and therefore lower level of power.	No	One of the networks that was involved by providing their expertise and in discussions on mercury monitoring. This network has many member organizations working on mercury, including organizations identified in the ProDoc as potential stakeholder (such as AMAP (Arctic Monitoring and Assessment Programme)).	Continued and strengthened commitment to mercury monitoring.
Government of Japan	High level of interest in the issue of mercury monitoring, but not directly involved as implementation organization and therefore lower level of power.	No	The Government of Japan is currently funding mercury monitoring activities in Asian countries.	Continued and strengthened commitment to mercury monitoring.

#### D. Project implementation structure and partners

48. The ProDoc contains a "decision making flowchart and organigram" in appendix 11. Institutional arrangements are also described in the main part of the ProDoc. As the implementation structure of the project was not fully in line with the actual structure, the evaluation consultant took the organigram from the ProDoc and made the necessary adjustments as illustrated below:



Source: (Adapted from) ProDoc

**Figure 1: Decision making flowchart and organigram**

49. The GEF Team of the UNEP Economy Division was the Implementing Agency (IA). A Project Manager from the UNEP Science Team (Chemicals and Waste Branch) was overall in-charge of managing the project. WHO and CNR-IIA were co-executing agencies for respectively the biomonitoring component and the air monitoring component. Later during the project it was decided to research two additional matrices – biota and soil – as reflected in the above organigram. WHO and CNR-IIA implemented their activities in pilot countries in the different UN regions. Several institutions and laboratories supported the implementation of the human biomonitoring component, such as the Institute of Health Carlos III (ISCIII), the Jožef Stefan Institute and the organization RECETOX. RECETOX was also responsible for conducting the interlaboratory assessment.
50. The Steering Committee (SC) consisted of representatives from UNEP, WHO and CNR-IIA. They met four times during the project (in November 2014, (online) in March 2017, in June 2017, and in February 2018) Many additional ad hoc meetings were organized during other meetings and at workshops, where also representatives of other organizations that participated in the project were present. The role of the SC was to provide advice on the identification of existing networks, programmes and laboratories, to ensure synergies with other monitoring efforts, to provide advice on the development and scientific review of analytical schemes and sampling guidelines for various matrices, to provide advice on what elements to include in a global mercury monitoring plan, and on dissemination of experience and lessons learned.

## **E. Changes in design during implementation**

51. During the project three no-cost amendments were made (in 2017, 2018 and 2019). The first two amendments were made because of delays at the start of the project, which



were mainly of an administrative nature (contracting) and due to staff change, and also because the planned activities required more time to be implemented; the initial planned duration of the project (two years) was not realistic. Additionally, the introduction and initiation of the UMOJA system in UNEP also caused delays. The last amendment was requested because the extension would provide the opportunity to address two extra matrices, biota and soil, which became relevant after the Second Meeting of the Minamata Convention Conference of Parties (COP2). Through this extension it was expected that discussion with relevant experts and contributions to the Minamata Convention expert group on Effectiveness Evaluation would be delivered.

## F. Project financing

52. The overall approved and planned budget was USD 3,855,411. The GEF contribution was planned to be USD 850,000. The total co-finance was calculated at USD 3,005,411.
53. A table summary of the planned budget as provided in the ProDoc is presented below:

**Table 4: Total planned and approved project financing**

	<b>GEF Funding (cash)</b>	<b>CNR-IIA co-finance (in-kind)</b>	<b>UNEP co-finance (in-kind)</b>	<b>WHO co-finance (in-kind)</b>	<b>TOTAL Planned Budget</b>
Component 1	137,500	350,000	418,090	125,389	<b>1,030,979</b>
Component 2	232,750	1,330,000	99,000		<b>1,661,750</b>
Component 3	259,750		99,000	285,000	<b>643,750</b>
Component 4	146,000	20,000			<b>166,000</b>
Project management	74,000		278,932		<b>352,932</b>
<b>TOTAL</b>	<b>850,000</b>	<b>1,700,00</b>	<b>895,022</b>	<b>410,389</b>	<b>3,855,411</b>

Source: Appendix 2,3 and 4 of the ProDoc.

54. For further details on planned budget, actual project expenditure, and actual co-finance, please see chapter V - Evaluation findings, section E - Financial Management.

#### IV. THEORY OF CHANGE AT EVALUATION

55. At the time the ProDoc was designed, the Theory of Change (ToC) was not yet a requirement for the development of project proposals. Therefore, the TOC had to be reconstructed during the Inception Phase of this evaluation, based on the defined activities, outcomes, outputs, goals and objectives as described in the ProDoc.
56. For the development of the ToC, the evaluation considered the outcomes and outputs as provided in the ProDoc and Project Results Framework (and as presented in chapter III - The projects, section B - Results framework) as basis for developing the ToC. These outcomes and outputs were often not in line with the definitions of outcomes and outputs as used today by UNEP. The evaluation used the definitions as stated in the document "Final Glossary of Results definitions\_13.11.2019"<sup>1</sup>. Therefore, the project Outcomes and Outputs were rephrased in order to develop a more coherent intervention logic.
57. The Intermediate States and Impact were not explicitly described within the ProDoc; the evaluation consultant, however, considered the explanations on possible longer-term results that were mentioned throughout the document to define the Intermediate States and Impact.
58. During the main evaluation phase, several adjustments were made to the reconstructed ToC based on interviews and project reports: The ProDoc indicated that capacity would be built in developing countries and approaches harmonized. During the evaluation it became clear that this referred specifically to the pilot countries for human biomonitoring and air monitoring. Furthermore, a Global Mercury Monitoring Plan was not prepared as originally planned at project design, but all elements that should be included in such a plan were defined within the project. A roadmap for developing guidance on monitoring based on the results of the project was prepared by the Secretariat to the Minamata convention. A first draft of this guidance has recently been published on the website of the convention and is open for comments by Parties and relevant stakeholders (until 31 May 2021). It is expected that the monitoring guidance will be presented at the next COP for approval. And finally, two extra matrices, namely

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<sup>1</sup> **Output:** An Output is the availability (for intended beneficiaries/users) of new products and services and/or gains in knowledge, abilities and awareness of individuals or within institutions. For example, access by the intended user to a report; new knowledge held by a workshop participant at the end of a training event; heightened awareness of a serious risk among targeted decision-makers. (Outputs are viewed from the perspective of the intended beneficiary or user of the Output rather than the provider);

**Outcome:** An outcome is the use (i.e., uptake, adoption, application) of an output by intended beneficiaries, observed as a change in institutions or behaviors, attitudes or conditions;

**Direct Outcome:** A direct outcome is an outcome that is intended to be achieved from the uptake of outputs and occurring prior to the achievement of Project Outcome(s);

**Project Outcome:** Project Outcome(s) are those outcomes that are intended to be achieved by the end of project timeframe/funding envelope;

**Intermediate State:** Intermediate States are changes (i.e. changes at the Outcome level) beyond the Project Outcome(s) that are required to contribute towards the achievement of the intended impact of a project;

**Impact:** Impacts are long-lasting results arising, directly or indirectly from a project. Impacts are intended and positive changes and must relate to UNEP's mandate;

**Assumption:** An assumption is a significant external factor or condition that needs to be present for the realization of the intended results but is beyond the influence of the project and its partners. Assumptions are often positively formulated risks;

**Driver:** A driver is a significant external factor that, if present, is expected to contribute to the realization of the intended results of a project. Drivers can be influenced by the project and its partners.

biota and soil, were included in the project and desk pilot studies were prepared for both these matrices.

### **Causal pathways**

59. The ProDoc divided the project into four components. Each component had one outcome and two or three outputs. Both the outcomes and outputs were not always phrased in line with the UNEP definitions. Instead of having two or even three outputs per component, the evaluation consultant considered that these outputs could easily be rephrased into one output per component, also reflecting that an output often are "gains in knowledge, abilities and awareness of individuals or within institutions". The ToC outcomes are based on the outcomes as mentioned in the ProDoc and have been rephrased; please see the table below for a comparison between the ProDoc and the ToC at evaluation, and a justification for rephrasing the outputs and outcomes. The ToC also contains one overall project outcome to show how the four outcomes per component would lead to one overall project result.
60. The four components and hence the four outcomes are ordered in logical sequence. Output 1 and Outcome 1 in the reconstructed ToC are the basis of the project. First, before mercury monitoring can be improved, the existing networks and capacities of laboratories have to be assessed. Based on this, the project would involve the laboratories and institutions to assess and test how mercury monitoring in air (reflected in Output 2) and mercury biomonitoring (reflected in Output 3) can be improved. This is then expected to lead to improved capacity to analyse mercury in ambient air (Outcome 2) and to analyse mercury in human samples (Outcome 3). Based on the experiences from Outputs 2 and 3, awareness in pilot study countries on how to adequately monitor mercury is raised and a lessons learned report prepared, as well as a report in which all elements will be defined for a global mercury monitoring plan (as is shown in Output 4). This will lead to Outcome 4, whereby countries and other stakeholders are enabled to monitor mercury in an adequate and harmonized manner. Outcome 4 will lead to the overall Project Outcome, showing that at the end of the project there will be improved understanding and capacity to analyse mercury in humans and the environment and to (more) accurately determine mercury concentrations globally.
61. It is expected that the application of the overall Project Outcome would lead to Intermediate State 1 (and from Intermediate State 1 also to Intermediate State 2, and Impact 1 and 2). Improved capacity for mercury monitoring would ideally lead to the implementation of a harmonized global approach for sound mercury monitoring (after approval of the monitoring guidance by the Parties to the Minamata Convention), and from there to improved and more targeted measures to reduce exposure to and concentrations of mercury. In the long run this would lead to reduced risk to human health and the environment, and from there to improved environmental and health conditions globally.
62. It should be noted that the project is responsible for achieving the Outputs and Outcomes. Intermediate States, as well as Impacts are expected to be part of the longer-term possible results, and the evaluation will assess the likelihood that these results will be realized.

### **Drivers and assumptions**

63. The ProDoc did not contain a ToC, and drivers and assumptions were therefore not specified. The Project Results Framework does contain a column with "Risk and assumptions" for the end-of-project targets that were formulated per outcome. The evaluation consultant has used these risks and assumptions to define several of the

assumptions for the ToC, and also tried to logically extract possible drivers from the narrative text of the ProDoc.

64. For the reconstructed ToC at evaluation, the following assumptions and drivers were established:

**Assumptions (from Outputs to Outcomes and to Intermediate State 1)**

- Project partners are willing to participate and are open to cooperation;
- National laboratories are interested to participate and willing to undergo an interlaboratory comparison study and submit the results;
- People are willing to provide hair and other samples for mercury concentration analysis.

**Assumptions (from Project Outcome to Intermediate States to Impact):**

- Funding is made available by the governments and institutions for continued mercury monitoring, awareness-raising and capacity building activities;
- Partners remain open to cooperation and are willing to provide samples for mercury analysis.

**Drivers (from Outputs to Outcomes and to Intermediate State 1):**

- Active UNEP support and guidance provided to increase cooperation and networking on mercury monitoring;
- Active distribution of monitoring plans and lessons learned report by UNEP and project partners;
- Stakeholders are pro-actively contributing to improving and harmonizing mercury monitoring;
- Active, support, information and guidance provided by the main project partners, specifically WHO and CNR-IIA.

**Drivers (from Project Outcome to Intermediate States to Impact):**

- Stakeholders continued interest, commitment, and support (e.g. by UNEP, Secretariat of the Minamata Convention);
- Continuation of awareness-raising and capacity building activities;
- Financing provided by governments and relevant institutions.

65. In the table below, a comparison between the results of the ProDoc versus the reconstructed ToC at evaluation, as well as a justification for reconstruction, is provided:

**Table 5: Comparison table between ToC in ProDoc and reconstructed ToC:**

ProDoc		Reconstructed TOC		Justification for reconstruction and comments
Impact		Impact	Impact 1: Reduced risk to human health and the environment posed by mercury. Impact 2: Improved environmental and health	No long-term impact was defined in the narrative text or the project result framework of the ProDoc. However, improved mercury monitoring, and

ProDoc		Reconstructed TOC		Justification for reconstruction and comments
			conditions globally.	thus a better understanding of the actual mercury situation, can in the long run (via Intermediate States 1 and 2, where based on improved monitoring, better risk reduction measures can be taken) be expected to lead to a reduced risk on human health and the environment, and this will lead to an improved environmental and health situation worldwide.
<b>Main goal</b>	The project goal is to strengthen the capacity for global monitoring of human exposure to and environmental concentration of mercury. Through its activities the project will assist countries in making informed decisions for the selection of mercury risk management measures and in the assessment of their effectiveness.	<b>Intermediate States (IS)</b>	IS 1: Implementation of harmonized global approach for sound monitoring of mercury in humans and the environment. IS 2: Improved measures to reduce mercury exposure and mercury concentrations.	The Intermediate States are partly based on the main goal; through implementation of a harmonized approach for better mercury monitoring on a global level, improved and better targeted measures can be taken to reduce the risk to mercury exposure.
<b>Overall project goal</b>	To harmonize approaches for monitoring mercury in humans and the environment, and strengthen the capacity for mercury analysis in humans and the environment to accurately determine their concentrations globally.			
<b>Outcomes</b>	<u>Component 1:</u> Project technical and analytical baseline strengthened, and information needs identified. <u>Component 2:</u> Enhanced understanding of mercury concentrations in	<b>Outcomes</b>	<u>Direct Outcomes:</u> 1. Technical and analytical baseline is strengthened, and information gaps are identified. 2. Improved national capacity in pilot countries to analyse mercury in ambient, supported by	There are four outcomes in the ProDoc; one per component. These outcomes have been used in the reconstructed ToC. However, they have been rephrased to align them better to the definitions of outcomes as they are used by UNEP

ProDoc		Reconstructed TOC		Justification for reconstruction and comments
	<p>ambient air through the strengthening of the Global Monitoring Observation System (GMOS) and the development of the complimentary passive air sampling (PAS) network for ambient air concentrations improves national capacity to analyze mercury in ambient air and to develop and apply sound mercury mitigation plans.</p> <p><u>Component 3:</u> Capacity in developing countries to analyze total mercury in human samples improved and monitoring plan on human exposure to mercury developed.</p> <p><u>Component 4:</u> Lessons learned and consolidated first global plan for monitoring human exposure to and environmental concentration of mercury enable countries to monitor mercury in a harmonized manner.</p>		<p>the development of air monitoring reports.</p> <p>3. Improved capacity in pilot developing countries to analyse mercury in human samples, and improved understanding of how to monitor human exposure to mercury.</p> <p>4. Empowerment of pilot countries and other stakeholders to monitor mercury in a harmonized manner through defining all elements needed for the first global plan for monitoring human exposure to and environmental concentration of mercury.</p> <p><u>Project Outcome:</u> 1. Improved understanding and capacity for mercury analysis in humans and the environment to accurately determine their concentration globally.</p>	<p>today.</p> <p>Additionally, one overall project outcome has been defined to show the anticipated ultimate result of the project to which the outcomes of the individual components are expected to lead.</p>
<b>Outputs</b>	<p><u>Component 1:</u> 1. Worldwide analysis of existing networks for mercury monitoring; 2. Central mercury laboratory database established and first report on inter-laboratory assessment available.</p> <p><u>Component 2:</u> 1. Comprehensive network and stations for mercury atmospheric samples established and ready to be used. 2. Results of one-year pilot test of the atmospheric network for mercury in ambient air available in a</p>	<b>Outputs</b>	<p>1. Increased knowledge on existing networks and capacities of laboratories for mercury monitoring.</p> <p>2. Gain in knowledge and awareness on mercury monitoring in ambient air after one-year pilot test, and development of an air monitoring report (including interaction between active and passive sampling techniques).</p> <p>3. Gain in knowledge and awareness on mercury biomonitoring through development of SOPs, including selection/defining of</p>	<p>The Project Results Framework did not have any outputs included. The narrative text of the project does have outputs. There are two or three outputs defined per component, in total 11 outputs. These outputs could easily be combined do reduce the number of outputs, to show that these outputs are interrelated, and to rephrase them so it is not phrased anymore as an activity or product, but as gains in knowledge, abilities and awareness of individuals or within</p>

ProDoc		Reconstructed TOC		Justification for reconstruction and comments
	<p>consolidated report.                      3. Draft proposal for a monitoring plan for mercury on ambient air includes active and passive sampling techniques and short-, medium- and long-term actions.</p> <p><u>Component 3:</u>                      1. Standard Operating Procedures (SOP) for human biomonitoring of mercury in place and includes selected sample matrices and two additional matrices;                      2. Network for mercury biomonitoring established and harmonized protocols for national assessments available;                      3. Draft global plan for biomonitoring of mercury includes short-, medium- and long-term actions.</p> <p><u>Component 4:</u>                      1. Global mercury monitoring plan, including two additional SOPs for fish and shellfish, available and published in UNEP's website;                      2. Draft report on lessons learned includes recommendations on setting-up a mercury monitoring team, scope of mercury monitoring, and results interpretation;                      3. Monitoring and Evaluation plan fully implemented assess rate of project success.</p>		<p>sample matrices and harmonized monitoring protocols.                      4. Gain in awareness of mercury monitoring (related to human biomonitoring, air, biota, and soil) through development and distribution of mercury monitoring reports and a lessons learned report.</p>	<p>institutions.</p>

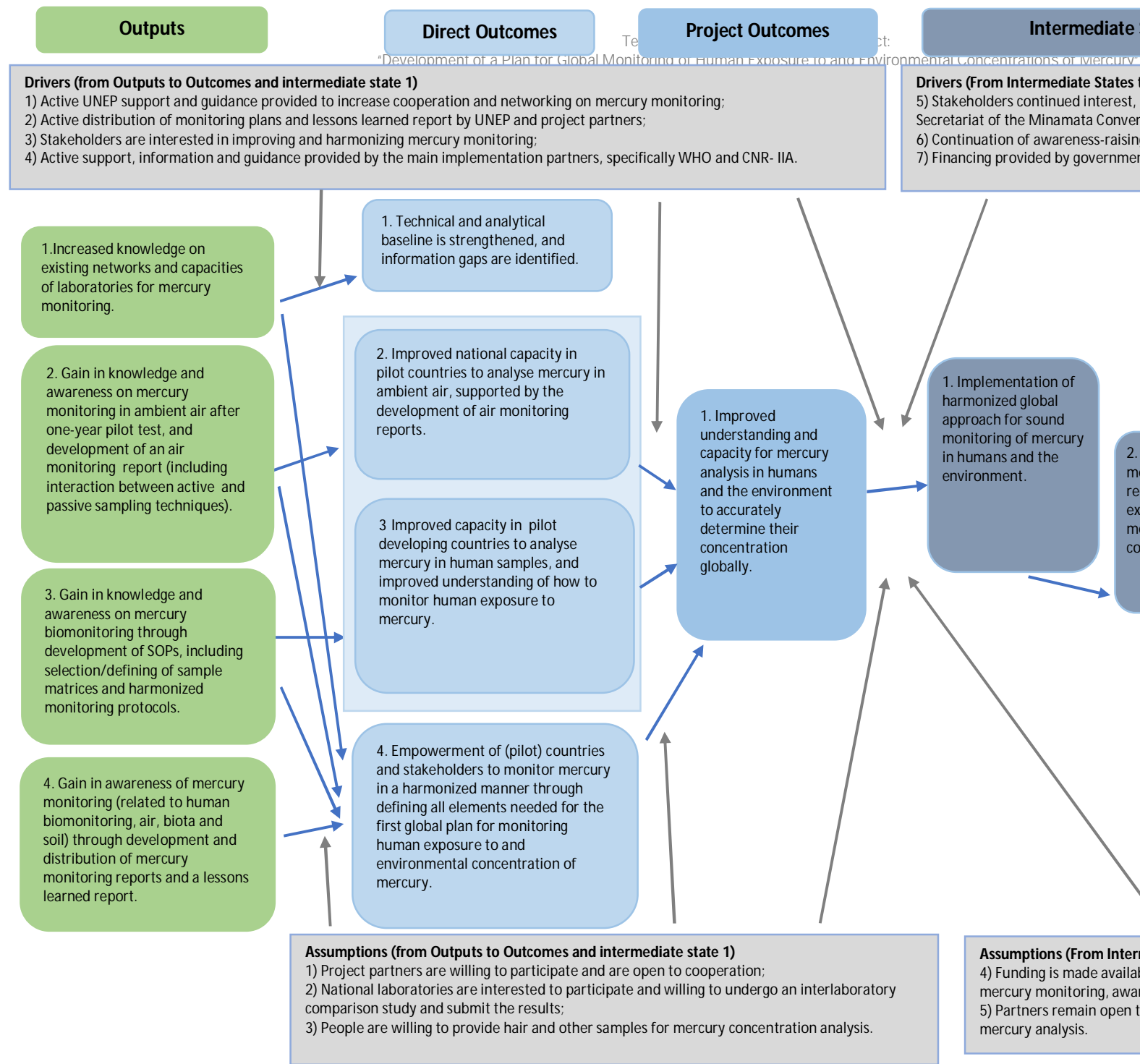


Figure 2: Reconstructed To



## V. EVALUATION FINDINGS

### A. Strategic Relevance

**Finding 1: The project is aligned with UNEP MTS 2010-2013, 2014-2017 and 2018-2021, with the UNEP PoW, and UNEP's Strategic Priorities. The Projects are fully in line with national and regional priorities, as well as the GEF strategic priorities and existing interventions.**

#### Alignment to UNEP MTS, PoW and Strategic Priorities

66. The project is line with the UNEP MTS, the PoW and Strategic priorities.
67. **Medium-Term Strategy (MTS), 2010-2013, 2014-2017 and 2018-2021:** The project is fully in line with the Medium-Term Strategies that were operational during design and implementation of the project. The project adheres to the subprogramme "Chemical and Waste" of the MTS 2014-2017. The objective of the chemicals and waste subprogramme is to promote a transition among countries to the sound management of chemicals and waste, with a view to minimizing impacts on the environment and human health. It was planned to conduct pilot-projects and studies on monitoring of human exposure to and environmental concentrations of mercury, and to define all elements needed for developing a global mercury monitoring plan. These activities are fully aligned with this objective.
68. **Programme of Work (PoW) 2014-2015, 2016-2017 and 2018-2019:** The PoW 2014-2015 and 2016-2017 include seven priority areas, including Subprogramme 5 on "Chemicals and Waste" (the subprogramme in Pow 2018-2019 is "Chemicals, waste and air quality). The project is in line with this Subprogramme, most specifically the following Expected Accomplishments:
- Countries increasingly have the necessary institutional capacity and policy instruments to manage chemicals and waste soundly including the implementation of related provisions of the multilateral environmental agreements;
  - Countries, including major groups and stakeholders, make increasing use of the scientific and technical knowledge and tools needed to implement sound chemicals management and the related multilateral environmental agreements.
69. The project is also aligned to the **UNEP Strategy for South-South and Triangular Cooperation**. This is a cross-cutting mechanism intended to enhance UNEP's ability to deliver environmental capacity building and technology support activities in developing countries and regions in the South. The project planned to make sure that adequate laboratory capacity would be available in all UN regions, in order to ensure that mercury monitoring can be done at the regional level. The implementation of the South-South cooperation is carried out as part of the **Bali Strategic Plan for Technology Support and capacity Building**, which aims at strengthening the capacity of governments in developing countries and countries with economies in transition to address their needs, priorities and obligations in the field of the environment.

**Rating for Alignment to UNEP MTS, PoW and Strategic Priorities: Highly Satisfactory**

#### Alignment to Donor Strategic Priorities

70. Although the project is not fully aligned to the chemicals reduction targets, the project adheres to the strategic priorities of GEF. As is mentioned in the document "GEF 5 Focal Area Strategies", The GEF-5 strategy for chemicals set out to consolidate the persistent

organic pollutants and ozone layer depletion focal areas, as well as to broaden the scope of GEF's engagement with the sound management of chemicals and to initiate work on mercury. The goal of the GEF's chemicals program under GEF 5 was "to promote the sound management of chemicals throughout their life-cycle in ways that lead to the minimization of significant adverse effects on human health and the global environment." This project fits within Focal Area CHEM 3 "Pilot sound chemicals management and mercury reduction".

**Rating for Alignment to Donor Strategic Priorities: Satisfactory**

**Relevance to Regional, Sub-regional and National Priorities**

71. The projects are in line with regional, sub-regional and national priorities and initiatives. Mercury is of global, regional and national concern. Those countries that have ratified the Minamata Convention will try to adhere to the aim of the Convention: to protect the human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds.
72. The countries that were involved in the pilot studies on air monitoring and human biomonitoring, were selected based on, amongst others, the interest they showed to participate. Interview data and data from the questionnaires confirmed the high relevance of the projects to all pilot countries.
73. The "Centro Coordinador Convenio Basilea - Centro Regional de Estocolmo América Latina y el Caribe" in Uruguay (BCRC-SCRC-Uruguay) has been working on POPs and mercury issues in Latin America and the Caribbean. This centre was one of the project partners; the centre and eight countries in South America were trained on human biomonitoring within the project, and conducted human biomonitoring activities. The project thus managed to leverage additional co-finance and extended its mercury activities to other countries besides the pilot study countries.

**Rating for Relevance to regional, sub-regional and national environmental priorities: Highly Satisfactory**

**Complementarity with Existing Interventions**

74. The project built on two existing global initiatives for monitoring of mercury: the Global Mercury Observation System (GMOS) and the Consortium to Perform Human biomonitoring on a European Scale (COPHES). GMOS was set up in 2010 and is a "global observing system providing comparable monitoring data on mercury levels in air and marine ecosystems in the Southern and Northern Hemispheres aiming to support the Minamata Convention" [www.gmos.eu]. GMOS is led by CNR-IIA. Within the project ten sites (four sites from the existing GMOS network, and six sites within the six countries selected for the human biomonitoring project) were included in a pilot project to monitor mercury in ambient air.
75. The Consortium to Perform Human biomonitoring on a European Scale (COPHES) was funded by the EU's Seventh Framework Programme and developed harmonised protocols allowing the collection of comparable human biomonitoring data on children exposure to mercury throughout Europe. One of the chemicals chosen for biomonitoring was mercury. COPHES demonstrated that a more coordinated and harmonised approach to human biomonitoring in Europe is possible and is an important tool to monitor the exposure of Europeans to chemical substances and address potential health effects that may derive from it" [http://www.eu-hbm.info/cophes]. WHO was

involved in the Consortium. Within the project WHO managed project component 3 on human biomonitoring of prenatal exposure to mercury.

76. The project is in line with the Minamata Convention, and the results of this project directly contributed to the development of monitoring arrangements for Effectiveness Evaluation under the Minamata Convention. The Secretariat of the Minamata Convention has prepared a roadmap for developing the guidance on monitoring. The first draft of the monitoring guidance is currently open for comments by Parties and relevant stakeholders, and it is expected that these monitoring arrangements will be discussed at the next Conference of the Parties to the Minamata Convention (COP4), which is expected to be held in two segments: online (1-5 November 2021) and in-person (first quarter of 2022 in Bali, Indonesia).

**Rating for Complementarity with Existing Interventions: Highly Satisfactory**

**Rating for Strategic Relevance: Highly Satisfactory**

## **B. Quality of Project Design**

**Finding 2: The project design document contained the most relevant information as prescribed by the project document format. Key strengths were the project justification, strategic relevance, and complementarity with other initiatives. The project design did not provide comprehensive information and details on communication and outreach, in the results framework and contains only a preliminary stakeholder analysis.**

77. A detailed review of the Project design was carried out during the Inception Phase of the evaluation. The project was rated as Satisfactory. Below a summary of the assessment of the project design is presented:
78. Overall, the project was well designed. The section on "baseline scenario and any associated baseline projects" provides elaborate explanations on existing projects, the current state of mercury monitoring, the technical challenges and how UNEP will aim to improve mercury monitoring. This section also presents the two existing global and regional activities for monitoring of mercury, GMOS and COPHES, including technical details.
79. The stakeholder consultation process is not described in the ProDoc. No extensive stakeholder analysis was included in the ProDoc. It was mentioned that a more extensive stakeholder review would be part of component 1 of the project. The project duration is considered to be quite short for this project, especially so, as e.g. no comprehensive stakeholder analyses were done during the preparation and the usual administrative and contract procedures at the start of the project may not have been taken into account. Also, there is only little information and explanation provided on learning, communication and outreach, whereas this is an important part of the project. A clear communication plan is missing. The description of activities and the Project Results Framework together make it clear how the project is set up and what it aims to achieve. However, the Project Results Framework does not include any outputs, these can only be found in the narrative text.
80. In summary, the ProDoc contains the following strengths and weaknesses:

### **Strengths:**

- The project background and justification are well explained;
- The complementarities and synergies with other projects and networks are clearly described;
- The relevance of the project is elaborately explained;
- Specific attention was paid to the technical details, e.g. within the section on "baseline scenario and associated baseline projects", as well as appendix 5 "Detailed analytical methods and proposal for mercury monitoring sites".

**Weaknesses:**

- The Project Results Framework does not contain outputs. Although the narrative text of the ProDoc and the Project Results Framework make it clear what the project aimed to achieve, the causal pathways are not always explicitly described;
- The project contains only a preliminary stakeholder analysis. Even though it was explained that a more elaborate stakeholder analysis would be prepared within component 1 of the project, a slightly more comprehensive stakeholder review, including strengths and weaknesses, would have benefitted the project at design;
- The chapter on Public Awareness and Communication in the ProDoc needs more elaboration and explanation on learning, communication and outreach.

81. The overall rating of the project design is rated as Satisfactory. Most sections were rated as Satisfactory, one rating for 'Strategic Relevance' as Highly Satisfactory, and the following five sections as Moderately Satisfactory: 'Project Preparation', 'Intended Results and Causality', 'Logical Framework and Monitoring', 'Partnerships', and 'Learning, Communication and Outreach'.

**Table 6: Ratings table**

	<b>SECTION</b>	<b>RATING</b> (1-6)	<b>WEIGHTING</b>	<b>TOTAL</b> (Rating x Weighting /100)
A	Operating Context	5	4	0.2
B	Project Preparation	4	12	0.48
C	Strategic Relevance	6	8	0.48
D	Intended Results and Causality	4	16	0.64
E	Logical Framework and Monitoring	4	8	0.32
F	Governance and Supervision Arrangements	5	4	0.2
G	Partnerships	4	8	0.32
H	Learning, Communication and Outreach	4	4	0.16
I	Financial Planning / Budgeting	5	4	0.2
J	Efficiency	5	8	0.4
K	Risk identification and Social Safeguards	5	8	0.4
L	Sustainability / Replication and Catalytic Effects	5	12	0.6
M	Identified Project Design Weaknesses/Gaps	5	4	0.2
	<b>TOTAL SCORE :</b>			<b>4.6</b>

Notes: Six point rating scale consists of: 1 (Highly Unsatisfactory): < 1.83; 2 (Unsatisfactory): >= 1.83 < 2.66; 3 (Moderately Unsatisfactory): >=2.66 <3.5; 4 (Moderately Satisfactory): >=3.5 <=4.33; 5 (Satisfactory): >4.33 <= 5.16; 6 (Highly Satisfactory): > 5.16

**Rating for Project Design: Satisfactory**

### C. Nature of the External Context

**Finding 3:** The nature of external context did not affect the implementation of this project. However, the political situation in a country can influence mercury monitoring (for example in countries with artisanal gold mining).

82. The ProDoc contains a risk analysis table. However, external factors such as natural disasters, conflicts, and unexpected political upheaval are not mentioned there. The main risks defined in this table are scientific risks.
83. Such external factors could have influenced the implementation of activities in the pilot countries. Nonetheless, respondents and interviewees did not report that these factors affected the implementation of country activities. Some of the stakeholders involved mentioned that political factors in a country can affect monitoring of mercury, for example in countries with artisanal gold mining. It was mentioned several times that bureaucracy and staff change at government officials caused some delays in project implementation.

**Rating for Nature of the external context: Favourable**

### D. Effectiveness

#### Availability of Outputs

**Finding 4:** The project successfully identified global mercury networks and gaps in mercury data. The interlaboratory assessment conducted by RECETOX showed that there is adequate capacity in all UN regions to analyse mercury.

**Finding 5:** The implementation of pilot studies on human biomonitoring in six countries showed that the Standard Operating Procedures used were appropriate and that it is fully possible to conduct human biomonitoring studies in developing countries and countries with economies in transition.

**Finding 6:** The pilot studies on air monitoring in 10 countries increased the knowledge on mercury monitoring in ambient air and generated interest in the use of passive air samplers for air monitoring.

**Finding 7:** The cooperation of UNEP with experienced project partners worked well; the partners had the required expertise, knowledge as well as well-established networks in the countries and regions, which contributed to effective implementation of activities.

**Finding 8:** The discussions with the Minamata Convention led to the project assessing two additional matrices, mercury monitoring in biota and soil, that were not foreseen to be assessed at project design. These extra activities contributed to the development of the monitoring arrangements for the Effectiveness Evaluation under the Minamata Convention.

84. Achievement of Outputs was assessed based on the reconstructed ToC, as follows:
85. **Output 1: Increased knowledge on existing networks and capacities of laboratories for mercury monitoring** has been assessed as fully delivered.
86. Under this output the following main documents were prepared:
  - Global Review of Mercury Monitoring Networks (November 2016);
  - Worldwide Capacities to analyze Mercury;

- Final Report - Global Assessment of Laboratories Analyzing Mercury, First Round, 2018 (July-October 2018).
87. The Global Review of Mercury Monitoring Networks summarizes available information on existing mercury monitoring networks for mercury in air, human, biota and soil. It also emphasizes gaps in the coverage and scope of the monitoring networks. The review shows that some regions with the highest mercury emissions into the atmosphere (Asia, Latin America, and Africa) are also those regions where atmospheric monitoring stations are scarce or information is not well documented.
  88. In 2017, a voluntary registration process was set up for laboratories based on which a Mercury Laboratory Databank was set up. The databank contains information on the worldwide capacity of laboratories to analyse mercury. 210 Laboratories from 60 countries provided information on their sampling and analytical capacities.
  89. In 2018, RECETOX carried out an interlaboratory assessment. A selection of laboratories was invited to analyse the same samples of three different matrices (standard solution, hair and fish). There were 80 laboratories invited, 42 laboratories from 29 countries had registered for the global assessment and 38 laboratories from 28 countries worldwide delivered results. No matrix was compulsory in this pilot laboratory assessment. Almost 90% of all laboratories analysed the standard solution and 80% of the delivered results satisfactory results. 84% of all laboratories analysed biota sample (fish), of which almost 85% with a satisfactory outcome. 73.7% laboratories analysed human scalp hair and 82% of these laboratories with satisfactory results.
  90. One interviewee mentioned that there were some delays due to interruptions in shipping samples at customs, and that because of this three laboratories could not participate. However, overall the interlaboratory assessment showed that there is adequate capacity, in both developed and developing countries, to analyse mercury. Furthermore sufficient capacity is available in all UN regions. Still, some respondents mentioned that in-country capacity remains important, as sending samples from one country to another country in the same region is not necessarily straightforward. For instance sometimes it can be easier to ship samples from a country in Africa to Europe instead of to another country in the same region. Several interviewees remarked that analysing mercury is not as complicated as analysing for instance Persistent Organic Pollutants (POPs) and therefore it is easier to have adequate capacity for mercury analysis.
  91. Based on data from interviews and the published reports, the evaluation consultant concludes that there is a clear rise in knowledge within existing mercury networks and the capacities of laboratories for mercury monitoring. Also gaps and lessons learned have been identified.
  92. **Output 2. Gain in knowledge and awareness on mercury monitoring in ambient air after one-year pilot test, and development of an air monitoring report (including interaction between active and passive sampling techniques)** has been assessed as fully delivered:
  93. In 2017, a one-year pilot study was conducted by CNR-IIA at ten sites in Argentina, China, Costa Rica, Ghana, India, Italy, Japan, Mongolia, the Russian Federation and South Africa. Six of these sites were chosen because in these countries the biomonitoring component was implemented. The other four sites (Argentina, Italy, Japan and South Africa) were selected to ensure regional coverage and because these sites were already included in the GMOS network. Out of these ten countries, nine delivered results.
  94. CNR-IIA developed and used a passive sampling system, and compared passive and active air samplers. At all ten sampling sites passive air samplers were tested, and at six

of these also active air samplers. Nine sites delivered their results to the project. An active air sampler is expensive and needs a well-trained person to operate. A passive air sampler is very cost-effective, more easily operated and does not require power. According to interviewees, the results of the passive samplers were consistent with those of the active samplers, thus the study showed that a passive sampler can be a good alternative for mercury monitoring of air. Even so, the report "Global Monitoring of Mercury – Outcomes from the GEF-funded project (September 2019)" states that "On the other hand, they also presented in some cases variable results, probably due to uncorrected management, added to the influence of local conditions (i.e. dust, high wind speed, etc.) along with other parameters and factors. In conclusion, further work into the testing of the developed Hg passives is essential to argue their validity in every condition".

95. Based on the results of the pilot study, two main reports and a video were prepared:
  - UNEP-GEF Project "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury" - Final Technical Progress Report (June 2018);
  - Practical instructions to use CNR-IIA Passive Air Samplers (PASs) for Total Gaseous Mercury (TGM) monitoring;
  - A video: Practical instructions for Mercury Passive Sampling.
96. The feedback from interviews showed that through the pilot study, the development of the two above mentioned reports and the video, as well as presentation of the pilot study at meetings and workshops, a high interest was generated on mercury monitoring in air and on the Passive Air Samplers. Knowledge and awareness were raised, and, as an interviewee remarked: "Governments could see that there is a comparatively easy and cost-effective way to undertake mercury monitoring in air."
97. **Output 3. Gain in knowledge and awareness on mercury biomonitoring through development of SOPs, including selection/defining of sample matrices and harmonized monitoring protocols** has been assessed as fully delivered.
98. This output corresponds to component 3 on human biomonitoring as mentioned in the ProDoc. Under this output, WHO managed six pilot studies in China, Ghana, India, Kyrgyzstan, Mongolia and the Russian Federation. The pilot countries were chosen based on a selection process and the interest they showed to participate. Costa Rica was also selected as one of the countries where the human biomonitoring component would be implemented, however, the protocol could not be adopted by the Ethics Committee in this country in time.
99. Based on the feedback received through questionnaires and interviews, the evaluation concludes that overall the pilot studies were conducted successfully. The aim of the pilot projects was to introduce and use harmonized approaches for the assessment of human exposure to mercury by analysing three matrices: scalp hair, urine and cord blood of pregnant women. Countries could select which of the proposed three matrices they would analyse; China, Ghana, India and Mongolia analysed mercury in all three biological samples, the Russian Federation analysed scalp hair and cord blood and Kyrgyzstan analysed scalp hair and urine. In most countries 250 samples per matrix were taken. A training was provided in Slovenia for the national coordinators and one analyst from the pilot country laboratory at the start of the project. Surveys were adapted to national context and translated.
100. Some of the main results mentioned by the respondents to the questionnaire were as follows: (i) the pilot study increased the capacity of the country to conduct human biomonitoring (within laboratories, and on how to conduct human biomonitoring) (ii) the

project provided reliable data on prenatal exposure to mercury (in some cases it was the first time such data was collected), (iii) the project supported the validation of a globally harmonized protocol for human biomonitoring, (iv) in one case, it was mentioned that the data the project provided were already used to start implementing risk reduction measures, (v) two respondents remarked that human biomonitoring studies were expanded to other areas, (vi) the pilot study led to increased international cooperation on human biomonitoring which will help the countries to increase their work on this topic.

101. Respondents and interviewees highlighted also some challenges and lessons learned: (i) The budget available was very limited, and meant that both partner organizations as well as the countries had to provide large amounts of co-funding (often from other national projects) during the pilot studies. Some respondents remarked that experts were financially undervalued, (ii) Capacity was raised, but some respondents mentioned that this capacity is still limited and needs further efforts to maintain and/or to extend to other parts of the country, (iii) in some countries bureaucracy within governmental bodies slowed down the work being implemented, (iv) community awareness raising, sensibilization and community engagement are very important to gain local support for conducting human biomonitoring (for example, in two countries persons were opposed to cutting of hair of pregnant women), (v) flexibility and adequate time for implementing human biomonitoring are important, as there can be unanticipated issues that can lead to delays, such as customs procedures and the necessity for a thorough approval process.
102. Based on the interviews and responses to the questionnaire and an analysis of project reports, the evaluation agrees with the conclusion from the report "Global Monitoring of Mercury – Outcomes from the GEF-funded project "develop a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury" that "the pilot projects confirmed the applicability of Standard Operating Procedures (SOPs) and the feasibility of conduction human biomonitoring studies in developing countries and countries with economies in transition."
103. **Output 4. Gain in awareness of mercury monitoring through development and distribution of mercury monitoring reports and a lessons learned report** has been assessed as fully delivered.
104. In the ProDoc, under component 4, it was originally planned to develop a Global Mercury Monitoring Plan. At the time the project document was developed, the Minamata Convention was however just being adopted (October 2013). The Convention entered into force only in 2017. Therefore, it was not clear at the start of the project what could actually be achieved within the project. The project has been referred to as a "moving target". Besides scientific knowledge, there is also a political and policy side to developing mercury monitoring arrangements, and these arrangements need to approval of the Parties to the Convention. Thus, the project could not develop a comprehensive Mercury Monitoring Plan, but through its studies, assessments and research was able to define all the elements that needed to be included in such a monitoring plan. These elements could then be discussed within expert groups of the Minamata Convention and used for the development of the Convention's monitoring guidance.
105. The different reports related to the interlaboratory assessment, air monitoring, human biomonitoring, and mercury networks already mentioned above have been distributed and were presented at different workshops and meetings. The reports presented the results of the different project components and were also shared with the Secretariat of the Minamata Convention where they are being used to develop monitoring guidance for Effectiveness Evaluation under the Convention. In this way, the project has contributed



to raising the awareness and knowledge of mercury monitoring of the direct project stakeholders, as well as the Minamata Convention stakeholders. Interviewees confirmed the importance of the reports produced for the work of the expert groups and the Secretariat of the Minamata Convention.

106. Under component 4, the ProDoc also planned for a lessons learned report to be produced. This is the report "Global Monitoring of Mercury – Outcomes from the GEF-funded project 'Develop a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury'" that was prepared in September 2019. This report clearly summarizes all the work that was done within the project, the reports and other publications that were prepared, the key deliverables, key findings, lessons learned, and describes how the project contributed to the discussion on Effectiveness Evaluation under the Minamata Convention. A Lessons Learned presentation had also been organized at COP2 of the Convention.
107. Based on discussion that took place at the second COP of the Minamata Convention, it was decided that the project would request a project extension which would provide the opportunity to address two matrices (besides human biomonitoring and air monitoring), namely biota and soil, which were not part of the original project document.
108. These two matrices were addressed in desk studies. The Biodiversity Research Institute developed the "Technical Information Report on Mercury Monitoring in Biota: Proposed components towards a strategic long-term plan for monitoring mercury in fish and wildlife globally". The Jožef Stefan Institute prepared the "Technical Information Report on Mercury Monitoring in Soil."

<b>Rating for Availability of Outputs:    Highly Satisfactory</b>
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#### **Achievement of Project Outcomes**

**Finding 9: The pilot projects related to air monitoring and human biomonitoring has led to an increased capacity of laboratories and other stakeholders on mercury monitoring in the pilot countries, and this capacity is being used in several countries to extend the work on human biomonitoring. Continued capacity building activities and training will be needed to maintain and extend the knowledge on mercury monitoring in pilot and other countries.**

**Finding 10: The pilot studies and additional research carried out within the project led to an improved understanding on and capacity for mercury analysis in humans and the environment to accurately determine their concentration globally using a harmonized approach. Based on this increased understanding, mercury monitoring guidance the Minamata Convention is being developed and is expected to be proposed at the next COP.**

109. **Direct Outcome 1: Technical and analytical baseline is strengthened, and information gaps are identified.** The evaluation consultant considers that this Outcome was fully achieved:
110. As described under the delivery of output 1, an interlaboratory assessment and an assessment of existing mercury networks was conducted. These assessments made the interest and capacities of laboratories to conduct mercury monitoring clear, identified existing networks and also identified gaps and needs. The review of the mercury monitoring networks shows for instance that some regions with the highest mercury emissions into the atmosphere (including Africa and Asia), are also the regions with a lack of capacity on mercury monitoring and a lack of data.
111. The baseline was also strengthened through cooperation with the International Atomic Energy Agency (IAEA) on mercury monitoring. In the report "Global Monitoring of

Mercury – Outcomes from the GEF-funded project 'Develop a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury' an overview is provided of the activities of the IAEA it is mentioned that "given the extensive expertise in quality assurance measures, the IAEA is well placed for consideration when exploring options to oversee and coordinate regional QA/QC (Quality Assurance and Quality Control) centres" and "The Environmental laboratories of the IAEA are prepared to assist UNEP and IAEA Member States to establish or strengthen environmental mercury monitoring efforts. Additional funding will be required to increase the IAEA's involvement in this area of the Minamata Convention's implementation."

112. **Direct Outcome 2: Improved national capacity (in pilot countries) to analyse mercury in ambient, including development of air monitoring reports** was fully achieved.
113. Based on the interviews held and the reports prepared, the evaluation concluded that capacity in pilot countries and of other stakeholders involved in the project has increased. The countries were trained on using passive air samples, and in 6 countries a comparison with active air samplers was conducted. The pilot projects, the reports and video produced generated a high interest in air monitoring and showed that air monitoring can be done relatively cheap with consistent and mostly adequate results.
114. **Direct Outcome 3: Improved capacity in developing pilot countries to analyse mercury in human samples, and improved understanding of how to monitor human exposure to mercury** was also fully achieved.
115. The interviews and questionnaires overall substantiate that the capacities in the pilot countries have improved through implementation of human biomonitoring activities and training. These countries participated in the selection process set up by WHO and thus actively requested support to increase their knowledge on and capacity in mercury monitoring. The questionnaires indicate that the support from WHO, UNEP, the Jožef Stefan Institute (that helped Mongolia and India in analysing their samples), and RECETOX (that analysed samples for Ghana and Kyrgyzstan) was very much valued and contributed to the countries' capacity to analyse mercury in humans. Several respondents also noted that capacity building programmes would be needed in future projects and that it is important to maintain and extend capacity (to e.g. other parts of the countries).
116. **Direct Outcome 4: Empowerment of pilot countries and other stakeholders to monitor mercury in a harmonized manner through defining all elements needed for the first global plan for monitoring human exposure to and environmental concentration of mercury.**
117. As mentioned previously, the project did not generate a Global Mercury Monitoring Report, as this was not feasible to do within the project and such a plan would also need the approval of Parties to the Minamata Convention. The project delivered the elements though for preparation of such a plan – through conducting pilot projects and preparing reports based on these pilot projects and on additional research – and in this way the project empowered the pilot countries and other stakeholders to monitor mercury using harmonized approaches. The project also directly contributed to the development of monitoring guidance for Effectiveness Evaluation under the Minamata Convention (and thus indirectly contributes to enabling the Parties to the Convention to monitor mercury once these monitoring arrangements are approved).
118. **Project Outcome 1: Improved understanding on and capacity for mercury analysis in humans and the environment to accurately determine their concentration globally.** was achieved:

119. Overall, the direct outcomes have led to an improved understanding on and capacity of all stakeholders directly involved in this project: first of all and foremost the pilot countries, but also the expert organizations, as well as for example BCRC-SCRC in Uruguay (which was trained in the project, as well as eight South American countries, and implemented human biomonitoring activities in South American countries), and also the Secretariat of the Minamata Convention and the Convention expert groups. It is expected that this improved understanding will lead to the full development of monitoring guidance for the Effectiveness Evaluation of the Minamata Convention, and that the monitoring arrangements will be presented at the next COP. Most interviewees were confident that the monitoring arrangements will be approved at the next COP, but possibly there will be some new suggestions and proposals that will need to be addressed first before the arrangements can be approved. The project is directly contributing to enabling the Parties of the Convention to monitor human exposure to and environmental concentrations of mercury accurately, even though it can take some time before Parties will actually start implementing monitoring arrangements and long-term results can be achieved (see also below under Likelihood of Impact).

120. **Drivers and assumptions from Outputs to Outcomes:** All the drivers and assumptions for the causal pathways from Output to Outcome held.

**Drivers:**

- Active UNEP support and guidance provided to increase cooperation and networking on mercury monitoring;
- Active distribution of monitoring plans and lessons learned report by UNEP and project partners;
- Stakeholders are interested in improving and harmonizing mercury monitoring;
- Active support, information and guidance provided by the main implementation partners, specifically WHO and CNR- IIA.

**Assumptions:**

- Project partners are willing to participate and are open to cooperation;
- National laboratories are interested to participate and willing to undergo an interlaboratory comparison study and submit the results;
- People are willing to provide hair and other samples for mercury concentration analysis.

121. Regarding the **drivers**, it can be concluded that UNEP provided active support and guidance, and actively sought to increase cooperation with relevant stakeholders. Interviewees and respondents overall valued the support provided by the two main project partners WHO and CNR-IIA, and this support was essential in realising the project outputs and outcomes. The reports prepared (including a report presenting the outcomes of the project) were shared with relevant stakeholders, such as the expert groups of the Minamata Convention, and lessons learned were also presented at COP2 of the Minamata Convention. All stakeholders in the project were actively engaged and showed high commitment to implementing the project activities.

122. The **assumptions** all held. Project partners actively participated and an adequate number of laboratories showed interest to be included in the mercury laboratory databank, as well as in the interlaboratory assessment. Within the human biomonitoring pilot studies, the SOPs and community sensibilization measures ensured that samples were provided and the local population was actively engaged.

**Rating for Achievement of project outcomes: Highly Satisfactory**

**Likelihood of Impact**

**Finding 11: Long lasting results (Intermediate States and Impacts as mentioned in the reconstructed ToC) can be achieved if the monitoring arrangements currently prepared by the Secretariat to the Minamata Convention will be approved by the Parties of the Convention and if funding schemes are available.**

123. This evaluation assessed the likelihood of the intended, positive impact becoming a reality, using the guidance provided by the UNEP Evaluation Office (see Table 7). The likelihood of impact being achieved in the future is assessed based on the reconstructed ToC at evaluation, on whether outputs had been made available and outcomes achieved combined with an analysis of whether assumptions and drivers from outputs to impact held.
124. Based on the assessment, the achievement of impact is assessed as **Likely**. Impact can certainly be attained if the monitoring arrangements that are expected to be discussed at the next COP of the Minamata Convention will be approved. Not all factors for achieving full impact as foreseen have been met yet. Most importantly, it is as yet unclear if adequate financial schemes and funding will be available.
125. It should be noted that the project is held responsible for realising outputs and outcomes, and it is recognised that impact will be realised outside of the lifetime of the project.

**Table 7: Analysis of likelihood of impact**

#	Criteria	Findings
1	Drivers to support transition <b>from outputs to direct outcomes</b> are partially in place/in place/not in place	All 4 drivers were in place: UNEP and partner organizations WHO and CNR-IIA provided active support and guidance. This support and the active cooperation between organizations involved in the project contributed greatly to outputs being delivered in a qualitative manner. All stakeholders were actively engaged and showed active involvement and interest in the mercury monitoring activities. The different reports and the report on the outcomes of the project were actively distributed and shared with all relevant stakeholders, including the Secretariat of the Minamata Convention and the Parties to the Convention.
2	Assumptions for the change process <b>from outputs to direct outcomes</b> hold/ partially hold/ do not hold	All three assumptions held: the project partners and relevant stakeholders were willing to participate and open to cooperation, laboratories showed good engagement and the stakeholders in the biomonitoring projects also participated actively (in some cases extra sensibilization activities were organized to ensure there were enough participants to provide samples).
3	Proportion of outcomes fully or partially achieved	The four direct outcomes and overall project outcome were achieved. With regard to the overall project outcome, it can be said that capacity was built of stakeholders directly involved in the project, and that understanding was raised of stakeholders who were directly and indirectly engaged in the project.

#	Criteria	Findings
4	Which outcomes? (the most important to attain intermediate states / impact or others)	All outcomes.
5	Level of outcome achievement (full, partial)	Based on the above, as mentioned under criteria three, it can be concluded that the outcomes are fully achieved.
6	Drivers to support transition from <b>direct outcome(s) to project outcomes to intermediate states</b> are not in place/ in place/ partially in place	The drivers from Direct Outcome to Intermediate States are partially in place. In many projects and other countries there is a (continued) interest in harmonizing mercury monitoring. However, not in all pilot countries and other countries there are currently awareness raising and capacity building activities being implemented. This would depend greatly on the monitoring arrangements for the Effectiveness Evaluation under the Minamata Convention being approved in the near future. Also, approval of these arrangements would facilitate funding schemes becoming more readily available.
7	Assumptions for the change process from <b>direct outcomes to project outcomes to intermediate states</b> hold/ partially hold/ do not hold	Out of the five assumptions from outcomes (direct and project outcomes) to intermediate state four hold and one partially holds. It is unclear if countries, institutions and donors will make adequate funding available for (continued) mercury monitoring, awareness raising and capacity building activities.
8	Proportion of Intermediate states achieved (none, some, all)	The intermediate states have not yet been achieved. Implementation of a harmonized approach for mercury monitoring depend on the outcomes of the next COP and approval of the monitoring arrangements that are expected to be presented at this COP.
9	Drivers to support transition from <b>intermediate states to impact</b> are not in place/ in place/ partially in place	The drivers are the same as the drivers from outcome to intermediate state, see also point 6, and partially hold.
10	Assumptions for the change process from <b>intermediate states to impact</b> hold, partially hold, do not hold	The assumptions are the same as the assumptions from outcome to intermediate state, see also point 7, and are partially in place. In conclusion it can be said that stakeholders are interested, actively involved and willingness to cooperate is present. Whether there will be adequate funding schemes, and whether funding will also be made available by governments, institutions and donors, is not fully clear and depends in part on the approval of the monitoring arrangements for the Minamata Convention.
	<b>OVERALL RATING</b>	<b>Moderately Likely to Likely</b>

**Rating for Likelihood of Impact: Likely**

**Rating for Effectiveness: Highly satisfactory**

## **E. Financial Management**

**Finding 12: The project's financial management adhered to UNEP's financial policies and procedures. The available financial information was incomplete and there were some inconsistencies in the expenditure reports.**

**Finding 13: For the co-finance only total amounts per organization were recorded. Due to the lack of detail in the co-finance and the final financial report it was difficult to assess cost-efficiency.**

### **Adherence to UNEP's Financial Policies and Procedures**

126. UNEP used UNEP's financial management systems and procedures in the management of this project. Finances were recorded in the UMOJA system (the change to UMOJA took place during the project). The Fund Management Officer in Nairobi was in contact with both the Project Manager (Executing Agency) and Task Manager (Implementing Agency). Expenditure reports were prepared on a six-monthly or yearly basis.
127. The project had three no-cost project amendments (in 2017, 2018 and 2019). The amendments included a justification and budget revision. The main reasons for the project amendments were to request additional time to implement the project activities or, in the case of the last amendment, to conduct extra activities.

**Rating for Adherence to UNEP's Financial Policies and Procedures: Satisfactory**

### **Completeness of Financial Information**

128. The evaluation consultant received expenditure reports, including the final report; one expenditure report for the period July to December 2016 was missing and therefore not available to the evaluation. The expenditure reports contain some inconsistencies. For example, the "Total cumulative to date" as mentioned in the report from December 2017 should be the same as the "Cumulative previous years" in the next report from July 2018, however, these amounts are slightly different. This inconsistency is found in other reports as well. Furthermore, the amount for "Total cumulative to date" in the last three reports (before the final report) is getting lower instead of higher as would be expected; it means that the total left-over budget is lower in June 2019 than in December 2019. Also, the "cumulative expenses from previous years from IMIS" (the financial system used before UMOJA) are only mentioned in the later expenditure reports. Changes and adjustments were made from one to the next report without adjusting previous reports.
129. The final expenditure report was made according to budget lines and not per component or outcome. A report with expenses per component or outcome could not be provided. A summary of this final report, including expenditure ratio for actual divided by planned expenditure is presented below.
130. The overall expenditure ratio is 0.98. There is still an amount of USD 11,291.40 as outstanding commitment in the UMOJA system. This outstanding commitment is currently being closed. Not all evaluation costs were included in the final expenditure report yet. After settling of all costs and outstanding commitments, a new final financial report will need to be prepared.

131. As can be seen in the table below, some planned budget lines such as "Group training", "Meetings/Conferences", "Expendable equipment", "Reporting costs" and "Sundry" were not used. However, the amount for the budget line "Sub-contracts" was much higher than planned and expenses that were planned to be included under the unused budget lines were part of the Sub-contracts and of the co-financing (see also table 9 below).
132. The actual budget for travel is much higher than the planned budget for travel. UNEP explained that for several meetings it turned out that the organizer could not directly purchase flight tickets or pay daily subsistence allowances, for example for the meeting organized in Rome by CNR-IIA in 2018, and for the meeting with the IAEA in 2019. Therefore, UNEP arranged and paid for the travel of all participants.
133. No expenditures on a detailed level were provided to the evaluation. The co-financing table only contained total amounts of co-financing. UNEP asked partner organizations to submit this total and indicated to these organizations what would be considered co-finance. Therefore it has been difficult to assess expenditure and co-financing at a more detailed level and to assess cost-efficiency, although the high amounts of co-financing from partner organizations, as well as the responses of interviewees, clearly indicate that the projects were implemented in a cost-effective way. Furthermore, some respondents to the questionnaire remarked that they implemented activities making use of other national projects. Due to the lack of detail of the co-finance table, it is not fully clear if (some of) these national projects mentioned by the national focal points are included within the co-finance table of the partner organizations, or that these projects could be regarded even as additional co-finance.
134. The total planned cash budget (GEF contribution) was USD 850,000. The actual expenditure is USD 828,974. The total cash expenditure represents 98% of the planned cash budget (changes in cash expenditure are expected to be made, as there is still an outstanding commitment and no evaluation costs were included in the final expenditure report thus far). The total secured co-finance was USD 3,851,000, and the planned co-finance was USD 3,005,411. This means that the actual co-finance generated was 128.1% compared to the planned co-finance.

**Table 8: Expenditure table per budget lines**

Component/sub-component/output All figures as USD	Estimated cost at design	Actual expenditure	Cost/	Expenditure ratio (actual/planned)
Project personnel	60,000	36,869		0.61
Consultants	47,500	20,954		0.44
Administrative support				
Travel on official business	21,000	60,791		2.89
Sub-contracts (UN entities)				
Sub-contracts (supporting organizations)	182,500	685,217		3.75
Sub-contracts (for commercial purposes)				
Group training	145,000			0
Meetings/Conferences	185,000			0
Expendable equipment	54,000			0
Non-expendable equipment				
Premises				
Operation and maintenance of equipment		25,142		
Reporting costs	78,000			0

Sundry	57,000		0
Hospitality and entertainment			
Evaluation	20,000		0
<b>GRAND TOTAL</b>	<b>850,000</b>	<b>828,974</b>	0.98

Source: ProDoc and final financial report shared by the Fund Management Officer.

**Table 9: Co-finance table**

Co-financing organization	Type of co-financing	Planned co-financing (USD)	Actual co-financing (USD)
UNEP	In-kind	895,022	1,186,000
CNR - National Research Council of Italy	In-kind	1,700,000	1,770,000
WHO	In-kind	410,389	565,000
BRS Secretariat	In-kind		40,000
RECETOX	In-kind		80,000
BRI - Biodiversity Research Institute	In-kind		50,000
JSI - Jožef Stefan Institute	In-kind		20,000
BCRC-SCRC-Uruguay	In-kind		60,000
IAEA - International Atomic Energy Agency	In-kind		80,000
<b>TOTALS</b>		<b>3.005.411</b>	<b>3.851.000</b>

Source: ProDoc and final co-financing report shared by the Fund Management Officer.

**Rating for Completeness of Financial Information: Moderately Satisfactory**

**Communication Between Finance and Project Management Staff**

135. The Fund Management Officer in Nairobi communicated directly with the Project Manager as well as with the Task Manager and the Fund Management Officer at the Chemical and Health Branch. The Task Manager checked reports and provided these to the Fund Management Officer in Nairobi. Overall, no specific financial problems were reported, although financial reporting was sometimes late.

**Rating for Communication Between Finance and Project Management Staff: Satisfactory**

136. The analysis of this section is based on a set of criteria presented in the table below:

**Table 10: Rating of financial management components**

Financial management components:	Rating	Evidence/ Comments
<b>1. Adherence to UNEP's policies and procedures:</b>	<b>S</b>	
Any evidence that indicates shortcomings in the project's adherence to UNEP or donor policies, procedures or rules	No	The projects were managed in line with UNEP's regulations and using the UNEP UMOJA system.
<b>2. Completeness of project financial information:</b>	<b>MS</b>	
Provision of key documents to the evaluator (based on the responses to A-H below)		



Financial management components:		Rating	Evidence/ Comments
A.	Co-financing and Project Cost's tables at design (by budget lines)	Yes	The ProDoc contained co-financing, summary and full budgets.
B.	Revisions to the budget	Yes	The project had three co-cost amendments, including revised budgets.
C.	All relevant project legal agreements (e.g. Small-scale Funding Agreement, PCA, ICA)	Yes	All relevant project agreements were provided.
D.	Proof of fund transfers	Yes	Some proofs of fund transfers from before UMOJA could not be provided due to COVID-19 restrictions for visiting the UNEP office.
E.	Proof of co-financing (cash and in-kind)	Yes	Total amounts of co-financing were provided by the FMO.
F.	A summary report on the project's expenditures during the life of the project (by budget lines, project components and/or annual level)	Yes	Expenditure reports (one report was missing) and a final financial report by budget lines were provided to the evaluation. The expenditure reports contained inconsistencies that were not explained
G.	Copies of any completed audits and management responses (where applicable)	N/A	N/A No project audits needed to be prepared. UNEP has annual audits.
H.	Any other financial information that was required for this project (list):	No	All relevant information (except for one expenditure report) was provided.
<b>3. Communication between finance and project management staff</b>		<b>S</b>	
Project Manager and/or Task Manager's level of awareness of the project's financial status.		S	Overall, the Project and Task manager's awareness of the financial status was adequate, although they were not aware of the still outstanding commitment in the UMOJA system.
Fund Management Officer's knowledge of project progress/status when disbursements are done.		S	The Fund Management Officer was aware of the project progress and was in contact with UNEP EA and IA on a regular basis.
Level of addressing and resolving financial management issues among Fund Management Officer and Project Manager/Task Manager.		S	No specific issues were reported.
Contact/communication between by Fund Management Officer, Project Manager/Task Manager during the preparation of financial and progress reports.		S	Overall, the communication between the Fund Management Officer and the Project and Task Manager was well organized. Sometimes, there were delays in submitting financial reports.
Project Manager, Task Manager and Fund Management Officer responsiveness to financial requests during the evaluation process		S	The Project Manager and coordinator, the Task Manager and the Fund Management Officer were responsive to the requests of the evaluation consultant
<b>Overall rating</b>		<b>S</b>	

**Rating for Financial Management: Satisfactory**

## F. Efficiency

**Finding 14: UNEP partnered with experienced organizations and made good use of existing initiatives, which contributed to implementing project activities in a qualitative and efficient manner. However, more realistic planning at project design could have prevented that three extensions were needed to finalize all project activities.**

137. The project had three no-cost extensions. In the first period of the project, activities were not implemented in time, mostly due to administrative delays, including the change to UMOJA, and to change of staff at UNEP. At the end of the project, all planned activities and pilot studies were finalised and the last project extension also provided the opportunity to research, besides monitoring of air and human biomonitoring, soil and biota.
138. The initial planned duration of two years for the project is a weakness of the project design. It was unlikely that the project could have been implemented within two years, considering one-year pilot studies on air monitoring and human biomonitoring were planned (for which an adequate amount of preparation time would be needed, including a thorough selection process), and at the time it was unclear how the Minamata Convention would develop, and influence the project activities. The extensions of the project are therefore justified, as it could be expected not all activities could be implemented within the given timeframe, even if there had not been administrative delays or changes of crucial staff. The amendments were necessary in order for the outputs to be achieved with a high quality. The third amendment also made it possible for the project to assess two additional matrices (biota and soil) and in this way provided essential contributions to the discussions in the expert groups of the Minamata Convention.
139. The projects made good use of existing partnerships and other initiatives (COPHES, GMOS). The main project partners were experienced organizations, and their knowledge, structures, networks and infrastructures were used to implement this project in an efficient and cost-effective way. High amounts of co-finance from the partner organizations were leveraged. The respondents to the questionnaire also noted that human biomonitoring activities were sometimes implemented by making use of other national projects.

**Rating for Efficiency: Satisfactory**

## G. Monitoring and Reporting

**Finding 15: The ProDoc contained a concise M&E plan. Clear indicators were not included in the Project Results Framework. Project monitoring was undertaken in line with the M&E plan and adaptive management was shown where necessary to improve the results of the project.**

### Monitoring Design and Budgeting

140. The ProDoc contains a short narrative section with a Monitoring and Evaluation (M&E) Plan and a table describing the different M&E activities, the purpose of the activity, the responsible party and the time-frame for conducting the M&E activities. The M&E plan included the preparation of annual Project Implementation (PIR) reports, the establishment of a Project Steering Committee, appointment of national focal points for major project activities, as well as organization of an Inception Workshop, and preparation of an inception report and a final report. The M&E plan was not

disaggregated by stakeholder groups, including gender and minority groups. However, this was not obligatory at the time the project was developed.

141. The M&E Plan also planned for a mid-term and terminal evaluation. The mid-term review was not organized; UNEP informed the evaluation that conducting a mid-term evaluation was not obligatory according to GEF rules. The evaluation consultant did not receive documents that confirmed the reasons why a mid-term evaluation was not conducted.
142. The ProDoc also contains a Project Results Framework with mid-term and end of project targets. The sources of verification for reaching these targets are included in the Project results Framework. Clear indicators are not included.

#### **Rating for Monitoring Design and Budget: Moderately Satisfactory**

#### **Monitoring of Project Implementation**

143. Monitoring of project implementation was carried out in line with the M&E plan defined in the ProDoc. Monitoring data were collected by the Project Manager and the coordinator who consulted with the main implementation partners on a regular basis and discussed the necessity of changes and adaptations to project activities. Monitoring data were presented in the PIR reports.
144. Four Project Steering Committees ((in November 2014, (online) in March 2017, in June 2017, and in February 2018) were organized in line with the M&E plan in the ProDoc. During these meetings implementation of activities and achievement of results were discussed. Many additional ad hoc discussions took place with project partners during workshops and at other meetings (e.g. at the COPs of the Minamata Convention). Adaptive management was shown by adjusting the project where necessary (e.g. adding studies on biota and soil) to achieve the best possible results for supporting the development of monitoring guidance within the Minamata Convention.

#### **Rating for Project Reporting: Satisfactory**

#### **Project Reporting**

145. The annual PIR reports assessed the mid-term and end-of-project targets, the possible risks for the implementation of the project, the project implementation status, the changes that were made to the project and the reasons for this, and provided progress ratings. The PIR reports provided valuable information on the progress and achievements of the project. A final narrative report was also prepared, providing a good overview of all activities implemented, the collaboration with project partners, how the project nurtured sustainability, and what were the lessons learned and best practices.
146. The reports that were prepared on monitoring of air, soil, biota, and human biomonitoring and the report presenting the Outcomes of the project also provide a clear presentation of what the project achieved and how the pilot studies were implemented.

#### **Rating for Project Reporting: Satisfactory**

#### **Rating for Monitoring and Reporting: Satisfactory**

## H. Sustainability

### Socio-political Sustainability

**Finding 16: Socio-economic factors did not greatly affect the implementation of project activities but can influence mercury monitoring projects and should therefore be considered when drafting similar projects.**

147. Social and political factors were not assessed in the ProDoc's risk table as it was not expected these factors would influence the project. Within the project these factors did not have an important effect on the timely implementation of the activities, except for Costa Rica, where the Ethics Committee did not approve the SOPs for the pilot study.
148. Some respondents to the questionnaire and interviewees stated that social and political factors affected (or could affect) the implementation of certain activities, and that these factors should be considered in future mercury monitoring and similar projects. For example, political factors can influence mercury monitoring at artisanal gold mine sites, and ethical and social considerations need to be considered when taking samples and interpreting the analyses of samples (it was for instance mentioned that in two countries cutting hair of pregnant women was not easily accepted and that mercury analysis showed that the pattern of fish consumption is also affected by socio-economic factors). Some respondents also mentioned that changes in governmental bodies, bureaucracy, and a low level of capacity in-country can influence the timely and effective implementation of mercury monitoring.
149. It can be expected that parties to the Minamata Convention, once the monitoring arrangements are approved, will be interested to conduct mercury monitoring on a national, regional and global level, although governments may possibly not always prioritise mercury management, probably due to political factors and financial reasons.

**Rating for Socio-Political Sustainability: Likely**

### Financial Sustainability

**Finding 17: Project outputs could be achieved thanks to UNEP being able to activate large amounts of co-financing. The lack of cash budget meant that stakeholders had to ensure that activities could be implemented through other projects, and in some cases led to financial undervaluation of stakeholders.**

**Finding 18: Financial sustainability of mercury monitoring activities and projects in developing countries can only be achieved if the monitoring arrangements will be approved by the Parties of the Minamata Convention and is dependent on availability of funding by GEF, SIP and other funding schemes and donors.**

150. The cash budget available to implement the project was not adequate for the activities that were planned to be implemented. UNEP managed to activate large amounts of co-financing (higher than planned in the ProDoC) through which all activities could be conducted. Even so, it was regularly mentioned by interviewees and respondents to the questionnaire that the cash funding was not at an adequate level and meant that stakeholders had to rely on activities being carried out with support from activities in other projects. Several interviewees and one respondent to the questionnaire mentioned that the lack of cash budget meant experts and stakeholders were financially undervalued.

151. It can be expected that financial factors will play a role in developing countries and regions that will undertake mercury monitoring once the monitoring arrangements are approved. The financial mechanism for the Minamata Convention is made up of the Global Environment Facility (GEF) and the Specific International Programme (SIP). However, currently it is not clear how the GEF will contribute to mercury monitoring (once the monitoring arrangements for Effectiveness Evaluation under the Minamata Convention has been approved), possibly by making monitoring part of a project focused on reducing exposure to mercury. The SIP is expected to provide smaller amounts of funding. Probably countries and regions will need other funding sources to include mercury monitoring in their projects. It was mentioned in interviews that in Asia the Government of Japan is already funding a mercury monitoring project.

**Rating for Financial Sustainability: Moderately Likely**

### **Institutional Sustainability**

**Finding 19:** No major issues regarding institutional sustainability of the main project implementing partners were identified. Nevertheless, in many countries there is still limited institutional and financial sustainability. In future projects where mercury monitoring plays a role, it is necessary that national government bodies and institutions (such as laboratories) are supported in building and maintaining capacity.

152. There were no issues within the project related to institutional sustainability of the Executing Agency UNEP, co-executing agencies WHO and CNR-IIA, and other project partners. The national stakeholders overall very actively contributed to the project, but some interviewees and respondents mentioned that there is lack of capacity, bureaucracy and frequent staff turnover in governmental bodies and institutions in some countries. Not in all countries the capacity at laboratories was of an adequate level to analyse the samples taken. Therefore in future mercury monitoring projects, institutional sustainability at national level may affect the effective implementation of mercury monitoring activities. Interviewees and respondents to questionnaires remarked that countries need further support, and that capacity needs to be built and maintained.

**Rating for Institutional Sustainability: Likely**

**Rating for Sustainability: Moderately Likely**

## **I. Factors Affecting Performance and Cross-Cutting Issues**

153. The evaluation looks at seven factors that may affect project performance, as follows:

### **Preparation and readiness**

**Finding 20:** There were delays of an administrative nature and due to staff change in the first period of the project. Overall, UNEP and the main project partners were technically well prepared and ready to carry out the activities under each project. The most relevant partners were identified and involved early at project inception.

154. At the start of the project there were delays mainly of an administrative nature (contracting, delays in transfer of funds which were partly connected to the introduction

of UMOJA) and also due to staff change. Even though these delays did not lead to any critical issues, there was a need to extend the project's duration.

155. The technical preparation and readiness of UNEP and project partners was well organized. UNEP had identified the most relevant project partners that were expected to be able to contribute to the project using their extensive experience in air monitoring, human biomonitoring and laboratory work during project design or at the start of the project. The capacities and experience of main project co-executing partners were well described in the ProDoc. A first project Steering Committee meeting was held in September 2014 at the start of the project.

#### **Rating for Preparation and Readiness: Satisfactory**

#### **Quality of project management and supervision**

**Finding 21: After the delays at the start of the project, the project was managed and supervised well. All interviewees and respondents highly valued the support provided by UNEP and its project partners.**

156. The cooperation between UNEP, the main project implementing partners CNR-IIA and WHO worked well, was constructive and had a positive impact on achieving all outputs. Interviewees and respondents highly valued the management, support and inputs provided by UNEP. The evaluation team considers that this had a positive influence on the projects' performance and that the project was well managed (after the initial delays in starting up the project).
157. The Project Steering Committee – including UNEP, WHO, CNR-IIA - met four times, and also had informal discussions (where other project partners also participated) at workshops and other meetings.

#### **Rating for Quality of Project Management and Supervision: Highly Satisfactory**

#### **Stakeholder participation and cooperation**

**Finding 22: Active and strong cooperation of all involved project partners resulted in the delivery of high-quality outputs.**

158. The level of stakeholder participation and cooperation of all stakeholders has been high from the start of the project. This active and broad cooperation has resulted in the outputs being delivered and the outputs being of high quality. UNEP's strategy to work with experienced partners was effective for attaining good results. Human biomonitoring activities were successfully managed by WHO and implemented in six countries, and CNR-IIA used its extensive network and knowledge of mercury monitoring in ambient air to effectively conduct pilot studies using active and passive air samplers in ten countries. RECETOX conducted an interlaboratory assessment and other partners contributed to defining standard operating procedures (such as the Institute of Health Carlos III) and to analyses of samples.
159. UNEP regularly consulted project partners during implementation of activities. WHO and CNR-IIA frequently discussed with partners at national and local level during the implementation of their pilot studies. RECETOX and the Jožef Stefan Institute supported countries in the analyses of samples and contributed to raising awareness and building capacity on analysis in these countries. There was also direct exchange between the national coordinators of the human biomonitoring component at trainings and workshops and in this way, they also learned from each other.

160. All people interviewed were very satisfied with the teamwork and cooperation and appreciated the quality and level of support provided by UNEP and partners. The respondents to the questionnaire highly valued the level of support, in this case mainly by WHO as they managed this component, provided to them.

**Rating for Stakeholders' Participation and Cooperation: Highly Satisfactory**

**Responsiveness to human rights and gender equity**

**Finding 23: Gender and human rights aspects were taken into account in the human biomonitoring component of the project and women were represented well within the project. The SOPs and protocols, as well as the needed approval from the Ethics Committees, ensured that gender and human rights aspects were considered well.**

161. As mentioned in the ProDoc, this project was mostly of a scientific nature and therefore gender aspects were of a different dimension and did not play a specific role, except for the human biomonitoring component. Women and children are especially susceptible to mercury exposure. This vulnerability was considered in the design of the monitoring activities of pregnant women, such as the Standard Operating Procedures and the Survey Protocol guide for assessment of prenatal exposure to mercury. It was also mentioned by interviewees that women were well represented in the fieldwork executed in the pilot countries, as it was noted that pregnant women preferred to be approached by women instead of men. Respondents to the questionnaire also stated that the approval of the Ethics Committees before the human biomonitoring activities started ensured consideration of human rights.
162. Even though gender aspects did not play a specific role in other parts of the project, women were well represented in the project. Of the 16 persons interviewed from the partner organizations, 11 were female and 5 were male. Overall, the evaluation consultant considers that UNEP and its project partners' responsiveness to human right and gender aspects was satisfactory and that protocols were in place and adhered to.

**Rating for Responsiveness to Human Rights and Gender Equity: Satisfactory**

**Environmental and Social Safeguards**

**Finding 24: Aspects related to environmental and social safeguards have been included the ProDoc and were adhered to during the project. The project contributed to SDGs related to chemicals and environment.**

163. Environmental and social safeguards are discussed in appendix 7 of the ProDoc. The sampling and analytical work of participating laboratories were carried out in accordance with international safety standards and quality control. Countries that would participate in the project were asked to sign a statement of interest by both the health and environmental sector. The ProDoc also mentions that environmental safeguards would be applied throughout the project, for example by restricting travel to the necessary, reducing the use of paper to a minimum, and circulating documents by email rather than sending hard copies. WHO standardised protocols were expected to be used in order to avoid accidents and to ensure proper handling of samples. Used samples were planned to be treated as waste and as such would be managed properly in the laboratories.
164. The project contributed to Sustainable Development Goals 3.9, 3.13, 6.3, 12.4, 17.6 and 17.18. These include the goals related to reducing the number of death and illnesses from hazardous chemicals and air, strengthening the capacity for early warning, risk



reduction and management of national and global health risks, and achieving the environmentally sound management of chemicals and waste in order to minimize adverse impacts on human health and the environment. The project contributed to reducing negative effects on human health and the environment by improving mercury monitoring. Furthermore, by defining elements to be included in the monitoring guidance under the Minamata Convention, the project is also contributing indirectly to meeting the international commitments of countries related to this Convention.

165. The project team made efforts to keep UNEP's environmental footprint minimal. For example, electronic versions of all reports and documents were made available, back-to-back meetings were organized, and several virtual meetings and discussions took place. No issues related to environmental and social safeguards were reported, and risk ratings were monitored regularly.

**Rating for Environmental and Social Safeguards: Satisfactory**

**Country ownership and driven-ness**

**Finding 25: Governmental bodies, institutions, organizations and experts on a national level within the pilot project countries were overall actively committed to ensuring that the pilot studies were implemented well.**

166. Within this project, countries were directly involved within the pilot studies on air monitoring and human biomonitoring. Out of ten countries involved in air monitoring, nine delivered results. Out of the seven countries selected for participation in the human biomonitoring component, six implemented pilot projects. The ministries, institutions, organizations and experts overall showed active engagement and interest in implementing activities and delivering outputs of a high quality. Several respondents to the questionnaire noted that bureaucracy sometimes delayed implementation of activities to a limited extent. Several respondents also indicated that they already have extended their work on human biomonitoring.

**Rating for Country ownership and Driven-ness: Satisfactory**

**Communication and awareness raising**

**Finding 26: The ProDoc contains a chapter on communication and awareness raising, but no methodical communication strategy was prepared. The project did not implement a structured approach to communication and awareness raising. Nevertheless, the ad hoc communication, networking and awareness raising efforts that were undertaken were done adequately and effectively.**

167. The ProDoc contains an appendix on "Public Awareness, Communications and Mainstreaming". The information provided in this appendix is brief but relevant. It is mentioned that the results of the project will be shared with policy-makers and efforts will be made during the project to raise awareness of the targeted populations. The appendix also briefly discusses that the underlying objective of the project is the promotion and mainstreaming of mercury monitoring activities into national policies and plans. To this end, efforts will be made to ensure understanding of the value of the project activities and commitment to sustained monitoring from national responsible authorities of participating laboratories, as well as a broader group of countries. In addition, the project planned to assist participating laboratories in positioning mercury monitoring in their work plan and as part of the national health, environment and/or



chemicals management policy. Finally, recommendations were expected to be made for the establishment of an adequate legal and institutional infrastructure for mercury monitoring including sustainable financing.

168. The communication and awareness raising efforts during project implementation focused on informing the Minamata Convention and its Parties of the results of the project, on how the results of the project could contribute to the monitoring arrangements for the Effectiveness Evaluation of the Convention, and on networking and cooperation. Reports on air, soil and biota monitoring, as well as human biomonitoring, were shared with relevant stakeholders. Side events were organized, including a side event on lessons learned at COP2. Several leaflets, posters and brochures were made and shared.
169. The evaluation consultant considers that the communication, networking and awareness raising efforts that were undertaken were done regularly, adequately, well targeted and effectively. The reports produced contributed to the work of the Minamata Convention and awareness and interest was raised on mercury monitoring. Even so, not everything that was planned to be done at project design and that would have been relevant was undertaken. No structured outreach activities were carried out based on a communication and outreach plan, communication was mostly implemented on an ad hoc basis, and communication, awareness raising and outreach activities were not monitored.

**Rating for Communication and Awareness Raising: Satisfactory**

**Rating for Factors Affecting Performance and Cross-Cutting Issues: Satisfactory**

## VI. CONCLUSIONS AND RECOMMENDATIONS

### A. Conclusions

170. Based on the Findings of the project, the evaluation consultant has drawn the following main conclusions:
171. **Conclusion 1: UNEP and project partners have delivered high quality outputs related to monitoring of human exposure to and environmental concentrations of mercury. The project successfully implemented pilot studies on air monitoring in ten countries and on human biomonitoring in six countries, as well as developed desk studies on biota and soil. These studies and pilot projects have contributed to an increased understanding on harmonized approaches to mercury monitoring.**
172. The pilot study on air monitoring in ten countries compared active and passive air sampling and showed that Passive Air Samplers can be a good tool to monitor mercury; it is cost-effective, does not require power and does not need specific skills to operate. The human biomonitoring studies in six pilot countries confirmed the applicability of SOPs and the feasibility of conducting human biomonitoring studies in developing countries and countries with economies in transition. Both pilot studies generated interest of stakeholders involved in mercury pollution. The two desk studies on biota and soil, two extra activities that were not planned at the start of the project but became relevant during discussions at the second COP of the Minamata Convention, helped to shape the discussions on mercury monitoring within the experts groups of the Minamata Convention. (Findings 5, 6, 7, 9, 10)
173. **Conclusion 2: UNEP's constructive cooperation with experienced project partners has been essential for the effective delivery of project outputs, and an increase of knowledge and capacity on mercury monitoring in project countries.** UNEP worked with experienced organizations on implementing activities and delivering the outputs, such as WHO, CNR-IIA, RECETOX, the Jožef Stefan Institute and the Biodiversity Research Institute. The project built on the project partners' extensive expertise and networks to facilitate project implementation.
174. Consultations with key stakeholders confirmed the rise in awareness and capacity in the pilot project countries, as well as the interest and engagement of all stakeholders involved. The capacity generated in the pilot projects is currently being used to extend the work on mercury monitoring in several countries. Interviewees and respondents to the questionnaire remarked that it will be necessary to extend and maintain capacity, and that capacity building programmes will be crucial in other countries and regions. The final narrative report of the project also mentions that: "A global monitoring plan for mercury can be built on already existing initiatives. However, long-term capacity building strategies, especially in some regions (i.e. Africa, South Asia, Pacific and Latin America) with due consideration of long-term sustainability are still needed". (Findings 7, 9, 10, 14, 19, 21, 22)
175. **Conclusion 3: The project has provided important contributions to the development of monitoring guidance for Effectiveness Evaluation under the Minamata Convention. If these monitoring arrangements will be approved by the Parties to the Minamata Convention and if adequate cash funding and co-finance is available, it can be expected that long term results can be achieved.** At the start of the project it was not clear how the project could contribute to the Minamata Convention on mercury (as it was adopted only in 2013 and entered into force in 2017) and thus it was unclear what the project could actually achieve. Hence, the project has been referred to as a "moving target". Via implementing pilot studies in project countries and, after discussions at

COP2, researching two additional matrices on soil and biota, the project team provided valuable contributions to the discussions on and development of the mercury monitoring guidance for Effectiveness Evaluation of the Minamata Convention. At the last COP, monitoring arrangements have already been discussed and it was decided that at the next COP the monitoring guidance will be presented and, hopefully, approved. Some interviewees mentioned that it is possible that some additional adjustments will need to be made before the Parties to the Convention will fully approve the monitoring arrangements, but interviewees are confident that the monitoring guidance based on the results of this project will become part of the Minamata Convention in the near future.

176. Once the monitoring guidance is approved, it is expected that countries and regions will use this guidance for a harmonized monitoring approach, and thus long-term results (such as improved measures to reduce mercury exposure and mercury concentrations, and finally reduced risk to human health and the environment posed by mercury) can be achieved. As many developing countries will need additional financial support for this, long term results are also dependent on the availability of financing schemes (such as the GEF and SIP) and other funding. Generally the funding schemes will also require co-financing. Within the project large amounts of co-finance could be generated, which made it possible to implement activities in a cost-effective way. However, it was also noted that the limited cash funding led to an undervaluation of stakeholders. Recording co-finance in more detail could have contributed to raising the visibility of partner contributions. (Findings 8, 10, 11, 13, 17, 18)
177. **Conclusion 4: The project identified the main mercury networks and assessed laboratory capacity related to mercury analyses. The interlaboratory assessment showed that there is adequate capacity in all regions to analyse mercury. However, capacity in some countries or regions needs to be improved.** Within the project a Global Review of Mercury Monitoring Networks was prepared, and a Mercury Laboratory Databank was set up. The global review showed that there is capacity and knowledge on mercury but that in some regions there is a lack of capacity and information (for example in Africa, as also noted by interviewees). In total 210 laboratories from 60 countries gave feedback on their sampling and analytical capacities. RECETOX organised an interlaboratory assessment. A selection of laboratories was invited to analyse the same samples of three different matrices. There were 80 laboratories invited, 42 laboratories from 29 countries had registered for the global assessment and 38 laboratories from 28 countries worldwide delivered results. The interlaboratory assessment demonstrated that there is adequate capacity, also in developing countries, and in all UN regions, to analyse mercury. Interviewees stated that such assessments need to be repeated at regular intervals.
178. Some respondents mentioned that in-country capacity remains important, as sending samples from one country to another country in the same region is not necessarily straightforward. Sometimes, it can be easier to ship samples from a country in a region to for instance Europe than to another country in the same region. During the pilot studies on human biomonitoring, countries also needed assistance with analysing samples. RECETOX analysed samples from Ghana and Kyrgyzstan and the Jožef Stefan Institute supported Mongolia (by sending an analyst to Mongolia) and India with analyses of their samples. (Findings 4, 9)
179. **Conclusion 5: Aspects on human rights, gender and vulnerable groups are important in mercury. The Minamata Convention pays specific attention to these effects on women and mentions the need to establish strategies to prevent the exposure of vulnerable populations to mercury. Gender issues and human rights issues did not play a specific role in all project components. In the component of human biomonitoring, gender and human rights aspects were taken into account; the SOPs and protocols, as well as the**

**needed approval from the Ethics Committees, ensured that gender and human rights aspects were considered well.** In May 2021, the Minamata Convention published a brochure on "Gender equality and mercury." As the brochure describes "all people are exposed to mercury on some level, but the greatest concern revolves around the exposure of women of child-bearing age because of its impact on future generations." It is explained that mercury in maternal blood is directly transferred to the developing foetus through the placenta, and that children, infants and foetuses are at the highest risk because of the development of their nervous systems. Currently, the Secretariat of the Minamata Convention is developing a proposal for a gender roadmap, with the objective of mainstreaming gender within its programme of work.

180. This project was mostly of a scientific nature and therefore gender aspects were of a different dimension and did not play a specific role, except of course for the human biomonitoring component. Women and children are especially sensitive to mercury exposure. This vulnerability was taken into account within the monitoring activities of pregnant women, such as the Standard Operating Procedures and the Survey Protocol guide for assessment of prenatal exposure to mercury. Interviewees mentioned that women were well represented in the fieldwork executed in the pilot countries, as it was noted that pregnant women preferred to be approached by women instead of men. Respondents to the questionnaire also stated that the approval of the Ethics Committees before the human biomonitoring activities started ensured consideration of human rights. (Findings 5, 23)
181. **Conclusion 6: Communication, awareness raising, and outreach activities were implemented regularly, also in the pilot studies on human biomonitoring. A more structural approach to communication and outreach could have enhanced the visibility of project results and ensured that all outreach activities that were planned were executed and monitored.**
182. The ProDoc contains an appendix on "Public Awareness, Communications and Mainstreaming". The information provided in this appendix is brief but relevant. The appendix mentions for example that the results of the project will be shared with policy-makers and efforts will be made during the project to raise awareness of the targeted populations. Recommendations were expected to be made on the establishment of an adequate legal and institutional infrastructure for mercury monitoring including sustainable financing.
183. The communication and awareness raising activities during project implementation focused on informing the Minamata Convention and its Parties of the results of the project, and on how the results of the project could contribute to the monitoring arrangements for the Effectiveness Evaluation of the Convention. The communication, networking and awareness raising efforts that were undertaken were done adequately. Not everything that was planned to be done at project design and that would have been relevant was implemented. No structured outreach activities were carried out based on a communication and outreach plan, and communication was mostly implemented on an ad hoc basis. Preparing a communication and outreach plan, and allocating specific budget, could have ensured better that all relevant communication activities identified were considered during project implementation, and would ensure that the effectiveness of the communication, awareness raising and outreach activities was monitored. (Finding 26)
184. In addition to the evaluation criteria, the evaluation addresses the following three **strategic questions** that are of interest to UNEP and to which the project was believed to be able to make a substantive contribution:

- i. To what degree of success has the project improved coordination and harmonization of national approaches in monitoring environmental concentrations and human exposure to ensure all regions are able to provide reliable data for future effectiveness evaluation of the mercury treaty?
  - ii. To what extent has the project contributed to ensuring adequate laboratory capacity is available/accessible in each region in order to provide accurate and comparable data on human exposure to and environmental concentrations of mercury?
  - iii. What main factors have been identified by the evaluation as having contributed to the project's success and which have presented the greatest challenge in attaining the goal to strengthen the capacity for global monitoring of mercury in humans and the environment?
185. With regard to **strategic question i)**, it can be said that the project had an important contribution to improving coordination on mercury. The project tested and researched the application of human biomonitoring and mercury monitoring in air, and additionally delivered two reports on biota and soil monitoring. The project contributed to the generation of comparable global data by producing SOPs and protocols. The reports and studies were made available to the Minamata Convention and are the basis for discussions within the expert groups (currently there are for example discussions on the applicability and necessity or relevance of including biota and soil in the monitoring arrangements of the Minamata Convention) and for the development of monitoring guidance for Effectiveness Evaluation under the Convention. Harmonization of approaches can be expected once the monitoring guidance has been approved. The monitoring arrangements are expected to be presented at the next COP.
186. Pertaining to **strategic question ii)**, the project contributed to identifying laboratories in each region. The interlaboratory assessment showed that there is adequate capacity in each region to analyse mercury. In general, analysing mercury is less difficult and less expensive than e.g. POPs.
187. However, respondents and interviewees noted that it is necessary to assess capacity of laboratories on a regular basis, and that some pilot study countries needed support by RECETOX or the Jožef Stefan Institute to analyse their samples accurately. Also, interviewees mentioned that it is important to have capacity in-country, and that it is not always enough to have adequate capacity in the region, as shipping samples within a region is not always straightforward.
188. The ProDoc mentions that capacity of laboratories in each region would be built. UNEP explained that as the interlaboratory assessment showed there is adequate capacity in each region, the focus could be on other aspects of the project (mainly on the pilot studies and research on mercury monitoring). The project did contribute to capacity building within laboratories involved in the pilot projects; the Jožef Stefan Institute for example supported laboratories in Mongolia and India to analyse the samples taken.
189. The main factors that contributed to the project's success (**strategic question iii)** were the commitment of all project organizations and stakeholders to realising and delivering high quality outputs. Additionally, UNEP's cooperation with experienced project executing partners also played a significant role in achieving results, as well as the support and guidance provided by UNEP and these main project partners. As mentioned previously, the level of cooperation and support from UNEP and the main project partners were highly valued by project stakeholders and certainly had a positive impact on the project's performance.

190. Some of the challenges mentioned by interviewees and respondents were the time constraints for implementing certain activities and the delays at the start of the project. Another challenge was the fact that it was not fully clear what could be achieved when the project started, since the Minamata Convention was adopted in 2013 and entered into force only in 2017. It meant for example, that it was not realistic and feasible to already prepare a comprehensive Global Mercury Monitoring Plan. Another challenge that was repeatedly mentioned were the inadequate amounts of cash funding and therefore the need to generate large amount of co-finance. Of course, the co-finance ensured that activities could be implemented in a cost-effective way. On the other hand some respondents indicated that the limited amounts of cash led to an undervaluation of experts and stakeholders and made it at times more difficult to implement certain activities.

## B. Summary of project findings and ratings

191. The table below provides a summary of the ratings and findings discussed in chapter V - Evaluation Findings. Overall, the projects demonstrate a rating of **'Highly Satisfactory'**. The projects were all highly relevant to UNEP priorities, as well as to the regions and countries and Parties to the Minamata Convention. The strategic cooperation with the main project partners resulted in the delivery of all four outcomes, four direct outcomes and overall project outcome. The pilot studies on monitoring of air and human biomonitoring, as well as the extra desk studies on biota and soil provided essential contributions to the discussions on mercury monitoring guidance for Effectiveness Evaluation under the Minamata Convention. The interlaboratory assessment showed that there is adequate capacity within laboratories in each region to analyse mercury. More capacity building programmes will be needed in-country and in regions (e.g. Africa) to improve capacity on mercury monitoring.

**Table 11: Summary of project findings and ratings**

Projects 531.1, 531.2, 534.1:		
Criterion	Summary assessment	Rating
<b>Strategic Relevance</b>		<b>HS</b>
1. Alignment to UNEP MTS, PoW and Strategic Priorities	The Projects are aligned with MTS 2010-2013, 2014-2017 and 2018-2012, and fits within the Subprogramme on Chemicals and Waste. The projects are aligned with the UNEP PoW 2014-2015.	HS
2. Alignment to Donor strategic priorities	Although the project is not fully aligned to the chemicals reduction targets, the project is in line with the strategic priorities of GEF "to promote the sound management of chemicals throughout their life-cycle in ways that lead to the minimization of significant adverse effects on human health and the global environment." This project fits within Focal Area CHEM 3 "Pilot sound chemicals management and mercury reduction".	S
3. Relevance to regional, sub-regional and national environmental priorities	The projects are in line with regional, sub-regional and national priorities and initiatives. For countries that ratified the Minamata Convention mercury is a priority and these countries will try to adhere to the aims of the Convention. Interview data and data from the questionnaires confirmed the high relevance of the project to the pilot countries, and it was also clear that mercury monitoring is relevant in other countries and regions. For instance, BCRC-SCRC-Uruguay has been working on mercury issues in Latin America and the Caribbean and was trained on human biomonitoring within the project.	HS

<b>Projects 531.1, 531.2, 534.1:</b>		
<b>Criterion</b>	<b>Summary assessment</b>	<b>Rating</b>
4. Complementarity with existing interventions	<p>The project built on two existing global initiatives for monitoring of mercury: GMOS and COPHES. GMOS related to air monitoring is led by project partner CNR-IIA. Within the project, CNR-IIA conducted a pilot project to monitor mercury in ambient air at ten sites.</p> <p>COPHES was funded by the EU and developed harmonised protocols allowing the collection of comparable human biomonitoring data throughout Europe. WHO was involved in this Consortium and within the project managed the component on human biomonitoring.</p> <p>The project is also in line with the Minamata Convention, and the results of this project directly contributed to the development of monitoring arrangements for Effectiveness Evaluation under the Minamata Convention.</p>	HS
<b>Quality of Project Design</b>	The project design document contained the most relevant information as prescribed by the project document format. Key strengths were the project justification, strategic relevance, and complementarity with other initiatives. The project design did not provide comprehensive information and details on communication and outreach, on the results framework and contains only a preliminary stakeholder analysis.	S
<b>Nature of External Context</b>	The nature of external context (natural disasters, conflicts, and unexpected political upheaval), did not affect the implementation of this project.	F
<b>Effectiveness</b>		<b>HS</b>
1. Availability of outputs	All four outputs were delivered. An interlaboratory assessment was made and knowledge on available mercury networks increased. A pilot study on air monitoring was implemented in 10 countries, and a pilot study on human biomonitoring was conducted in 6 countries. Additionally, two extra matrices were researched, namely biota and soil. Based on these four studies, reports were prepared and distributed and a report on the Outcomes was shared with all relevant stakeholders, leading to an increase in knowledge and awareness on these issues.	HS
2. Achievement of project outcomes	<p>The four direct outcomes and project outcome were all achieved. The pilot projects on air monitoring and human biomonitoring not only led to an increase in knowledge on mercury monitoring but also to an increase in capacity in the pilot countries. Continued capacity building activities and training will be needed to maintain and extend the knowledge on mercury monitoring in pilot and other countries.</p> <p>The reports that were prepared, enabled stakeholders to define all elements that needed to be included in the development of mercury monitoring arrangements for Effectiveness Evaluation under the Minamata Convention. Overall, the project contributed to an improved understanding and capacity for mercury analysis and an improved understanding on how to harmonize approaches. Based on this increased understanding, mercury monitoring guidance is being developed within the Minamata Convention and is expected to be proposed at the next COP.</p>	HS
3. Likelihood of impact	Long lasting results (Intermediate States and Impacts as mentioned in the reconstructed ToC) can certainly be achieved if the monitoring arrangements currently prepared by the Secretariat to the Minamata Convention will be approved by the Parties of the Convention. These long lasting results also depend on the availability of funding schemes once the monitoring arrangements have been approved.	L
<b>Financial Management</b>		
1. Adherence to UNEP's financial policies and procedures	UNEP used UNEP's financial management systems and procedures in the management of this project. Finances were recorded in the UMOJA system. Expenditure reports were prepared on a six-monthly or yearly basis.	S

<b>Projects 531.1, 531.2, 534.1:</b>		
<b>Criterion</b>	<b>Summary assessment</b>	<b>Rating</b>
2. Completeness of project financial information	All relevant documents were made available to the evaluation, only one expenditure report was missing. In that sense, the financial information is (almost) complete. The expenditure reports however contained several inconsistencies. Changes and adjustments were made from one to the next report without adjusting previous reports. Furthermore, the table with co-financing contained only total amounts of co-finance and did not give details on what was included in the co-finance. The lack of detail in both expenditure and co-finance reports made it difficult to analyse the finances and assess cost-efficiency.	MS
3. Communication between finance and project management staff	The FMO in Nairobi communicated directly with the Project Manager as well as with the Task Manager and the FMO at the Chemical and Health Branch. The Task Manager checked reports and provided these to the FMO in Nairobi. No specific financial problems were reported, although financial reporting was sometimes late.	S
<b>Efficiency</b>	UNEP partnered with experienced organizations and made good use of existing initiatives, which was conducive for project implementation and implementation of activities in a qualitative manner. Even though the project had three amendments, the extensions were justified; the initial timeframe at project design was not realistic and the last amendment allowed for important extra activities to be implemented which improved the results of the project. Large amounts of co-finance were generated and contributed to activities being implemented in a cost-effective way.	<b>S</b>
<b>Monitoring and Reporting</b>		
1. Monitoring design and budgeting	The ProDoc contained a M&E Plan and a table describing the different M&E activities, the purpose of the activity, the responsible party and the time-frame for conducting the M&E activities. The M&E plan is very concise. The ProDoc did not contain clear indicators.	MS
2. Monitoring of project implementation	Monitoring of project implementation was carried out in line with the M&E plan defined in the ProDoc. Project Steering Committees were organized. During these SC meetings implementation of activities and achievement of results were discussed. Additional ad hoc discussions took place with project partners during workshops and meetings. Adaptive management was shown by adjusting the project where necessary to achieve the best possible results for supporting the development of monitoring guidance within the Minamata Convention.	S
3. Project reporting	The annual PIR reports assessed the end-of-project targets, the possible risks for the implementation of the project, the project implementation status, the changes that were made, and provided progress ratings. A final narrative report was also prepared, giving a good overview of all activities implemented, including lessons learned and best practices. The report presenting the Outcomes of the project also provides a clear presentation of the project's achievements.	S
<b>Sustainability</b>		<b>ML</b>
1. Socio-political sustainability	Social and political did not have an important effect on the timely implementation of the activities, except for Costa Rica, where the Ethics Committee did not approve the pilot study to be implemented. It was remarked that political, ethical and social factors can influence mercury monitoring projects, which need to be considered when taking samples and interpreting the analyses of samples.	L
2. Financial sustainability	It can be expected that financial factors will play a role in developing countries and regions that will undertake mercury monitoring once the monitoring arrangements are approved. There are financial mechanisms (GEF and SIP) that may support mercury monitoring to a certain extend. Possibly countries and regions will need other funding sources to include mercury monitoring in their projects.	ML
3. Institutional sustainability	There were no issues within the project related to institutional sustainability of the Executing Agency UNEP, co-executing agencies WHO and CNR-IIA, and other project partners. The national stakeholders actively contributed to the project, but some respondents mentioned that there is bureaucracy, a lack of capacity, and frequent staff turnover in governmental bodies and institutions in some countries. remarked that countries need further support, and that capacity needs to be built and maintained.	L



Projects 531.1, 531.2, 534.1:		
Criterion	Summary assessment	Rating
<b>Factors Affecting Performance</b>		<b>HS</b>
1. Preparation and readiness	There were some delays at the start of the project, mostly administrative and also due to staff change. Overall, UNEP and project partners were technically well prepared.	S
2. Quality of project management and supervision	The support and guidance provided by UNEP was highly valued by all stakeholders.	HS
3. Stakeholders' participation and cooperation	The level of stakeholder participation and cooperation of all stakeholders was high from the start of the project. This active and broad cooperation has resulted in the outputs being delivered in a qualitative manner. Persons interviewed were satisfied with the teamwork and cooperation	HS
4. Responsiveness to human rights and gender equity	Gender and human rights considerations did not play a specific role in the project, except for the human biomonitoring component where the SOPs and protocols, as well as the necessary approval from the Ethics Committees, ensured that gender and human rights aspects were considered adequately. Overall, women were represented well within the project.	S
5. Environmental, social and economic safeguards	The ProDoc contains an appendix on environmental and social safeguards, and these were adhered to during the project. The project contributed to SDGs related to chemicals and environment. No fundamental safeguarding issues were reported during project implementation. UNEP made efforts to keep carbon footprint minimal, for example, electronic versions of all reports and documents were made available and several back-to-back meetings were organized.	S
6. Country ownership and driven-ness	Countries were directly involved within the pilot studies on air monitoring and human biomonitoring. Ministries, institutions, organizations and experts overall showed active engagement and interest in implementing activities and delivering outputs.	S
7. Communication and public awareness	The ProDoc contains a brief chapter on "Public Awareness, Communications and Mainstreaming". No communication strategy was prepared, and activities were done ad hoc. These communication, networking and awareness raising efforts were done adequately.	S
<b>Overall Project Performance Rating</b>		<b>HS</b>

### C. Lessons learned

<b>Lesson Learned #1:</b>	<b>UNEP partnered with experienced organizations (including WHO, CNR-IIA, RECETOX, Biodiversity Research Institute, the Jožef Stefan Institute, the Institute of Health Carlos III, IAEA Environment Laboratories, BCRC-SCRC-Uruguay) during project implementation. This approach contributed greatly to achieve the expected outputs in a qualitative and timely manner.</b>
<b>Context/comment:</b>	UNEP and the co-executing partners each had specific expertise needed for successful implementation of the project. By making use of this expertise and the networks of project partners, it was possible to implement activities and achieve outputs and outcomes effectively and in a qualitative manner. Interviewees and respondents overall mentioned that the support and guidance provided by UNEP and the co-executing partners was very

	valuable and highly appreciated.
<b>Cross-reference(s) to rationale and supporting discussions:</b>	Conclusions 1,2 Findings (Findings 5, 6, 7, 9, 10, 14, 21, 22)

<b>Lesson Learned #2:</b>	<b>Continued strengthening of local capacities is vital for effective and sustainable mercury monitoring; long-term capacity building programmes are needed.</b>
<b>Context/comment:</b>	The pilot projects on air monitoring and specifically human biomonitoring showed that capacity was built in the pilot projects. Where necessary, country laboratories received support with analysing samples, and in two cases analyses of samples was undertaken by REXETOX. Interviewees and respondents mentioned that there is now increased capacity in their countries but that longer-term capacity building programmes will be needed in order for the capacity to be maintained and extended (within the pilot country, or to the region). It has been regularly noted in reports and by interviewees that capacity and knowledge on mercury monitoring is not equally divided among the regions in the world. Especially in the African region there is a lack of capacity and lack of mercury monitoring data and information. This region needs additional support to be able to implement the monitoring guidance for Effectiveness Evaluation once the guidance has been approved.
<b>Cross-reference(s) to rationale and supporting discussions:</b>	Conclusions 2, 4 Findings 4, 9, 19

<b>Lesson Learned #3:</b>	<b>Updates on monitoring and laboratory assessments are needed regularly to measure trends. Approach to monitoring needs to be methodical.</b>
<b>Context/comment:</b>	The interlaboratory assessment showed that there is adequate capacity in all UN regions to monitor mercury. It was however also mentioned that such interlaboratory assessments will have to be repeated regularly and the databank on mercury networks should be kept up-to-date. The overall approach should be methodical and to keep information relevant, assessments should be made regularly (the title of report of the interlaboratory assessment clearly indicated that this was the first round of interlaboratory assessments).
<b>Cross-reference(s) to rationale and supporting discussions:</b>	Conclusion 4 Findings 4, 9

<b>Lesson Learned #4:</b>	<b>Human biomonitoring projects should ensure that besides scientific/technical aspects also other aspects are considered;</b>
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	<b>gender aspects, country involvement, community sensibilization and awareness raising are vital in such projects.</b>
<b>Context/comment:</b>	<p>The project was overall a scientific project focusing on monitoring mercury in different ways and analysing the results. Within the human biomonitoring component, it was clear that besides the purely scientific activities, this component needed to ensure that the rights of pregnant women were considered in the design of the monitoring activities, including the Standard Operating Procedures and the Survey Protocol guide for assessment of prenatal exposure to mercury. Raising awareness of the stakeholders (and specifically vulnerable groups such as women) in the countries is important to ensure that they understand the benefits of the project and how mercury monitoring can help to understand how exposure to risks can be reduced. In two countries it was not well accepted to cut hair of pregnant women, so it was important to discuss this and engage the community. When pilot countries in specific countries are part of a project, it could be beneficial to include country representatives in (some of) the Project Steering Committee. In this project they were not formally part of the Steering Committee. Recently, the Minamata Convention published a brochure on "Gender equality and mercury." The brochure explains that the greatest concern related to exposure to mercury revolves around the exposure of women of child-bearing age because of its impact on future generations. Currently, the Secretariat of the Minamata Convention is developing a proposal for a gender roadmap. For future projects on mercury, UNEP should ensure that gender aspects continue to be considered, and that the project will be aligned to the gender roadmap being developed within the Minamata Convention.</p>
<b>Cross-reference(s) to rationale and supporting discussions:</b>	<p>Conclusion 5                  Findings 5, 23</p>

<b>Lesson Learned #5:</b>	<b>Finances are often limited in developing countries. Mercury monitoring can only be carried out if there is adequate external and/or internal funding.</b>
<b>Context/comment:</b>	<p>It was mentioned by interviewees that analysing mercury is less expensive than analysing POPs. Also, the project showed that using a Passive Air Sampler is cost-effective, provides adequate results and can be used without power and is easily operated. Even so, most developing countries do not have the needed budget to monitor mercury adequately. Respondents to the questionnaire mentioned that such projects can only be carried out if there is adequate capacity and sufficient finances. Most developing countries will depend on funding mechanisms and funding from global, regional and/or national donors to adequately monitor mercury once the monitoring guidance of the</p>

	<p>Minamata Convention is approved. The financial mechanism for the Minamata Convention consists of the Global Environment Facility (GEF) and the Specific International Programme (SIP). At the moment it is not yet clear how the GEF will contribute to mercury monitoring, possibly by making monitoring part of projects focused on reducing exposure to mercury. The SIP is expected to provide smaller amounts of funding. In Asia the Government of Japan is already funding a mercury monitoring project.</p> <p>The UNEP Chemicals and Health Branch can support this process by actively supporting and informing countries about financing possibilities.</p>
<b>Cross-reference(s) to rationale and supporting discussions:</b>	<p>Conclusion 3                  Findings 11, 17, 18</p>

<b>Lesson Learned #6:</b>	<p><b>The cash resources were limited, and the project depended on large co-finance contributions from partners. In some cases, this led to a financial undervaluation of experts and more limited possibilities for implementing activities.</b></p>
<b>Context/comment:</b>	<p>In connection to Lesson Learned #5, the project showed that large amounts of co-finance from co-executing and partner organizations ensured that all activities could be implemented. The project used the resources available at UNEP and the main project partners well, and therefore it can be said that the project worked in a cost-effective way and worked in line with GEF regulations as the project built on existing programmes. Some respondents to the questionnaire on human biomonitoring mentioned however that certain activities could only be implemented with support from other national projects. Additionally, the limited cash resources meant that in some cases experts and stakeholders felt financially undervalued, and that there were more limited possibilities for implementing activities.</p>
<b>Cross-reference(s) to rationale and supporting discussions:</b>	<p>Conclusion 3                  Findings 17</p>

<b>Lesson Learned #7:</b>	<p><b>The results of this project were important for the discussions on monitoring arrangements within the Minamata Convention to evolve.</b></p>
<b>Context/comment:</b>	<p>The results of this project are being used in discussions on monitoring guidance for Effectiveness Evaluation under the Minamata Convention. The first draft of the monitoring guidance is currently open for comments by Parties and relevant stakeholders, and it is expected that these monitoring arrangements will be discussed at the next COP to the Minamata Convention (COP4), which is expected to be held in two segments: online (1-5 November 2021) and in-person (first quarter of 2022 in</p>

	Bali, Indonesia). Approval of this monitoring guidance by the Parties of the Convention is important as it may open up funding mechanisms and will ensure that mercury monitoring will use a harmonized approach by all Parties to the Convention. UNEP can continue to help ensure that besides scientific elements, also elements related to ethics and awareness raising are included in the monitoring guidance.
<b>Cross-reference(s) to rationale and supporting discussions:</b>	Conclusion 3 Findings 8, 10, 11, 18

<b>Lesson Learned #8:</b>	<b>Communication and awareness raising are important to raise the profile and strengthen the results of the project. A more systematic approach to awareness raising and communication could potentially have increased the visibility and outreach of the project.</b>
<b>Context/comment:</b>	The communication and awareness raising efforts within the project were mostly done ad hoc. Although they were implemented well and effectively, not all communication and awareness raising activities planned at project design were conducted, and they were not monitored or evaluated during project implementation. Respondents and interviewees remarked that awareness raising and communication is important to raise the profile of the results, and that it is important that awareness raising and community sensibilization are needed to have full commitment of all country and other stakeholders. A more systematic approach to communication and awareness raising would likely have contributed to this, and ensured that all planned communication and outreach activities would have been implemented.
<b>Cross-reference(s) to rationale and supporting discussions:</b>	Conclusion 6 Finding 26

<b>Lesson Learned #9:</b>	<b>It is important to make a realistic planning at project design, to ensure that activities such as pilot studies have an adequate timeframe for implementation.</b>
<b>Context/comment:</b>	During the project three no-cost extensions were needed to finalize the project. Better planning could have reduced the number of extensions. When one year pilot studies are planned, it is not very realistic to have only a two year project period. Especially with pilot studies in different countries, it can be expected that there will be unforeseen events, and furthermore such pilot projects need an adequate amount of time for preparation and closure. It is likely that not all countries will work at the same speed. The PIR reports showed that overall progress is rated from Moderately Unsatisfactory to Moderately Satisfactory (even in the last year (2019) when sufficient project

	<p>progress was made and good results were achieved) because project extensions were needed. Fortunately, UNEP worked with experienced organizations and the project built on the project partners' expertise to facilitate project implementation, which made it possible to achieve good project results in the end.</p>
<b>Cross-reference(s) to rationale and supporting discussions:</b>	<p>Conclusion 2                  Finding 14</p>

#### D. Recommendations

192. Considering that the overall rating of the project is "Highly Satisfactory", and all outputs and outcomes have been delivered, no crucial recommendations "for specific actions to be taken by identified people/position-stakeholders to resolve concrete problems affecting the project or sustainability of its results"<sup>2</sup> were identified. The recommendations below are recommendations to (continue to) support the sustainability of the project results or are opportunities for improvement identified for similar future projects. The lessons learned and recommendations together provide an overview of what the project could achieve and what aspects need to be considered or improved in future activities on mercury monitoring, or in future similar projects.

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<b>Recommendation #1:</b>	<b>UNEP/WHO to follow-up with countries involved in the pilot tests to see what may be further needs for support.</b>
<b>Challenge/problem to be addressed by the recommendation:</b>	<p>The pilot projects on human biomonitoring were implemented in six countries and were planned to be implemented in seven countries. As Costa Rica did not receive approval to implement the biomonitoring project, this country did finally not participate. In the other six countries the human biomonitoring activities were successfully implemented. Some respondents to the questionnaire mentioned that they are extending their work on biomonitoring thanks to the capacity built within this project. Respondents also noted that further support is needed from UNEP and WHO in order to sustain the results of the pilot studies, to extend the work or to start human biomonitoring. It can support the sustainability of project results if it is clear what are the current/follow-up needs of the pilot countries involved in this project, for the air monitoring component and specifically the human biomonitoring component. A survey could be organized and a concise report could be prepared to capture the benefits and results of the pilot studies and the follow-up needs.</p>
<b>Priority Level:</b>	Important
<b>Type of</b>	Project

<sup>2</sup> See the evaluation document: "7\_Main\_Evaluation\_Report\_Structure\_and\_Contents\_04.11.19"

<b>recommendation:</b>	
<b>Responsibility:</b>	Project team
<b>Proposed implementation time-frame:</b>	Within the next half year
<b>Cross-reference(s) to rationale and supporting discussions:</b>	Conclusions 2, 4 Findings 9, 19,

<b>Recommendation #2:</b>	<b>UNEP should consider documenting co-finance of project activities at a more detailed level. This may help to raise the visibility/validity of partner contributions.</b>
<b>Challenge/problem to be addressed by the recommendation:</b>	<p>Large amounts of co-finance were generated within this project that helped to implement all activities and deliver all outputs. The co-financing table contained total amounts of co-financing and no detail was provided. UNEP requested partner organizations to submit only a total number, and indicated to these organizations what would be regarded as co-finance. Also, some respondents to the questionnaire remarked that they implemented activities making use of other national projects. It is not fully clear if (some of) these projects mentioned by the national focal points are included within the co-finance table of the partner organizations, or that these projects could be considered even as additional co-finance. Providing more detail on co-finance can help to make clear what the co-finance of the organizations consisted of, how it was generated, and in this way contribute to making the co-finance of partner organizations and at national level more visible. It is important to see that organizations, institutions, governments and other (local) stakeholders actively support the project by contributing with finances, time, human resources, and logistics (often making use of other (national) projects). It can also help to raise the interest of new donors that could support mercury monitoring activities.</p> <p>To better capture the full amounts of co-finance provided by UNEP, partner organizations and at national and local level, a co-finance template could be prepared for future projects that would provide better detail and could be easily filled in by the partner organizations and at national/local level.</p>
<b>Priority Level:</b>	Opportunity for improvement
<b>Type of recommendation:</b>	Project
<b>Responsibility:</b>	UNEP-wide
<b>Proposed implementation time-frame:</b>	In future projects
<b>Cross-reference(s) to rationale and supporting discussions:</b>	Conclusion 3 Finding 13, 17

<b>Recommendation #3:</b>	<b>UNEP should consider preparing a methodical/strategic communication strategy for future outreach projects including</b>
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	<b>budget for the communication activities.</b>
<b>Challenge/problem to be addressed by the recommendation:</b>	Although the communication and awareness raising efforts implemented within the project were implemented well, they were implemented ad hoc and not all communication and awareness raising activities planned at project design were fully implemented. Also, communication, awareness raising and outreach activities were not (consistently) monitored or evaluated during project implementation. Respondents and interviewees remarked that (continuous) awareness raising and outreach are essential to raise the profile of the results, and that community sensibilization is needed to have full commitment of all country (and other) stakeholders. Therefore, for future outreach projects, it should be considered to develop a methodical communication strategy and allocate specific budget to implement the strategy.
<b>Priority Level:</b>	Opportunity for improvement
<b>Type of recommendation:</b>	Project
<b>Responsibility:</b>	UNEP-wide
<b>Proposed implementation time-frame:</b>	In current and future outreach projects
<b>Cross-reference(s) to rationale and supporting discussions:</b>	Conclusion 6 Finding 26



**ANNEX I. EVALUATION FRAMEWORK**

No	Evaluation Criteria	Sub Questions	Indicators / Means of verification	Data Sources
A. Strategic Relevance				
<b>Key question for Strategic Relevance: To what extent were the project objectives relevant and suited to the priorities, policies and strategies of the implementing agencies, donors, stakeholders and target groups?</b>				
i.	Alignment to the UNEP Medium term strategy (MTS), programme of Work (POW), and other strategic priorities	- Were the projects in line with UNEP's mandate and how? - Are the projects responding to UNEP strategies and programme of work, and how (qualitative and quantitative contributions)?	- Degree of alignment with UNEP MTS and PoW - Degree of alignment with UNEP Bali Strategic Plan for Technology Support and Capacity Building (BSP) and South-South Cooperation (S-SC)	- UNEP publications (MTS, PoW) - ProDoc - PIR reports/progress reports - Interviews with UNEP project manager - Interviews with main implementation partners - UNEP publications (including BSP, S-SC)
ii.	Alignment to Donor Strategic Priorities	- Are the projects responding to GEF/ Donor Strategic priorities, and how (qualitative and quantitative contributions?)	- Degree of alignment with other UN/donor strategic policies	- ProDoc - PIR reports/progress reports - Interviews with UNEP project manager - Interviews with main implementation partners
iii.	Relevance to Regional, Sub-Regional and national Environmental Priorities	- Are the projects responding to the stated environmental concerns and needs of the countries/sub-regions/regions?	- Degree of alignment with: * National and (sub) regional plans, strategies, policies and agreements	- ProDoc - PIR reports/progress reports - Regional strategies and agreements - Interviews with UNEP project manager - Interviews with main implementation partners
iv.	Complementarity with existing interventions	- To what extent did the projects, at design and/or mobilization phase, take account of ongoing and/or planned initiatives? - To what extent did the project team make efforts to ensure that the projects were complementary to other UNEP and UN interventions , and	- Degree of potential synergies identified - Absence of duplication of efforts - Potential duplications identified at design stage - Degree of identified complementarities with other projects	- Pro Doc - PIR reports/progress reports - Interviews with UNEP project manager - Interviews with main implementation partners (specifically WHO and CNR-IIA) - Interviews/surveys with other stakeholders - Interviews with project managers from

No	Evaluation Criteria	Sub Questions	Indicators / Means of verification	Data Sources
		optimize any synergies?		related projects
B. Quality of Project Design				
<b>Key question: How adequate was the project design to achieve the project outputs, outcomes, goals and objectives?</b>				
	Relevance and logic of project Objectives, activities, Outputs and Outcomes according to Project Quality Design template (see annexes C).	The Quality of Project Design is assessed using the template provided by the UNEP Office.	- Result of Overall Project Design Quality rating	- ProDoc, including the project review sheet - Interviews with UNEP manager
C. Nature of External Context				
<b>Key question: To what extent did the projects consider (unexpected) external factors which had an effect on project implementation?</b>				
	Aspects related to external operating context (considering the prevalence of conflict, natural disasters and political upheaval).	- Have the projects faced an unusually challenging operational environment that negatively affected project performance, such as: * Conflicts or security issues? * Government instability? * Risks of natural disasters?	- Number of Project delays / extensions, ProDoc / log frame revisions and budget revisions	- ProDoc - PIR reports/project progress reports - Final reports - Interviews with UNEP project manager - Interviews with main implementation partners - Interviews/surveys with government/laboratory representatives
D. Effectiveness				
<b>Key question: To what extent did the projects achieve the expected (reconstructed) Outcomes and Outputs?</b>				

Terminal Evaluation of the UNEP Project:  
 "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury"

No	Evaluation Criteria	Sub Questions	Indicators / Means of verification	Data Sources
i.	Availability of Outputs	<ul style="list-style-type: none"> <li>- Were Outputs and milestones delivered on time and as planned? If not, what were the reasons of delay/changes?</li> <li>- What is the quality of these Outputs?</li> <li>- To what extent do the Outputs contribute to their planned Outcomes?</li> <li>- How useful, relevant and appropriate did beneficiaries find the Outputs produced by the projects?</li> <li>- Which factors contributed to the achievement of Outputs (and/or what were the reasons Outputs were not achieved)?</li> </ul>	<ul style="list-style-type: none"> <li>- Concrete examples of Outputs being used by end users</li> <li>- Approved project extensions / budget revisions</li> <li>- Involvement of stakeholders in the production of Outputs</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- PIR reports/project progress reports</li> <li>- Financial reports</li> <li>- Final reports</li> <li>- Interviews with UNEP project managers</li> <li>- Interviews with main implementation partner (specifically WHO and CNR-IIA)</li> <li>- Interviews/surveys with government representatives/laboratories</li> </ul>
ii.	Achievement of direct Outcomes	<ul style="list-style-type: none"> <li>- What direct Outcomes (as per the reconstructed TOC) have been achieved?</li> <li>- Are these Outcomes a result of project intervention?</li> <li>- Would these have been achieved without the direct involvement of UNEP? Why?</li> </ul>	<ul style="list-style-type: none"> <li>- Preparation and quality of mercury monitoring plans</li> <li>- Preparation and quality of Lessons Learned Report</li> <li>- Number of downloads of monitoring plans and Lessons Learned report</li> <li>- Number of exchanges and participation in meetings and workshops of e.g. the Minamata Convention and other relevant institutions</li> <li>- Number and quality of training capacity building activities undertaken within the project.</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- PIR reports/project progress reports</li> <li>- Financial reports</li> <li>- Final report</li> <li>- Interviews with UNEP project manager</li> <li>- Interviews with main project partners</li> <li>- Interviews/surveys with laboratory/government representatives</li> </ul>
iii.	Likelihood of Impact	<ul style="list-style-type: none"> <li>- What is the likelihood of expected positive impacts to be realized?</li> <li>- To what extent have any possible negative effects been identified in the project as risks or as part of the analysis of Environmental, Social and Economic Safeguards?</li> </ul>	<ul style="list-style-type: none"> <li>- Number of mercury monitoring initiatives globally</li> <li>- Development of projects and budget lines on mercury monitoring/mercury risk reduction measures</li> <li>- Increase in mercury risk reduction measures.</li> </ul>	<ul style="list-style-type: none"> <li>- Likelihood of Impact Assessment</li> <li>- Reconstructed ToC at Design and at Evaluation</li> <li>- ProDoc</li> <li>- PIR reports/project progress reports</li> <li>- Financial reports</li> <li>- Final report of the implementation of the</li> </ul>

No	Evaluation Criteria	Sub Questions	Indicators / Means of verification	Data Sources
		<ul style="list-style-type: none"> <li>- How successful have the projects been in playing a catalytic role and/or promoting the scaling up or replication of project results?</li> <li>- Are the projects likely to contribute to the long-lasting changes represented by the Sustainable Development Goals, and/or the intermediate-level results reflected in UNEP's Expected Accomplishments and the strategic priorities of funding partner(s)?</li> </ul>		three projects - Interviews with UNEP project managers - Interviews with main project partners - - Interviews/surveys with laboratory government representatives
E. Financial Management				
<b>Key question: How conducive was the financial management for the achievement of project Outputs and Outcomes?</b>				
i	Adherence to UNEP's financial policies and procedures	<ul style="list-style-type: none"> <li>- Have the projects been implemented in compliance with UN financial management standards and procedures?</li> </ul>	<ul style="list-style-type: none"> <li>- Approval of contracting documents, project reports and financial reporting</li> <li>- Alignment of expenditures during project implementation with approved budget</li> </ul>	<ul style="list-style-type: none"> <li>- Project budget</li> <li>- Financial reports, audit reports</li> <li>- Interviews with UNEP project manager</li> <li>- Interviews with UNEP Fund Management Officer</li> <li>- Interviews with implementation partners that received financial support</li> </ul>
ii	Completeness of financial information	<ul style="list-style-type: none"> <li>- Was the projects' key financial information complete ?</li> <li>- What was the actual expenditure across the life of the project?</li> <li>- To what extent were the project expenditures in line with the corresponding approved budget?</li> <li>- What changes, if any, have been made to the projects' budget and why?</li> </ul>	<ul style="list-style-type: none"> <li>- Approval of contracting documents, project reports and financial reporting</li> <li>- Alignment of expenditures during project implementation with approved budget</li> </ul>	<ul style="list-style-type: none"> <li>- Project budget</li> <li>- Financial reports, audit reports</li> <li>- Interviews with UNEP project manager</li> <li>- Interviews with UNEP Fund Management Officer</li> <li>- Interviews with project partners that received financial support</li> </ul>

No	Evaluation Criteria	Sub Questions	Indicators / Means of verification	Data Sources
iii	Communication between financial and project management staff	- To what extent did the quality of communication between project management and financial management staff affect project efficiency?	- Approval of contracting documents, project reports and financial reporting - Alignment of expenditures during project implementation with approved budget	- Project budget - Financial reports, audit reports - Interviews with UNEP project manager - Interviews with UNEP Fund Management Officer - Interviews with project partners that received financial support
F. Efficiency				
<b>Key question: To what extent and how were cost-effectiveness and timeliness considered during project implementation? How did these factors affect project performance?</b>				
	Cost-effectiveness and timeliness of project execution	- Were any cost or time-saving measures put in place to maximise results within the secured budget and agreed project timeframe? - Did the projects make use of / build upon pre-existing institutions, agreements and partnerships, data sources, etc. to increase project efficiency? How? - What factors have caused delays (if any) and have affected project execution, costs and effectiveness? How? - Were events leading to completion of activities sequenced efficiently? - What was the role of the project's governance structure and management approach on its efficiency?	- Number of project extensions and amendments, and budget adjustments, - Number of measures to mitigate delays - Timeliness of report submission	- ProDoc - PIR reports/project progress reports - Steering Committee meetings - Financial reports - Final reports - Interviews with UNEP project manager - Interviews with main implementation partner - Interviews/surveys with laboratory representatives
G. Monitoring and Reporting				
<b>Key question: How were monitoring, evaluation and reporting used to support, adapt, strengthen and improve project implementation?</b>				

Terminal Evaluation of the UNEP Project:  
 "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury"

No	Evaluation Criteria	Sub Questions	Indicators / Means of verification	Data Sources
i.	Monitoring design and budgeting	<ul style="list-style-type: none"> <li>- To what extent were the monitoring plans designed to track progress against SMART indicators?</li> <li>- To what extent were the allocated funds adequate for monitoring purposes, and for the mid-term and terminal evaluations?</li> </ul>	<ul style="list-style-type: none"> <li>- Quality of monitoring plan</li> <li>- Number and quality of monitoring documents</li> <li>- Existence and quality of mid-term review report</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- Mid-term review report</li> <li>- Project budget</li> <li>- PIR reports/project progress reports</li> <li>- Financial reports</li> <li>- Monitoring reports</li> <li>- Interviews with UNEP project manager</li> </ul>
ii.	Monitoring of project implementation	<ul style="list-style-type: none"> <li>- To what extent were the monitoring plans operational?</li> <li>- To what extent did the monitoring system facilitate the timely tracking of results and progress towards project Objectives?</li> <li>- To what extent was the information, generated by the monitoring system, used to adapt and improve project execution, achievement of Outcomes and ensure sustainability?</li> <li>- To what extent were the allocated funds for monitoring actually used to support monitoring?</li> </ul>	<ul style="list-style-type: none"> <li>- Number and quality of monitoring documents</li> <li>- Existence and quality of mid-term review report</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- Mid-term review report</li> <li>- Project budget</li> <li>- PIR reports/project progress reports</li> <li>- Financial reports</li> <li>- Monitoring reports</li> <li>- Interviews with UNEP project manager</li> </ul>
iii.	Project reporting	<ul style="list-style-type: none"> <li>- Were the PIR reports prepared adequately and timely?</li> <li>- To what extent have other UNEP and donor reporting requirements been fulfilled?</li> </ul>	<ul style="list-style-type: none"> <li>- Number and quality of reports delivered in line with reporting requirements</li> <li>- Number and quality of approved reports</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- Mid-term review reports</li> <li>- Project budget</li> <li>- PIR reports/project progress reports</li> <li>- Financial reports</li> <li>- Monitoring reports</li> <li>- Interviews with UNEP project manager</li> </ul>
H.	Sustainability			
<b>Key question: How do socio-political, financial and institutional factors affect the probability of project outcomes being maintained and developed after the project ends?</b>				

Terminal Evaluation of the UNEP Project:  
 "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury"

No	Evaluation Criteria	Sub Questions	Indicators / Means of verification	Data Sources
i.	Socio-political sustainability	<ul style="list-style-type: none"> <li>- What is the level of ownership, interest and commitment among the main stakeholders?</li> <li>- What is the likelihood that the project achievements will be taken forward by the main stakeholders?</li> <li>- What is the likelihood that capacity development efforts continue?</li> <li>- Has increased capacity been sustained until today?</li> </ul>	<ul style="list-style-type: none"> <li>- Number of follow-up mercury monitoring initiatives and (including associated budgets) by project stakeholders and countries</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- PIR reports/project progress reports</li> <li>- Final reports</li> <li>- Interviews with UNEP project manager</li> <li>- Interviews/surveys with laboratories</li> <li>- Interviews with main project partners</li> <li>- Interviews with other stakeholders</li> </ul>
ii.	Financial sustainability	<ul style="list-style-type: none"> <li>- To what extent are project Outcomes dependent on future funding for the benefits they bring to be sustained?</li> <li>- Is there any funding secured to fund future mercury monitoring?</li> <li>- What efforts are being made to secure funding for future complementary activities?</li> <li>- Have sustainable funding mechanisms been established to fund future mercury monitoring initiatives?</li> </ul>	<ul style="list-style-type: none"> <li>- Number of follow-up initiatives on mercury monitoring</li> <li>- Amount of funding available</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- PIR reports/project progress reports - Final reports</li> <li>- Interviews with UNEP project managers</li> <li>- Interviews/surveys with laboratories/government representatives</li> <li>- Interviews with main project partners</li> <li>- Interviews with other stakeholders</li> </ul>
iii.	Institutional sustainability	<ul style="list-style-type: none"> <li>- To what extent were institutional frameworks, policies, and legal and accountability frameworks in place and robust enough to support the sustainability of project Outcomes?</li> </ul>	<ul style="list-style-type: none"> <li>- Number and quality of policies and legal and accountability frameworks</li> <li>- Number of follow-up activities initiated by institutions involved in the project</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- PIR reports/project progress reports - Final reports</li> <li>- Interviews with UNEP project manager</li> <li>- Interviews/surveys with laboratories/government representatives</li> <li>- Interviews with main project partners</li> <li>- Interviews with other stakeholders</li> </ul>
I.	Factors and Processes Affecting Project Performance			
<b>Key question: How and to what extent did certain factors – preparation and readiness, quality of project management and supervision, stakeholder participation and cooperation, responsiveness to human rights and gender, and environmental and social safeguards - affect project performance?</b>				

Terminal Evaluation of the UNEP Project:  
 "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury"

No	Evaluation Criteria	Sub Questions	Indicators / Means of verification	Data Sources
i.	Preparation and Readiness	<ul style="list-style-type: none"> <li>- Were appropriate measures taken to either address weaknesses in the project design or respond to changes that took place between project approval, securing of the funds and project mobilisation? Which measures?</li> <li>- What was the nature and quality of engagement with stakeholder groups by the project team during project preparation?</li> <li>- What process was followed to assess the capacities of implementing partners and develop the partnership agreements?</li> <li>- Were initial staffing and financing arrangements sufficient to drive implementation?</li> </ul>	<ul style="list-style-type: none"> <li>- Number and quality of appropriate measures taken (if necessary)</li> <li>- Quality of partner agreements</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- Project budget</li> <li>- Minutes of meetings during project preparation phase</li> <li>- Interviews with UNEP project manager</li> <li>- Interviews with main project partners</li> <li>- Interviews/surveys with staff of other project partners/stakeholders</li> </ul>
ii.	Quality of Project Management and Supervision	<ul style="list-style-type: none"> <li>- Was project management by UNEP pro-active and responding timely and adequately to any issues encountered within the project?</li> <li>- What was the nature of communication and collaboration with stakeholders?</li> <li>- What was the nature of communication and collaboration between the GEF Team of UNEP (IA) and the Science Team of the Chemicals and Health Branch Agency (EA)?</li> <li>- How were risks managed? Did this require use of problem-solving and/or project adaptation? How?</li> </ul>	<ul style="list-style-type: none"> <li>- Number of issues complicating sound project implementation solved timely (as opposed to unsolved issues)</li> <li>- (Amount of) evidence of adaptive management being applied</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- PIR reports/project progress reports - Final report of the implementation of the three projects</li> <li>- Interviews with UNEP project manager</li> <li>- Interviews with main project partners</li> <li>- Interviews with other project partners and stakeholders</li> <li>- Interviews/surveys with laboratories/government representatives</li> </ul>



No	Evaluation Criteria	Sub Questions	Indicators / Means of verification	Data Sources
iii.	Stakeholder Participation and Cooperation	<ul style="list-style-type: none"> <li>- Were all important project stakeholders properly identified at project design and duly involved in project implementation?</li> <li>- What consultation and communication mechanisms were put in place to ensure an active stakeholder engagement and ownership? Were these effective?</li> <li>- What was the level of support provided to maximise collaboration and coherence between stakeholders?</li> <li>- What measures were taken to ensure inclusion and participation of all differentiated groups, including gender groups?</li> </ul>	<ul style="list-style-type: none"> <li>- Number of stakeholders identified and actively involved in project implementation</li> <li>- Number of stakeholders satisfied with the stakeholder participation</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- PIR reports/project progress reports</li> <li>- Final reports</li> <li>- Interviews with UNEP project managers</li> <li>- Interviews with main project partners</li> <li>- Interviews with staff of other project partners</li> <li>- Interviews/surveys with laboratories/government representatives</li> <li>- Interviews/surveys with other stakeholders</li> </ul>
iv.	Responsiveness to Human Rights and Gender Equity	<ul style="list-style-type: none"> <li>- To what extent did the project intervention adhere to UNEPs policy and strategy for gender and human rights?</li> <li>- To what extent did project implementation and monitoring take into consideration:                             <ul style="list-style-type: none"> <li>* Possible inequalities (especially gender-related)</li> <li>* Specific vulnerabilities of disadvantaged groups (such as women, youth, children)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Number of gender and human rights stakeholders identified and actively involved in project implementation</li> <li>- Number of stakeholders satisfied with the stakeholder participation realized</li> <li>- Evidence that sensitivity in gender has been observed in project design, implementation and monitoring and evaluation activities, including gender distribution in participation in project activities and events</li> </ul>	<ul style="list-style-type: none"> <li>- UN policies and strategies on gender and human rights:                             <ul style="list-style-type: none"> <li>* UN Common Understanding on the Human Rights Based Approach</li> <li>* UN Declaration on the Rights of Indigenous People</li> <li>* UNEP's Policy and Strategy for Gender Equality and the Environment</li> </ul> </li> <li>- ProDoc</li> <li>- PIR reports/project progress reports</li> <li>- Project Steering Committee meeting minutes and/or workshop reports</li> <li>- Final reports</li> <li>- Interviews with UNEP project manager</li> <li>- Interviews with main implementation partners</li> <li>- Interviews with staff of other project partners</li> </ul>

Terminal Evaluation of the UNEP Project:  
 "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury"

No	Evaluation Criteria	Sub Questions	Indicators / Means of verification	Data Sources
v	Environmental and Social Safeguards	<ul style="list-style-type: none"> <li>- To what extent were UNEP's requirements, with respect to environmental and social safeguards, met (through the process of environmental and social screening at project approval stage, risk assessment and management) of potential environmental and social risks and impacts associated with project and programme activities?</li> <li>- To what extent were the following activities carried out:                             <ul style="list-style-type: none"> <li>* Review of risk ratings on a regular basis;</li> <li>* Monitoring of project implementation for possible safeguard issues;</li> <li>* Providing responses to safeguard issues.</li> </ul> </li> <li>- To what extent did the project management minimise UNEP's environmental footprint? What measures, if any, were taken?</li> </ul>	<ul style="list-style-type: none"> <li>- Frequency of review of risk ratings</li> <li>- Number of monitoring reports that include monitoring of safeguard issues</li> <li>- Evidence of adequate responses to safeguard issues</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- PIR reports/ Project progress reports</li> <li>- Final reports</li> <li>- Interviews with UNEP project manager</li> <li>- Interviews with main implementation partners</li> <li>- Interviews with other project partners</li> </ul>
vi.	Country Ownership and Driven-ness	<ul style="list-style-type: none"> <li>- To what extent was the government involved with the project? (in respect to the need to embed the Outputs and Outcomes of project work in their respective institutions)</li> <li>- How did this contribute to embed changes in their respective institutions?</li> <li>- To what extent do these representatives/institutions consider the needs or interest of all gendered and marginalised groups?</li> </ul>	<ul style="list-style-type: none"> <li>- Number of project Outputs and Outcomes entrenched in government / public sector institutions</li> <li>- Degree to which project results have been adopted and championed on a national level</li> <li>- Degree to which countries have indicated on-going budgetary funding and capacity for mercury monitoring</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- PIR reports/ Project progress reports</li> <li>- Final reports</li> <li>- Interviews/surveys with laboratory and government representatives</li> <li>- Interviews/surveys with main implementation partners other stakeholders</li> <li>- Interviews with UNEP project managers</li> <li>- Interviews with staff of other project partners</li> </ul>

Terminal Evaluation of the UNEP Project:  
 "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury"

No	Evaluation Criteria	Sub Questions	Indicators / Means of verification	Data Sources
vi.	Communication and Public Awareness	<ul style="list-style-type: none"> <li>- How were learning and experience sharing communicated between project partners and interested groups?</li> <li>- Which (public) awareness activities were undertaken during project implementation?</li> <li>- To what extent did they influence attitudes or shape behaviour among project stakeholders, including local population? How?</li> <li>- To what extent were existing communication channels and networks used effectively, including meeting the differentiated needs of gendered or marginalized groups?</li> </ul>	<ul style="list-style-type: none"> <li>- Operative communication platforms</li> <li>- Development and quality of Lessons Learned report</li> <li>- Degree on awareness of stakeholders on mercury monitoring</li> </ul>	<ul style="list-style-type: none"> <li>- ProDoc</li> <li>- PIR reports/project progress reports</li> <li>- Final reports</li> <li>- Interviews/surveys with laboratories/government representatives</li> <li>- Interviews with UNEP project manager</li> <li>- Interviews with main implementation partners</li> <li>- Interviews with staff of other project partners</li> <li>- Lessons Learned and other communication/awareness raising materials developed within the project</li> </ul>

## ANNEX II. KEY DOCUMENTS CONSULTED

### Project planning, reporting and reference documents:

1. Terms of Reference for the Terminal Evaluation of the UNEP project "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury";
2. ProDoc "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury"
3. The GEF Secretariat project review
4. All UNEP evaluation documents and templates
5. The 3 amendments of the project (for 2017, 2018 and 2019)
6. The PIR (Project Implementation Review) reports for 2016, 2017, 2018 and 2019
7. Steering Committee Meeting reports
8. Report of the workshop: Workshop - Human Exposure to and Environment Concentration of Mercury Outcomes and lessons learnt Global Environment Facility Project. Date: 17 November 2018, Geneva, Switzerland;
9. Report of the workshop: Workshop – Elements towards a Global Monitoring Plan for Mercury. Date: 13 - 14 February 2018, Montelibretti, Rome, Italy;
10. Report of the meeting: Expert Consultation Meeting on Mercury Monitoring on Soil and Biota. Date: 13 - 14 May 2019 Monaco, Principality of Monaco;
11. Project Expenditure reports
12. Final progress report
13. Final co-finance report
14. Small-scale Funding Agreements with the Biodiversity research Institute, RECETOX, and CNR-IIA
15. UN to UN contract with WHO
16. Project Cooperation Agreements with CNR-IIA
17. UNEP MTS 2010-2013, 2014-2017, 2018-2021
18. UNEP PoW 2014-2015, 2016-2017, 2018-2019
19. UNEP Gender Equality and the Environment – Policy and Strategy
20. UNEP Strategy for South-South and Triangular Cooperation
21. GEF5 Focal Area Strategies;
22. Gender equality and mercury (prepared by the Minamata Convention)
23. Progress report 2020 (overview of the Minamata Convention on Mercury activities)
24. Minamata Convention on Mercury fact sheet

### Project documents:

25. Laboratories inputs to the Mercury Laboratory Databank: an overview, UNEP Chemicals and Waste Branch, September 2016;
26. Global review of mercury monitoring networks, UNEP Economy Division Chemicals and Waste Branch, November 2016;
27. Final report on Global Assessment of Laboratories Analyzing Mercury, First Round, RECETOX (coordinated by UNEP Chemicals and Health Branch), 2018;
28. Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury, Air Monitoring Component, Final Technical Progress Report, CNR-IIA, 2018
29. Practical instructions to use CNR-IIA Passive Air Samplers (PASs) for Total Gaseous Mercury (TGM) monitoring, prepared by CNR-IIA;
30. Assessment of prenatal exposure to mercury: standard operating procedures, WHO (2018);
31. Assessment of prenatal exposure to mercury: human biomonitoring survey - The first survey protocol - A tool for developing national protocols, WHO (2015)

32. Final report on the implementation of the project "Development of a Global Plan for Monitoring of Exposure to and Environmental Concentration of Mercury" funded by GEF, Component 3: Development of a monitoring plan on human exposure to mercury, WHO, 2015-2017;
33. Global Monitoring of Mercury – Outcomes from the GEF-funded project 'Develop a Plan for Global Monitoring of Human Exposure to and environmental Concentrations of Mercury', prepared by UNEP, Economy Division, Chemicals and Health Branch, Knowledge and Risk Unit, the Biodiversity Research Institute and the Jožef Stefan Institute (September 2019);
34. Report by UN Environment, the World Health Organization and Italian National Research Council–Institute of Atmospheric Pollution Research regarding the activities of the Global Environment Facility Project: Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury, prepared by UNEP, Economy Division, Chemicals and Health Branch, Science and Knowledge Unit, WHO, CNR-IIA (2017);
35. Evers, D.C. and Sunderland, E.M., Global Mercury Monitoring in Biota, Biodiversity Research Institute (2019);
36. Evers, D.C. and E. Sunderland, Technical Information Report on Mercury Monitoring in Biota: Proposed components towards a strategic long-term plan for monitoring mercury in fish and wildlife globally, Biodiversity Research Institute (2019);
37. Technical information report on mercury monitoring in soil, Jožef Stefan Institute, September 2019;
38. Milena Horvart and Jože Kotnik, Mercury monitoring in soil: Development of a plan for global monitoring of human exposure to and environmental concentrations of mercury, Jožef Stefan Institute, September 2019;
39. S. Blanchemanche, J. Tressou, Standard Operational Procedures for the Monitoring of Mercury and Methylmercury in Fish and Shellfish (2015);
40. Several communication materials (brochures, flyers and posters) developed within the project

**Websites:**

- <http://www.mercuryconvention.org/>
- [COPHES \(eu-hbm.info\)](http://eu-hbm.info)
- <http://www.gmos.eu/>
- <https://web.unep.org/globalmercurypartnership/>

**ANNEX III. PEOPLE CONSULTED DURING THE EVALUATION**

<b>Organisation</b>	<b>Name</b>	<b>Position</b>	<b>Gender</b>
Biodiversity Research Institute	David Evers	Executive Director	M
BCRC-SCRC-Uruguay (Centro Coordinador Convenio Basilea - Centro Regional de Estocolmo América Latina y el Caribe)	Gabriela Medina	Director	F
BCRC-SCRC-Uruguay	Virginia Santana		F
BCRC-SCRC-Uruguay	Natalia Maciel		F
BCRC-SCRC-Uruguay	Alejandra Torre		F
CNR-IIA (National Research Council of Italy - Institute of Atmospheric Pollution Research)	Nicola Pirrone	Director	M
Institute of Health Carlos III (ISCIII)	Marta Esteban López	Researcher	F
Jožef Stefan Institute	Milena Horvat	Senior Research Scientist	F
RECETOX (National Centre for Toxic Compounds and of the Stockholm Convention Regional Centre)	Kateřina Šebková	Director of the National Centre for Toxic Compounds and of the Stockholm Convention Regional Centre (hosted by RECETOX)	F
UNEP, Secretariat to the Minamata Convention	Eisaku Toda	Senior Programme Management Officer	M
UNEP, Secretariat to the Minamata Convention	Claudia ten Have	Senior Policy and Coordination Officer	F
UNEP, Chemicals and Health Branch	Jacqueline Alvarez	Project Manager (Executing Agency)	F
UNEP	Ludovic Bernaudat	Task Manager (Implementing Agency)	M
UNEP, Chemicals and Health Branch	Victor Estellano	Project coordinator (Executing Agency)	M
UNEP	Anuradha Shenoy	Fund Management Officer	F
WHO	Irina Zastenskaya	Technical Officer, Chemical Safety	F

## ANNEX IV. QUESTIONNAIRE

### Questionnaire for national coordinators of the human biomonitoring component

#### Project "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury"

We would greatly appreciate your input on the below questions. As this is an independent evaluation exercise, please note that your feedback and views will not be shared and will be treated as confidential by the evaluation consultant.

#### Background Information

- Your name:
- Period of involvement with the human biomonitoring process (initial month, year – end month, year):
- UNEP/WHO staff involved (your focal points):

#### Questions

1. What process was followed to undertake human biomonitoring of mercury exposure in your country? Could you explain briefly? In your opinion, did this process function well?
2. What other stakeholders were involved in your country? (laboratories, ministry, NGOs, etc.) Could you briefly describe their role?
3. What are according to you the main results of the human biomonitoring process? What are you most proud of?
4. Are there, according to you, any benefits (impacts) of the project that can still be seen today? If so, could you please describe them and provide examples.
5. What were the main challenges (in terms of time, technical issues, finances, implementation, internal/external context, availability of necessary key experts, etc.)? What measures were taken to cope with the challenges/adapt according to the challenges?
6. Do you consider that there is now more capacity in your country on human biomonitoring of mercury exposure? If yes, why and in how far did the project contribute? If not, could you describe what is still missing?
7. What would you consider as the important lessons learned for any follow-up project?

8. What would be the follow-up needs or support that have not been dealt with (fully) in this project (if any) and that would enable the country to effectively conduct human biomonitoring of mercury exposure?
  
9. What support and guidance did WHO and/or UNEP provide, and how?
  
10. Did the project consider aspects on gender, vulnerable groups and human rights, and how? Do you have any suggestions or recommendations to address these issues in future projects?
  
11. Do you have any other feedback / comments, which you consider relevant and would like to share?



## ANNEX V. BRIEF CV OF THE EVALUATOR

**Name: Sandra Molenkamp**

<b>Profession</b>	For 18 years (2001-1019): project manager at environmental organizations. Currently (2019-present): Evaluation and environmental consultant.
<b>Nationality</b>	Dutch
<b>Country experience</b>	<ul style="list-style-type: none"> <li>• Europe: Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Latvia, Lithuania, Macedonia, Moldova, the Netherlands, Romania, Russia, Ukraine, Switzerland</li> <li>• Africa: Ethiopia, Madagascar, ECOWAS countries</li> <li>• Asia: Kyrgyzstan, Mongolia, Tajikistan</li> </ul>
<b>Education</b>	MA Slavic Cultures and Languages
<b>Relevant training</b>	<ul style="list-style-type: none"> <li>• Training on Mercury Initial Assessment, UNITAR, Minsk</li> <li>• Training course on Development of Environmental Management Plans and Health and Safety Plans, FAO, Rome</li> <li>• Training on Inventory and Safeguarding of POPs and Obsolete Pesticides FAO, Minsk</li> </ul>

Sandra Molenkamp is an independent consultant based in The Netherlands. She holds a Master of Arts degree in Slavic Cultures and Languages and has 18 years of experience in managing environmental projects in Eastern Europe, Russia, the Caucasus, Central Asia, and West Africa for the environmental NGOs Milieucontact International and Green Cross Switzerland. Since 2004, Sandra Molenkamp has been involved in POPs and obsolete pesticides projects financed by the Netherlands Ministry of Foreign Affairs, FAO, UNEP, GEF, UNDP and Green Cross Switzerland with a focus on awareness raising, environmental and social impact assessments, technical capacity building, project evaluation and stakeholder involvement.

### Key skills and experience for this assignment

- 18 years of experience in project management of international (environmental and health) projects in countries in transition and developing countries;
- Extensive experience in acquisition of projects, supporting the development of new project directions and writing project proposals;
- Experience in internal and external project evaluation and monitoring;
- Design and implementation of training and capacity building programmes;
- Design and implementation of community engagement plans;
- Experience with stakeholder involvement in POPs and waste projects;
- Networking and communication skills;
- Broad experience in financial and narrative reporting;

### Selected recent assignments and experiences:

- 2020/2021: Conducting the terminal evaluation of three global waste projects implemented by IETC (International Environmental Technology Centre);
- 2020: Supporting the UN International Telecommunication Union with preparation of a project proposal on e-waste;
- 2019: Conducting the terminal evaluation of the UNEP/GEF project "Demonstrating Cost-Effectiveness and Sustainability of Environmentally Sound and Locally Appropriate Alternatives to DDT for Malaria Vector Control in Africa";
- 2019: Providing expertise as Obsolete Pesticides and Environmental Remediation Advisor for FSD (Swiss Foundation for Mine Action) in Central Asia;
- 2019: Providing support to the CWCC (Chemicals Weapons Convention Coalition) to ensure participation of civil society organisations at the annual Conference of the State Parties of the Organisation for the Prohibition of Chemical Weapons (OPCW) in The Hague.

## ANNEX VI. EVALUATION TORS (WITHOUT ANNEXES)

### TERMS OF REFERENCE

#### Terminal Evaluation of the UNEP/GEF project

#### "Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury" and "GEF ID 5409"

#### Section 1: PROJECT BACKGROUND AND OVERVIEW

##### 1. Project General Information

Table 1. Project summary

<b>GEF Project ID:</b>	5409	SB-000689.45	
<b>Implementing Agency:</b>	UNEP	<b>Executing Agency:</b>	UNEP Economy Division, Chemicals and Health Branch
<b>Relevant SDG(s) and indicator(s):</b>	Goal 3: Target 3.9 and Target 3.13 Goal 6: Target 6.3 Goal 12: Target 12.4 Goal 17: Target 17.6 and Target 17.18		
<b>Sub-programme:</b>	Chemicals, Waste and Air Quality	<b>Expected Accomplishment(s):</b>	Sound management of chemicals leading to reduced negative impacts from chemicals on environmental and human health; Prevention and sound management of waste leading to reduced negative impacts from waste on environmental and human health
<b>UNEP approval date:</b>	May 2014	<b>Programme of Work Output(s):</b>	Chemicals and Health Program of Work
<b>GEF approval date:</b>	November 2013	<b>Project type:</b>	Medium Size Project (MSP)
<b>GEF Operational Programme #:</b>	CHEM-3	<b>Focal Area(s):</b>	Persistent Organic Pollutants/Chemicals
		<b>GEF Strategic Priority:</b>	CHEMs-OBJ3: Pilot sound chemicals management and mercury reduction.
<b>Expected start date:</b>	May 2014	<b>Actual start date:</b>	November 2014
<b>Planned completion date:</b>	May 2016	<b>Actual operational completion date:</b>	December 2019
<b>Planned project budget at approval:</b>	USD 3,855,411	<b>Actual total expenditures reported as of:</b>	USD 828,974.34
<b>GEF grant allocation:</b>	USD 850,000	<b>GEF grant expenditures reported as of June 2020:</b>	USD 828,974.34
<b>Project Preparation Grant</b>	0	<b>Project Preparation</b>	0

<b>- GEF financing:</b>		<b>Grant - co-financing:</b>	
<b>Expected Medium-Size Project/Full-Size Project co-financing:</b>	USD 3,005,411	<b>Secured Medium-Size Project/Full-Size Project co-financing:</b>	USD 3,851,000 [as of June 2020]
<b>First disbursement:</b>	May 2015	<b>Planned date of financial closure:</b>	31/12/2019
<b>No. of formal project revisions:</b>	3	<b>Date of last approved project revision:</b>	December 2018
<b>No. of Steering Committee meetings:</b>	3	<b>Date of last/next Steering Committee meeting:</b>	Last: Nov 2018    Next: n/a
<b>Mid-term Review/ Evaluation (planned date):</b>	N/A	<b>Mid-term Review/ Evaluation (actual date):</b>	N/A
<b>Terminal Evaluation (planned date):</b>	January 2020	<b>Terminal Evaluation (actual date):</b>	September 2020
<b>Coverage - Country(ies):</b>	Global	<b>Coverage - Region(s):</b>	Global
<b>Dates of previous project phases:</b>	N/A	<b>Status of future project phases:</b>	N/A

## 2. Project rationale

1. Mercury continues to be used in a variety of products and processes all over the world. Elemental mercury is used in activities such as artisanal and small-scale mining of gold and silver; chlor alkali production; manometers for measurement and control; thermometers; electrical switches; fluorescent lamp bulbs; back lights of computers; and dental amalgam fillings. Mercury is also present in various raw materials (such as coal, oil, wood, and various mining deposits) and can be released to the air or other media when these materials are extracted, burned, pro-cessed, or disposed.

2. The mercury emitted to the air from various types of sources transports through the atmosphere and eventually deposits onto land or water bodies. Most of the mercury in the atmosphere is atomic mercury vapour (Hg<sup>0</sup>), which circulates in the atmosphere for up to a year, and hence can be widely dispersed and transported thousands of kilometres from sources of emission. Most of the mercury in water, soil, sediments, plants, animals and humans is in the form of inorganic, ionic mercury salts (such as mercuric chloride) or organic forms of mercury (e.g., methylmercury). Since mercury can be distributed over long distances through the atmosphere and through oceans, even countries with minimal mercury emissions, and areas situated remotely from dense human activity may be affected.

3. Many studies have documented the negative health and environmental impacts resulting from exposure to mercury in its various species, as well as the significant costs related to mercury mismanagement. In 2005, emissions of anthropogenic mercury to air were estimated to be 1921 metric tonnes, the main source being the combustion of fossil fuels. Other anthropogenic sources to air, soil and water include gold mining (large-scale and artisanal small scale); cement production; non-ferrous metal industries; iron steel production; waste management; cremation; chlor alkali industry and mercury production. In response to the growing concern over global exposure to mercury and its risks for human health and the environment, governments agreed in 2009 to undertake negotiations towards an international treaty on mercury.

4. Although guidelines or protocols were later developed by governmental and academic institutions, the materials on mercury monitoring did not provide sufficient and specific guidance to countries that could adequately facilitate the establishment of national and regional monitoring systems. The limited knowledge of the links between mercury emissions, environmental concentrations and human exposure also made the adoption of adequate risk reduction measures and the assessment of their effectiveness more difficult.

5. These technical challenges were further complicated significant geographical imbalances in the available data. Most measurements had been derived from North America and Western Eu-robe, whereas only a few observations had been made from the Southern Hemisphere. These, among other

issues, had prevented the development of accurate knowledge of mercury speciation, transformation in the environment and cycling, and as a result it was not possible to accurately model mercury time and spatial trends, as required for informed policy-making.

6. The Chemicals Branch of UNEP, through this project, proposed to strengthen capacity for mercury monitoring at the global level by combining existing mercury monitoring programmes and activities under the UN umbrella and to serve the Minamata Convention, its parties and the global community. The project was expected to harmonize approaches for monitoring mercury in humans and the environment, and to strengthen the capacity for mercury analysis in humans and the environment to accurately determine their concentrations globally. The project was also expected to foster coordination and synergies between programs, more specifically monitoring environmental concentrations and human exposure to mercury, and to ensure that adequate laboratory capacity is available in each region or be accessible to each region in order to provide accurate and comparable data on human exposure to and environmental concentrations of mercury, as part of a future global mercury monitoring system.

7. Human biomonitoring is recognized as the most effective tool for evaluation of cumulative human exposure to mercury. The detailed methodological documents for mercury biomonitoring in hair samples developed by WHO Europe are transferable to countries outside the WHO European Region and were used in the project. The implementation of pilot human biomonitoring surveys to assess exposure to mercury was expected to produce valuable baseline data on exposure levels and facilitate capacity building in participating countries. Pilot studies on human biomonitoring and passive air sampling were implemented in 6 and 9 countries respectively. The project assisted the pilot study countries in their implementation of the Minamata Convention, with specific emphasis on the Article 19 (research, development and monitoring) and Article 22 (Effectiveness evaluations), highlighting vital elements for monitoring of mercury in humans (scalp hair, cord blood, and urine) and the environment (air, biota and soil). Standard operating procedures for assessing prenatal exposure to mercury, and Practical Instructions to Use CNR-IIA Passive Air Samplers (PASs) for Total Gaseous Mercury (TGM) Monitoring were prepared in English, French and Spanish. A Global interlaboratory assessment, with 38 laboratories from five UN Regions participating, was also conducted for the assessment of laboratories analysing mercury.

8. The proposed project is of a scientific nature that does not directly impact people's productive activities. Therefore, the gender equity issue took a different dimension than for pure emissions reductions activities. The particular vulnerability to Mercury and Mercury compounds exposure of women in childbearing age was taken into account in the design of the monitoring activities, notably by the development of the Standard Operating Procedures for the Assessment of prenatal exposure to mercury (2018) and the Survey Protocol guide for assessment of prenatal exposure to mercury using biomarkers in cord blood, maternal urine and hair, a tool for developing national protocols (2018).

9. Through its activities, it was anticipated that the project would help to harmonize approaches and methodologies, improve the quality and comparability of data generated globally, and therefore allow for monitoring of the global fate of mercury. In addition, through mapping with the two large partner projects – GMOS and COPHES - the project was to identify countries/regions lacking mercury monitoring, provide training and capacity building activities for selected laboratories in developing countries to monitor mercury, and develop sampling guidelines and schemes for analysis of biotic and abiotic samples. In doing so, this project would ensure all regions are capable to provide reliable data for future effectiveness evaluation of the mercury treaty.

### 3. Project objectives and components

10. According to the Project Document (also referred to as prodoc), the **project goal** is to strengthen the capacity for global monitoring of human exposure to and environmental concentration of mercury. More specifically, the project's **main objective** is to harmonize approaches for monitoring mercury in humans and the environment, and strengthen the capacity for mercury analysis in humans and the environment to accurately determine their concentrations globally. The prodoc sets out four components through which the above-mentioned objective is to be achieved, these are:

- Component 1: Review of existing information on human exposure to and environmental concentrations of mercury;

- Component 2: Development of a monitoring plan on presence of mercury in ambient air
- Component 3: Development of a monitoring plan on human exposure to mercury
- Component 4: Lessons learned and formulation of GMP

11. An abridged version of the results framework<sup>1</sup> is presented in Table 2 below:

**Table 2. Summary of project components, activities, outputs and outcomes**

Component	Expected Outcome	Expected Outputs	Planned Activities
Component 1: Review of existing information on human exposure to and environmental concentrations of mercury	Project technical and analytical baseline strengthened, and information needs identified	1.1 Worldwide analysis of existing networks for mercury monitoring 1.2 Central mercury laboratory database established and first report on interlaboratory assessment available	Activity 1.1: Compile and assess existing networks on mercury in humans and air Activity 1.2: Establish a mercury laboratory assessment databank and organize the first round of inter-laboratory assessment
Component 2: Development of a monitoring plan on presence of mercury in ambient air	Enhanced understanding of mercury concentrations in ambient air improves national capacity to analyse mercury in ambient air and to develop and apply mercury mitigation plans	2.1 Comprehensive network and stations for mercury atmospheric samples established and ready to be used 2.2 Results of one-year pilot test of the atmospheric network for mercury in ambient air available in one consolidated report 2.3 Draft proposal for monitoring plan for mercury on ambient air includes active and passive sampling techniques and short, medium and long-term actions.	Activity 2.1: Establish a network for atmospheric samples by developing passive air samples to complement the GMOS work Activity 2.2: Conduct a pilot testing of the atmospheric network for one year Activity 2.3: draft a proposal for a worldwide air monitoring plan, including interaction between active and passive sampling techniques
Component 3: Development of a monitoring plan on human exposure to mercury	Capacity in developing countries to analyse total mercury in human samples improved and monitoring plan on human exposure to mercury developed	3.1 Standard Operation Procedures (SOP) for human biomonitoring of mercury in place and includes selected sample matrices. 3.2 Network for mercury biomonitoring established and harmonized protocols for national assessments available 3.3 Draft global plan for biomonitoring of mercury includes short	Activity 3.1: Select sample matrices for human biomonitoring of mercury exposure and development of Standard Operation Procedures (SOP) for human biomonitoring of mercury and inclusion of 2 additional matrices Activity 3.2: Develop Network for biomonitoring surveys and harmonized protocols for national assessments, baseline data from national surveys, and report on body burden Activity 3.3: Draft a results-based proposed plan for global human biomonitoring
Component 4: Lessons learned and formulation of GMP	Lessons learned and consolidated global plan for monitoring human exposure to an environmental concentration of mercury enable	4.1 Report on science-based international workshop for review and finalization of the human exposure and environmental components of the global monitoring plan	Activity 4.1: Organize a science-based international workshop for review and finalization of the human exposure and environmental components of the global monitoring plan

<sup>1</sup> Based upon the Project Document and PIR FY19

Component	Expected Outcome	Expected Outputs	Planned Activities
	countries to monitor mercury in harmonized manner	4.2 Lessons learned reported. 4.3 Monitoring and evaluation plan fully implemented assess rate of project's success	Activity 4.2: Develop a report on lessons learned Activity 4.3: Implement a Monitoring and Evaluation Plan

#### 4. Executing Arrangements

12. This project was implemented by the United Nations Environment Programme (UNEP), responsible for providing administrative supervision in the implementation of the project. The GEF Team of UNEP Economy Division was the Implementing Agency (IA) and the Science Team (Chemicals and Health Branch) was the Executing Agency (EA). The EA reported to the IA, which in turn reported to GEF and submitted the required reports to the GEF-SEC.

13. The EA was responsible for, among others: coordinating the overall project; executing activities as indicated in the prodoc; monitoring the indicators for Outputs and Outcomes of the project against the Logical Framework in the prodoc; and liaising with executing partners, including GMOS - a programme of INR, the national research organization of Italy which was sub-contracted for the work, and the World Health Organization. UNEP in its role as IA was responsible for administering and reporting on the use of GEF grant resources allocated to their respective components.

14. Project activities were guided by an international Project Steering Committee (PSC) comprised of GEF Secretariat, UNEP (as IA and EA), WHO, representatives from the main global/regional programmes monitoring mercury in humans and the environment, and other donors of the project. The PSC guided the strategic project planning decisions and oversaw the overall implementation of the project.

15. A project team was established in Geneva to provide day to day support for the execution of the various network activities at regional and global levels. The core team (Project Management Unit) was comprised of a Project Coordinator/ Technical Advisor, and an Administrative and Finance assistant (based in Geneva). The project team from the Economy Division (based in Paris) provided back-stopping services to project staff, as well as a link between the Chemicals and Health Branch (EA) and the broader UNEP Economy Division programmes and projects.

16. The Project Coordinator was expected to ensure coordination across participating countries and institutions, provide liaison between these and UNEP, and provide support to the project partners for project execution. Specifically on a day-to-day level the coordinator would: liaise with the national laboratories in participating countries, and the experts responsible for the national monitoring networks; coordinate surveys and development of the laboratory database; coordinate the available information for designing the workplan and assist in the joint development of the training and capacity building needs; coordinate provision of the necessary infrastructure for national activities of participating laboratories; provide regular updates on project progress; assist in the development of the global plan for mercury monitoring; and write a final report summarizing the activities undertaken in this project including lessons learned.

17. The project builds on two existing global activities for the monitoring of mercury: the Global Mercury Observation System (GMOS)<sup>2</sup> and the COPHES<sup>3</sup>. With respect to air monitoring, the project cooperated with GMOS and its already established net-work of monitoring stations. GMOS, a project funded by the European Union, is a network of more than twenty research intuitions with air monitoring stations in Europe, North and South America, Asia and Africa. GMOS and the environment monitoring component of this project were led by the Italian National Research Council - Institute of Atmospheric Pollution Research (CNR-IIA).

<sup>2</sup> [www.gmos.eu](http://www.gmos.eu)

<sup>3</sup> Consortium to perform human biomonitoring on a European Scale, online available <http://www.eu-hbm.info/cophes/project-work-packages>

18. WHO worked closely with UNEP in project component 3 and also supported the development of project components 1 and 4. CNR-IIA worked closely with UNEP in project component 2 and also assisted with project component 4. Both organizations played a key role in the training and field testing of biomonitoring and air monitoring respectively.

19. At the national level, UNEP subcontracted selected laboratories through the national responsible authorities. National institutions/laboratories responsible for the implementation of Component 3 were subcontracted in coordination with WHO/EURO to ensure that the project activities are well understood and supported by the national authorities.

## 5. Project Cost and Financing

20. The total budget of the project was USD 3,855,411 of which USD 850,000 was GEF financing and the balance was co-financing, as detailed in table 3 below.

**Table 3. Project budget**

Sources of funds	Type of financing	Amount (USD)
GEF Trust Fund	Cash	850,000
Name of Co-financier (source)		
UNEP Chemicals Branch	In-kind	895,022
World Health Organization	In-kind	410,389
CNR IIA	In-kind	1,700,000
Total Co-financing		3,005,411
<b>Total budget</b>		<b>3,855,411</b>

21. The budget breakdown by component is presented in Table 4 below.

**Table 4. Project budget by component**

Project Component	Expected Outcomes	Grant Amount (\$)	Co-financing (\$)
Review of existing information on human exposure to and environmental concentrations of mercury	Project technical and analytical baseline strengthened and information needs identified	137,500	893,479
Development of a monitoring plan on presence of mercury in ambient air	Enhanced understanding of mercury concentrations in ambient air through the strengthening of the Global Monitoring Observation System (GMOS) and the development of the complimentary, passive air sampling (PAS) network for ambient air concentrations improves national and global capacity to analyse mercury in ambient air and to develop and apply sound mercury mitigation plans	232,750	1,429,000
Development of a monitoring plan on human exposure to mercury	Capacity in developing countries to analyse total mercury in human samples improved and monitoring plan on human exposure to mercury developed	259,750	384,000
Lessons learned and formulation of GMP	Lessons learned and consolidated global plan for monitoring human exposure to and environmental concentration of mercury enable countries to monitor mercury in a harmonized manner	146,000	20,000
<b>Subtotal</b>		<b>776,000</b>	<b>2,726,479</b>
<b>Project management Cost</b>		<b>74,000</b>	<b>278,932</b>

Project Component	Expected Outcomes	Grant Amount (\$)	Co-financing (\$)
Total project costs		850,000	3,005,411

## 6. Implementation Issues

22. The project experienced delays at the onset of the project. This was occasioned by the introduction and initiation of the UMOJA system in UNEP, which caused some initial challenges to project implementation. Another notable cause of delay during the project's lifespan was caused by challenges that occurred after the inclusion of technical issues that were raised during the COP 2. By the Fiscal Year 2019, all the activities and components planned under Project had been achieved. After planned activities have been completed, additional activities were undertaken to provide further contribution in line with the discussion on the establishment of arrangement for an Effectives evaluation under the Minamata Convention. According to the Project Implementation Report FY 19, although the project did make a lot of progress towards meeting the objective, the delays previously accumulated could not be compensated and the project consequently obtained three (3) no-cost extensions.

## 7. Objective of the Evaluation

23. In line with the UNEP Evaluation Policy<sup>4</sup> and the UNEP Programme Manual<sup>5</sup>, the Terminal Evaluation is undertaken at completion of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UNEP, WHO and Italian National Research Council, Institute of Atmospheric Pollution Research (CNR-IIA) (main project partners). Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation, especially for the second phase of the project, where applicable

## 8. Key Evaluation Principles

24. Evaluation findings and judgements will be based on **sound evidence and analysis**, clearly documented in the evaluation report. Information will be triangulated (i.e. verified from different sources) as far as possible, and when verification is not possible, the single source will be mentioned (whilst anonymity is still protected). Analysis leading to evaluative judgements should always be clearly spelled out.

25. **The "Why?" Question.** As this is a terminal evaluation and a follow-up project is likely [or similar interventions are envisaged for the future], particular attention will be given to learning from the experience. Therefore, the "Why?" question should be at the front of the consultants' minds all through the evaluation exercise and is supported by the use of a theory of change approach. This means that the consultant(s) needs to go beyond the assessment of "what" the project performance was and make a serious effort to provide a deeper understanding of "why" the performance was as it was. This should provide the basis for the lessons that can be drawn from the project.

26. **Attribution, Contribution and Credible Association:** In order to attribute any outcomes and impacts to a project intervention, one needs to consider the difference between what has happened with, and what would have happened without, the project (i.e. take account of changes over time and between contexts in order to isolate the effects of an intervention). This requires appropriate baseline data and the identification of a relevant counterfactual, both of which are frequently not available for

4 <https://www.unenvironment.org/about-un-environment/evaluation-office/policies-and-strategies>

5 <https://wecollaborate.unep.org>



evaluations. Establishing the contribution made by a project in a complex change process relies heavily on prior intentionality (e.g. approved project design documentation, logical framework) and the articulation of causality (e.g. narrative and/or illustration of the Theory of Change). Robust evidence that a project was delivered as designed and that the expected causal pathways developed supports claims of contribution and this is strengthened where an alternative theory of change can be excluded. A credible association between the implementation of a project and observed positive effects can be made where a strong causal narrative, although not explicitly articulated, can be inferred by the chronological sequence of events, active involvement of key actors and engagement in critical processes.

27. **Communicating evaluation results.** A key aim of the evaluation is to encourage reflection and learning by UNEP staff and key project stakeholders. The consultant(s) should consider how reflection and learning can be promoted, both through the evaluation process and in the communication of evaluation findings and key lessons. Clear and concise writing is required on all evaluation deliverables. Draft and final versions of the main evaluation report will be shared with key stakeholders by the Evaluation Manager. There may, however, be several intended audiences, each with different interests and needs regarding the report. The consultant(s) will plan with the Evaluation Manager which audiences to target and the easiest and clearest way to communicate the key evaluation findings and lessons to them. This may include some, or all, of the following; a webinar, conference calls with relevant stakeholders, the preparation of an evaluation brief or interactive presentation.

## 9. Key Strategic Questions

28. In addition to the evaluation criteria outlined in Section 10 below, the evaluation will address the **strategic questions** listed below. These are questions of interest to UNEP and to which the project is believed to be able to make a substantive contribution:

- (a) To what degree of success has the project improved coordination and harmonization of national approaches in monitoring environmental concentrations and human exposure to ensure all regions are able to provide reliable data for future effectiveness evaluation of the mercury treaty?
- (b) To what extent has the project contributed to ensuring adequate laboratory capacity is available/accessible in each region in order to provide accurate and comparable data on human exposure to and environmental concentrations of mercury?
- (c) What main factors have been identified by the evaluation as having contributed to the project's success and which have presented the greatest challenge in attaining the goal of goal to strengthen the capacity for global monitoring of mercury in humans and the environment?

## 10. Evaluation Criteria

29. All evaluation criteria will be rated on a six-point scale. Sections A-I below, outline the scope of the criteria and a link to a table for recording the ratings is provided in Annex 1). A weightings table will be provided in excel format (link provided in Annex 1) to support the determination of an overall project rating. The set of evaluation criteria are grouped in nine categories: (A) Strategic Relevance; (B) Quality of Project Design; (C) Nature of External Context; (D) Effectiveness, which comprises assessments of the availability of outputs, achievement of outcomes and likelihood of impact; (E) Financial Management; (F) Efficiency; (G) Monitoring and Reporting; (H) Sustainability; and (I) Factors Affecting Project Performance. The evaluation consultant(s) can propose other evaluation criteria as deemed appropriate.

### A. Strategic Relevance

30. The evaluation will assess 'the extent to which the activity is suited to the priorities and policies of the target group, recipient and donor'. The evaluation will include an assessment of the project's relevance in relation to UNEP's mandate and its alignment with UNEP's policies and strategies at the time of project approval. Under strategic relevance an assessment of the complementarity of the project with other interventions addressing the needs of the same target groups will be made. This criterion comprises four elements:

31. In line with the UNEP Evaluation Policy<sup>6</sup> and the UNEP Programme Manual<sup>7</sup>, the Terminal Evaluation is undertaken at completion of the project to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) stemming from the project, including their sustainability. The evaluation has two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote operational improvement, learning and knowledge sharing through results and lessons learned among UNEP, WHO and CNR. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation, especially for the second phase of the project, where applicable

32. The evaluation should assess the project's alignment with the MTS and POW under which the project was approved and include, in its narrative, reflections on the scale and scope of any contributions made to the planned results reflected in the relevant MTS and POW. UNEP strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building<sup>8</sup> (BSP) and South-South Cooperation (S-SC). The BSP relates to the capacity of governments to: comply with international agreements and obligations at the national level; promote, facilitate and finance environmentally sound technologies and to strengthen frameworks for developing coherent international environmental policies. S-SC is regarded as the exchange of resources, technology and knowledge between developing countries.

**i. Alignment to Donor/GEF/Partner Strategic Priorities**

33. Donor, including GEF, strategic priorities will vary across interventions. GEF priorities are specified in published programming priorities and focal area strategies. The Evaluation will assess the extent to which the project is suited to, or responding to, donor priorities. In some cases, alignment with donor priorities may be a fundamental part of project design and grant approval processes while in others, for example, instances of 'softly-earmarked' funding, such alignment may be more of an assumption that should be assessed.

**ii. Relevance to Global, Regional, Sub-regional and National Environmental Priorities**

34. The evaluation will assess the alignment of the project with global priorities such as the SDGs and Agenda 2030. The extent to which the intervention is suited, or responding to, the stated environmental concerns and needs of the countries, sub-regions or regions where it is being implemented will be considered. Examples may include: national or sub-national development plans, poverty reduction strategies or Nationally Appropriate Mitigation Action (NAMA) plans or regional agreements etc. Within this section consideration will be given to whether the needs of all beneficiary groups are being met and reflects the current policy priority to leave no one behind.

**iii. Complementarity with Existing Interventions/Coherence<sup>9</sup>**

35. An assessment will be made of how well the project, either at design stage or during the project inception or mobilization<sup>10</sup>, took account of ongoing and planned initiatives (under the same sub-programme, other UNEP sub-programmes, or being implemented by other agencies within the same country, sector or institution) that address similar needs of the same target groups. The evaluation will consider if the project team, in collaboration with Regional Offices and Sub-Programme Coordinators, made efforts to ensure their own intervention was complementary to other interventions, optimized any synergies and avoided duplication of effort. Examples may include UN Development Assistance Frameworks or One UN programming. Linkages with other interventions should be described and instances where UNEP's comparative advantage has been particularly well applied should be highlighted.

Factors affecting this criterion may include:

- Stakeholders' participation and cooperation
- Responsiveness to human rights and gender equity

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<sup>6</sup> <https://www.unenvironment.org/about-un-environment/evaluation-office/policies-and-strategies>

<sup>7</sup> <https://wecollaborate.unep.org>

<sup>8</sup> <http://www.unep.fr/ozonaction/about/bsp.htm>

<sup>9</sup> This sub-category is consistent with the new criterion of 'Coherence' introduced by the OECD-DAC in 2019.

<sup>10</sup> A project's inception or mobilization period is understood as the time between project approval and first disbursement. Complementarity during project implementation is considered under Efficiency, see below.

- Country ownership and driven-ness

## **B. Quality of Project Design**

36. The quality of project design is assessed using an agreed template during the evaluation inception phase, ratings are attributed to identified criteria and an overall Project Design Quality rating is established ([www.unenvironment.org/about-un-environment/our-evaluation-approach/templates-and-tools](http://www.unenvironment.org/about-un-environment/our-evaluation-approach/templates-and-tools)). This overall Project Design Quality rating is entered in the final evaluation ratings table as item B. In the Main Evaluation Report a summary of the project's strengths and weaknesses at design stage is included, while the complete Project Design Quality template is annexed in the Inception Report.

Factors affecting this criterion may include (at the design stage):

- Stakeholders participation and cooperation
- Responsiveness to human rights and gender equity

## **C. Nature of External Context**

37. At evaluation inception stage a rating is established for the project's external operating context (considering the prevalence of conflict, natural disasters and political upheaval<sup>11</sup>). This rating is entered in the final evaluation ratings table as item C. Where a project has been rated as facing either an Unfavourable or Highly Unfavourable external operating context, and/or a negative external event has occurred during project implementation, the ratings for Effectiveness, Efficiency and/or Sustainability may be increased at the discretion of the evaluation consultant and Evaluation Manager together. A justification for such an increase must be given.

## **D. Effectiveness**

### **i. Availability of Outputs<sup>12</sup>**

38. The evaluation will assess the project's success in producing the programmed outputs and achieving milestones as per the project design document (ProDoc). Any formal modifications/revisions made during project implementation will be considered part of the project design. Where the project outputs are inappropriately or inaccurately stated in the ProDoc, reformulations may be necessary in the reconstruction of the TOC. In such cases a table should be provided showing the original and the reformulation of the outputs for transparency. The availability of outputs will be assessed in terms of both quantity and quality, and the assessment will consider their ownership by, and usefulness to, intended beneficiaries and the timeliness of their provision. It is noted that emphasis is placed on the performance of those outputs that are most important to achieve outcomes. The evaluation will briefly explain the reasons behind the success or shortcomings of the project in delivering its programmed outputs and meeting expected quality standards.

Factors affecting this criterion may include:

- Preparation and readiness
- Quality of project management and supervision<sup>13</sup>

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<sup>11</sup> Note that 'political upheaval' does not include regular national election cycles, but unanticipated unrest or prolonged disruption. The potential delays or changes in political support that are often associated with the regular national election cycle should be part of the project's design and addressed through adaptive management by the project team.

<sup>12</sup> Outputs are the availability (for intended beneficiaries/users) of new products and services and/or gains in knowledge, abilities and awareness of individuals or within institutions (UNEP, 2019)

<sup>13</sup> In some cases 'project management and supervision' will refer to the supervision and guidance provided by UNEP to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UNEP.

## ii. Achievement of Project Outcomes<sup>14</sup>

39. The achievement of project outcomes is assessed as performance against the project outcomes as defined in the reconstructed<sup>15</sup> Theory of Change. These are outcomes that are intended to be achieved by the end of the project timeframe and within the project's resource envelope. Emphasis is placed on the achievement of project outcomes that are most important for attaining intermediate states. As with outputs, a table can be used where substantive amendments to the formulation of project outcomes is necessary. The evaluation should report evidence of attribution between UNEP's intervention and the project outcomes. In cases of normative work or where several actors are collaborating to achieve common outcomes, evidence of the nature and magnitude of UNEP's 'substantive contribution' should be included and/or 'credible association' established between project efforts and the project outcomes realised.

Factors affecting this criterion may include:

- Quality of project management and supervision
- Stakeholders' participation and cooperation
- Responsiveness to human rights and gender equity
- Communication and public awareness

## iii. Likelihood of Impact

40. Based on the articulation of long-lasting effects in the reconstructed TOC (i.e. from project outcomes, via intermediate states, to impact), the evaluation will assess the likelihood of the intended, positive impacts becoming a reality. Project objectives or goals should be incorporated in the TOC, possibly as intermediate states or long-lasting impacts. The Evaluation Office's approach to the use of TOC in project evaluations is outlined in a guidance note available on the Evaluation Office website, <https://www.unenvironment.org/about-un-environment/evaluation> and is supported by an excel-based flow chart, 'Likelihood of Impact Assessment Decision Tree'. Essentially the approach follows a 'likelihood tree' from project outcomes to impacts, taking account of whether the assumptions and drivers identified in the reconstructed TOC held. Any unintended positive effects should also be identified and their causal linkages to the intended impact described.

41. The evaluation will also consider the likelihood that the intervention may lead, or contribute to, unintended negative effects (e.g. will vulnerable groups such as those living with disabilities and/or women and children, be disproportionately affected by the project?). Some of these potential negative effects may have been identified in the project design as risks or as part of the analysis of Environmental, Social and Economic Safeguards.<sup>16</sup>

42. The evaluation will consider the extent to which the project has played a catalytic role or has promoted scaling up and/or replication<sup>17</sup> as part of its Theory of Change and as factors that are likely to contribute to longer term impact.

43. Ultimately UNEP and all its partners aim to bring about benefits to the environment and human well-being. Few projects are likely to have impact statements that reflect such long-term or broad-based changes. However, the evaluation will assess the likelihood of the project to make a substantive contribution to the long-lasting changes represented by the Sustainable Development Goals and/or the

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<sup>14</sup> Outcomes are the use (i.e. uptake, adoption, application) of an output by intended beneficiaries, observed as changes in institutions or behavior, attitude or condition (UNEP, 2019)

<sup>15</sup> All submitted UNEP project documents are required to present a Theory of Change with all submitted project designs. The level of 'reconstruction' needed during an evaluation will depend on the quality of this initial TOC, the time that has lapsed between project design and implementation (which may be related to securing and disbursing funds) and the level of any formal changes made to the project design.

<sup>16</sup> Further information on Environmental, Social and Economic Safeguards (ESES) can be found at <http://wedocs.unep.org/handle/20.500.11822/8718>

<sup>17</sup> Scaling up refers to approaches being adopted on a much larger scale, but in a very similar context. Scaling up is often the longer-term objective of pilot initiatives. Replication refers to approaches being repeated or lessons being explicitly applied in new/different contexts e.g. other geographic areas, different target group etc. Effective replication typically requires some form of revision or adaptation to the new context. It is possible to replicate at either the same or a different scale.

intermediate-level results reflected in UNEP's Expected Accomplishments and the strategic priorities of funding partners.

Factors affecting this criterion may include:

- Quality of Project Management and Supervision (including adaptive management)
- Stakeholders participation and cooperation
- Responsiveness to human rights and gender equity
- Country ownership and driven-ness
- Communication and public awareness

## **E. Financial Management**

44. Financial management will be assessed under three themes: adherence to UNEP's financial policies and procedures, completeness of financial information and communication between financial and project management staff. The evaluation will establish the actual spend across the life of the project of funds secured from all donors. This expenditure will be reported, where possible, at output level and will be compared with the approved budget. The evaluation will verify the application of proper financial management standards and adherence to UNEP's financial management policies. Any financial management issues that have affected the timely delivery of the project or the quality of its performance will be highlighted. The evaluation will record where standard financial documentation is missing, inaccurate, incomplete or unavailable in a timely manner. The evaluation will assess the level of communication between the Project/Task Manager and the Fund Management Officer as it relates to the effective delivery of the planned project and the needs of a responsive, adaptive management approach.

Factors affecting this criterion may include:

- Preparation and readiness
- Quality of project management and supervision

## **F. Efficiency**

45. The evaluation will assess the extent to which the project delivered maximum results from the given resources. This will include an assessment of the cost-effectiveness and timeliness of project execution. Focussing on the translation of inputs into outputs, cost-effectiveness is the extent to which an intervention has achieved, or is expected to achieve, its results at the lowest possible cost. Timeliness refers to whether planned activities were delivered according to expected timeframes as well as whether events were sequenced efficiently. The evaluation will also assess to what extent any project extension could have been avoided through stronger project management and identify any negative impacts caused by project delays or extensions. The evaluation will describe any cost or time-saving measures put in place to maximise results within the secured budget and agreed project timeframe and consider whether the project was implemented in the most efficient way compared to alternative interventions or approaches.

46. The evaluation will give special attention to efforts made by the project teams during project implementation to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities<sup>18</sup> with other initiatives, programmes and projects etc. to increase project efficiency. The evaluation will also consider the extent to which the management of the project minimised UNEP's environmental footprint.

47. The factors underpinning the need for any project extensions will also be explored and discussed. As management or project support costs cannot be increased in cases of 'no cost extensions', such extensions represent an increase in unstated costs to implementing parties.

Factors affecting this criterion may include:

- Preparation and readiness (e.g. timeliness)
- Quality of project management and supervision

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<sup>18</sup> Complementarity with other interventions during project design, inception or mobilization is considered under Strategic Relevance above.

- Stakeholders participation and cooperation

## **G. Monitoring and Reporting**

48. The evaluation will assess monitoring and reporting across three sub-categories: monitoring design and budgeting, monitoring implementation and project reporting.

### **i. Monitoring Design and Budgeting**

49. Each project should be supported by a sound monitoring plan that is designed to track progress against SMART<sup>19</sup> results towards the provision of the project's outputs and achievement of project outcomes, including at a level disaggregated by gender, marginalisation or vulnerability, including those living with disabilities.. In particular, the evaluation will assess the relevance and appropriateness of the project indicators as well as the methods used for tracking progress against them as part of conscious results-based management. The evaluation will assess the quality of the design of the monitoring plan as well as the funds allocated for its implementation. The adequacy of resources for mid-term and terminal evaluation/review should be discussed if applicable.

### **ii. Monitoring of Project Implementation**

50. The evaluation will assess whether the monitoring system was operational and facilitated the timely tracking of results and progress towards projects objectives throughout the project implementation period. This assessment will include consideration of whether the project gathered relevant and good quality baseline data that is accurately and appropriately documented. This should include monitoring the representation and participation of disaggregated groups (including gendered, marginalised or vulnerable groups, such as those living with disabilities) in project activities. It will also consider the quality of the information generated by the monitoring system during project implementation and how it was used to adapt and improve project execution, achievement of outcomes and ensure sustainability. The evaluation should confirm that funds allocated for monitoring were used to support this activity.

### **iii. Project Reporting**

51. UNEP has a centralised project information management system (Anubis) in which project managers upload six-monthly progress reports against agreed project milestones. This information will be provided to the Evaluation Consultant(s) by the Evaluation Manager. Some projects have additional requirements to report regularly to funding partners, which will be supplied by the project team (e.g. the Project Implementation Reviews and Tracking Tool for GEF-funded projects). The evaluation will assess the extent to which both UNEP and donor reporting commitments have been fulfilled. Consideration will be given as to whether reporting has been carried out with respect to the effects of the initiative on disaggregated groups.

Factors affecting this criterion may include:

- Quality of project management and supervision
- Responsiveness to human rights and gender equity (e.g disaggregated indicators and data)

## **H. Sustainability**

52. Sustainability<sup>20</sup> is understood as the probability of project outcomes being maintained and developed after the close of the intervention. The evaluation will identify and assess the key conditions or factors that are likely to undermine or contribute to the endurance of achieved project outcomes (ie. 'assumptions' and 'drivers'). Some factors of sustainability may be embedded in the project design and implementation approaches while others may be contextual circumstances or conditions that evolve

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<sup>19</sup> SMART refers to results that are specific, measurable, achievable, relevant and time-oriented. Indicators help to make results measurable.

<sup>20</sup> As used here, 'sustainability' means the long-term maintenance of outcomes and consequent impacts, whether environmental or not. This is distinct from the concept of sustainability in the terms 'environmental sustainability' or 'sustainable development', which imply 'not living beyond our means' or 'not diminishing global environmental benefits' (GEF STAP Paper, 2019, Achieving More Enduring Outcomes from GEF Investment)

over the life of the intervention. Where applicable an assessment of bio-physical factors that may affect the sustainability of project outcomes may also be included.

**i. Socio-political Sustainability**

53. The evaluation will assess the extent to which social or political factors support the continuation and further development of project outcomes. It will consider the level of ownership, interest and commitment among government and other stakeholders to take the project achievements forwards. In particular the evaluation will consider whether individual capacity development efforts are likely to be sustained.

**ii. Financial Sustainability**

54. Some project outcomes, once achieved, do not require further financial inputs, e.g. the adoption of a revised policy. However, in order to derive a benefit from this outcome further management action may still be needed e.g. to undertake actions to enforce the policy. Other project outcomes may be dependent on a continuous flow of action that needs to be resourced for them to be maintained, e.g. continuation of a new resource management approach. The evaluation will assess the extent to which project outcomes are dependent on future funding for the benefits they bring to be sustained. Secured future funding is only relevant to financial sustainability where the project's outcomes have been extended into a future project phase. Even where future funding has been secured, the question still remains as to whether the project outcomes are financially sustainable.

**iii. Institutional Sustainability**

55. The evaluation will assess the extent to which the sustainability of project outcomes (especially those relating to policies and laws) is dependent on issues relating to institutional frameworks and governance. It will consider whether institutional achievements such as governance structures and processes, policies, sub-regional agreements, legal and accountability frameworks etc. are robust enough to continue delivering the benefits associated with the project outcomes after project closure. In particular, the evaluation will consider whether institutional capacity development efforts are likely to be sustained.

Factors affecting this criterion may include:

- Stakeholders participation and cooperation
- Responsiveness to human rights and gender equity (e.g. where interventions are not inclusive, their sustainability may be undermined)
- Communication and public awareness
- Country ownership and driven-ness

**I. Factors Affecting Project Performance and Cross-Cutting Issues**

(These factors are rated in the ratings table but are discussed within the Main Evaluation Report as cross-cutting themes as appropriate under the other evaluation criteria, above. Where the issues have not been addressed under other evaluation criteria, the consultant(s) will provide summary sections under the following headings.)

**i. Preparation and Readiness**

56. This criterion focuses on the inception or mobilisation stage of the project (i.e. the time between project approval and first disbursement). The evaluation will assess whether appropriate measures were taken to either address weaknesses in the project design or respond to changes that took place between project approval, the securing of funds and project mobilisation. In particular the evaluation will consider the nature and quality of engagement with stakeholder groups by the project team, the confirmation of partner capacity and development of partnership agreements as well as initial staffing and financing arrangements. (Project preparation is included in the template for the assessment of Project Design Quality).

**ii. Quality of Project Management and Supervision**

57. In some cases 'project management and supervision' will refer to the supervision and guidance provided by UNEP to implementing partners and national governments while in others, specifically for

GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping and supervision provided by UNEP.

58. The evaluation will assess the effectiveness of project management with regard to: providing leadership towards achieving the planned outcomes; managing team structures; maintaining productive partner relationships (including Steering Groups etc.); maintaining project relevance within changing external and strategic contexts; communication and collaboration with UNEP colleagues; risk management; use of problem-solving; project adaptation and overall project execution. Evidence of adaptive management should be highlighted.

### **iii. Stakeholder Participation and Cooperation**

59. Here the term 'stakeholder' should be considered in a broad sense, encompassing all project partners, duty bearers with a role in delivering project outputs and target users of project outputs and any other collaborating agents external to UNEP and the Executing Agency. The assessment will consider the quality and effectiveness of all forms of communication and consultation with stakeholders throughout the project life and the support given to maximise collaboration and coherence between various stakeholders, including sharing plans, pooling resources and exchanging learning and expertise. The inclusion and participation of all differentiated groups, including gender groups should be considered.

### **iv. Responsiveness to Human Rights and Gender Equity**

60. The evaluation will ascertain to what extent the project has applied the UN Common Understanding on the human rights-based approach (HRBA) and the UN Declaration on the Rights of Indigenous People. Within this human rights context the evaluation will assess to what extent the intervention adheres to UNEP's Policy and Strategy for Gender Equality and the Environment<sup>21</sup>.

61. In particular the evaluation will consider to what extent project-implementation and monitoring have taken into consideration: (i) possible inequalities (especially those related to gender) in access to, and the control over, natural resources; (ii) specific vulnerabilities of disadvantaged groups (especially women, youth and children and those living with disabilities) to environmental degradation or disasters; and (iii) the role of disadvantaged groups (especially those related to gender) in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation.

### **v. Environmental and Social Safeguards**

62. UNEP projects address environmental and social safeguards primarily through the process of environmental and social screening at the project approval stage, risk assessment and management (avoidance, minimization, mitigation or, in exceptional cases, offsetting) of potential environmental and social risks and impacts associated with project and programme activities. The evaluation will confirm whether UNEP requirements<sup>22</sup> were met to: review risk ratings on a regular basis; monitor project implementation for possible safeguard issues; respond (where relevant) to safeguard issues through risk avoidance, minimization, mitigation or offsetting and report on the implementation of safeguard management measures taken. UNEP requirements for proposed projects to be screened for any safeguarding issues; for sound environmental and social risk assessments to be conducted and initial risk ratings to be assigned are evaluated above under Quality of Project Design).

63. The evaluation will also consider the extent to which the management of the project minimised UNEP's environmental footprint.

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<sup>21</sup>The Evaluation Office notes that Gender Equality was first introduced in the UNEP Project Review Committee Checklist in 2010 and, therefore, provides a criterion rating on gender for projects approved from 2010 onwards. Equally, it is noted that policy documents, operational guidelines and other capacity building efforts have only been developed since then and have evolved over time. [https://wedocs.unep.org/bitstream/handle/20.500.11822/7655/-Gender\\_equality\\_and\\_the\\_environment\\_Policy\\_and\\_strategy-2015Gender\\_equality\\_and\\_the\\_environment\\_policy\\_and\\_strategy.pdf.pdf?sequence=3&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/7655/-Gender_equality_and_the_environment_Policy_and_strategy-2015Gender_equality_and_the_environment_policy_and_strategy.pdf.pdf?sequence=3&isAllowed=y)

<sup>22</sup>For the review of project concepts and proposals, the Safeguard Risk Identification Form (SRIF) was introduced in 2019 and replaced the Environmental, Social and Economic Review note (ESERN), which had been in place since 2016. In GEF projects safeguards have been considered in project designs since 2011.



#### vi. Country Ownership and Driven-ness

64. The evaluation will assess the quality and degree of engagement of government / public sector agencies in the project. While there is some overlap between Country Ownership and Institutional Sustainability, this criterion focuses primarily on the forward momentum of the intended projects results, ie. either a) moving forwards from outputs to project outcomes or b) moving forward from project outcomes towards intermediate states. The evaluation will consider the involvement not only of those directly involved in project execution and those participating in technical or leadership groups, but also those official representatives whose cooperation is needed for change to be embedded in their respective institutions and offices (e.g. representatives from multiple sectors or relevant ministries beyond Ministry of Environment). This factor is concerned with the level of ownership generated by the project over outputs and outcomes and that is necessary for long term impact to be realised. Ownership should extend to all gendered and marginalised groups.

#### vii. Communication and Public Awareness

65. The evaluation will assess the effectiveness of: a) communication of learning and experience sharing between project partners and interested groups arising from the project during its life and b) public awareness activities that were undertaken during the implementation of the project to influence attitudes or shape behaviour among wider communities and civil society at large. The evaluation should consider whether existing communication channels and networks were used effectively, including meeting the differentiated needs of gendered or marginalised groups, and whether any feedback channels were established. Where knowledge sharing platforms have been established under a project the evaluation will comment on the sustainability of the communication channel under either socio-political, institutional or financial sustainability, as appropriate.

### Section 3. EVALUATION APPROACH, METHODS AND DELIVERABLES

66. The Terminal Evaluation will be an in-depth evaluation using a participatory approach whereby key stakeholders are kept informed and consulted throughout the evaluation process. Both quantitative and qualitative evaluation methods will be used as appropriate to determine project achievements against the expected outputs, outcomes and impacts. It is highly recommended that the consultant(s) maintains close communication with the project team and promotes information exchange throughout the evaluation implementation phase in order to increase their (and other stakeholder) ownership of the evaluation findings. Where applicable, the consultant(s) will provide a geo-referenced map that demarcates the area covered by the project and, where possible, provide geo-reference photographs of key intervention sites (e.g. sites of habitat rehabilitation and protection, pollution treatment infrastructure, etc.)

67. The findings of the evaluation will be based on the following:

(a) A **desk review** of:

- Relevant background documentation;
- Project design documents (including minutes of the project design review meeting at approval); Annual Work Plans and Budgets or equivalent, revisions to the project (Project Document Revision), the logical framework and its budget;
- Project reports such as six-monthly progress and financial reports, progress reports from collaborating partners, meeting minutes, relevant correspondence and including the Project Implementation Reviews (PIR), and Tracking Tool etc.;
- Project outputs (e.g. Pilot studies);

(b) **Interviews** (individual or in group) with:

- UNEP Task Manager (TM);
- Project management team, including the Project Manager within the Executing Agency;
- UNEP Fund Management Officer (FMO);
- Portfolio Manager and Sub-Programme Coordinator;
- Project partners, including Italian National Research Council (INR), GMOS (a programme of INR), Institute of Atmospheric Pollution Research (CNR-IIA); World Health Organization,

Office for Europe (WHO); Research Centre for Toxic Compounds in the Environment (RECETOX); Biodiversity Research Institute (BRI); Jožef Stefan Institute (JSI);

- Relevant resource persons; and
- Representatives from civil society and specialist groups (such as women's, farmers and trade associations etc).

(c) **Surveys** (the project involved all the parties of the Minamata Convention on Mercury, as such there will be no field visits rather the evaluation will design a survey to collect relevant data from Parties for the purposes of this evaluation)

(d) **Other data collection tools** as deemed appropriate.

## 11. Evaluation Deliverables and Review Procedures

68. The evaluation team will prepare:

- **Inception Report:** (see Annex 1 for links to all templates, tables and guidance notes) containing an assessment of project design quality, a draft reconstructed Theory of Change of the project, project stakeholder analysis, evaluation framework and a tentative evaluation schedule.
- **Preliminary Findings Note:** typically in the form of a PowerPoint presentation, the sharing of preliminary findings is intended to support the participation of the project team, act as a means to ensure all information sources have been accessed and provide an opportunity to verify emerging findings. In the case of highly strategic project/portfolio evaluations or evaluations with an Evaluation Reference Group, the preliminary findings may be presented as a word document for review and comment.
- **Draft and Final Evaluation Report:** (see links in Annex 1) containing an executive summary that can act as a stand-alone document; detailed analysis of the evaluation findings organised by evaluation criteria and supported with evidence; lessons learned and recommendations and an annotated ratings table.

69. An **Evaluation Brief**, (a 2-page overview of the evaluation and key evaluation findings) for wider dissemination through the UNEP website may be required. This will be discussed with the Evaluation Manager no later than during the finalization of the Inception Report.

70. **Review of the draft evaluation report.** The evaluation team will submit a draft report to the Evaluation Manager and revise the draft in response to their comments and suggestions. Once a draft of adequate quality has been peer-reviewed and accepted, the Evaluation Manager will share the cleared draft report with the Task Manager and Project Manager, who will alert the Evaluation Manager in case the report contains any blatant factual errors. The Evaluation Manager will then forward revised draft report (corrected by the evaluation consultant(s) where necessary) to other project stakeholders, for their review and comments. Stakeholders may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions as well as providing feedback on the proposed recommendations and lessons. Any comments or responses to draft reports will be sent to the Evaluation Manager for consolidation. The Evaluation Manager will provide all comments to the evaluation consultant(s) for consideration in preparing the final report, along with guidance on areas of contradiction or issues requiring an institutional response.

71. Based on a careful review of the evidence collated by the evaluation consultants and the internal consistency of the report, the Evaluation Manager will provide an assessment of the ratings in the final evaluation report. Where there are differences of opinion between the evaluator and the Evaluation Manager on project ratings, both viewpoints will be clearly presented in the final report. The Evaluation Office ratings will be considered the final ratings for the project.

72. The Evaluation Manager will prepare a **quality assessment** of the first draft of the main evaluation report, which acts as a tool for providing structured feedback to the evaluation consultants. The quality of the final report will be assessed and rated against the criteria specified in template listed in Annex 1 and this assessment will be appended to the Final Evaluation Report.

73. At the end of the evaluation process, the Evaluation Office will prepare a **Recommendations Implementation Plan** in the format of a table, to be completed and updated at regular intervals by the

Task Manager. The Evaluation Office will track compliance against this plan on a six-monthly basis for a maximum of 18 months.

## 12. The Evaluation Consultant

74. For this evaluation, the evaluation team will consist of one Specialist who will work under the overall responsibility of the Evaluation Office represented by an Evaluation Manager (Pauline Marima), in consultation with the UNEP Task Manager representing the IA (Ludovic Bernaudat), Project Manager representing the EA (Jacqueline Alvarez), Fund Management Officer (Anuradha Shenoy), Head of the Chemical and Health Branch (Jacob Duer), and the Coordinator of the UNEP Sub-programme on Chemicals, Waste and Air Quality, (Tessa Goverse). The consultant will liaise with the Evaluation Manager on any procedural and methodological matters related to the evaluation. It is, however, each consultant's individual responsibility to arrange for their visas and immunizations as well as to plan meetings with stakeholders, organize online surveys, obtain documentary evidence and any other logistical matters related to the assignment. The UNEP Task Manager and project team will, where possible, provide logistical support (introductions, meetings etc.) allowing the consultants to conduct the evaluation as efficiently and independently as possible.

75. The Evaluation Consultant will be hired over a period of 8 months (September 2020 - April 2021) and should have: an advanced university degree in environmental sciences or other relevant sciences area; evaluation experience, including of evaluating regional or global programmes and using a Theory of Change approach; a good understanding of Chemicals (Mercury in particular) and the Minamata Convention. English and French are the working languages of the United Nations Secretariat. For this consultancy, fluency in oral and written English is a requirement, along with excellent writing skills in English. Working knowledge of the UN system and specifically the work of UNEP is an added advantage. The work will be home-based with no field visits envisaged.

76. The Evaluation Consultant will be responsible, in close consultation with the Evaluation Office of UNEP for overall management of the evaluation and timely provision of its outputs, data collection and analysis and report-writing, described above in Section 11 above. The Evaluation Consultant will ensure that all evaluation criteria and questions are adequately covered. More specifically:

Inception phase of the evaluation, including:

- preliminary desk review and introductory interviews with project staff;
- draft the reconstructed Theory of Change of the project;
- prepare the evaluation framework;
- develop the desk review and interview protocols;
- draft the survey protocols (if relevant);
- plan the evaluation schedule; and
- prepare the Inception Report, incorporating comments until approved by the Evaluation Manager

Data collection and analysis phase of the evaluation, including:

- conduct further desk review and in-depth interviews with project implementing and executing agencies;
- interview project partners and stakeholders;
- ensure independence of the evaluation and confidentiality of evaluation interviews;
- regularly report back to the Evaluation Manager on progress and inform of any possible problems or issues encountered; and
- keep the Task Manager and Project Manager informed of the evaluation progress.

Reporting phase, including:

- draft the Main Evaluation Report, ensuring that the evaluation report is complete, coherent and consistent with the Evaluation Manager guidelines both in substance and style;

- liaise with the Evaluation Manager on comments received and finalize the Main Evaluation Report, ensuring that comments are taken into account until approved by the Evaluation Manager
- prepare a Response to Comments annex for the main report, listing those comments not accepted by the evaluation consultant and indicating the reason for the rejection; and
- (where agreed with the Evaluation Manager) prepare an Evaluation Brief (2-page summary of the evaluand and the key evaluation findings and lessons)

Managing relations, including:

- maintain a positive relationship with evaluation stakeholders, ensuring that the evaluation process is as participatory as possible but at the same time maintains its independence; and
- communicate in a timely manner with the Evaluation Manager on any issues requiring its attention and intervention.

### 13. Schedule of the evaluation

77. The table below presents the tentative schedule for the evaluation.

**Table 5. Tentative schedule for the evaluation**

Milestone	Tentative Dates
Evaluation Initiation Meeting	September 2020
Inception Report	October 2020
Data gathering (telephone interviews, surveys etc.)	September – December 2020
Powerpoint/presentation on preliminary findings and recommendations	November 2020
Draft report to Evaluation Office (Evaluation Manager and Peer Reviewer)	January 2021
Draft Report shared with UNEP Project Manager and team	February 2021
Draft Report shared with wider group of stakeholders	March 2021
Final Report	April 2021
Final Report shared with all respondents	April 2021

### 14. Contractual Arrangements

78. Evaluation consultants will be selected and recruited by the Evaluation Office of UNEP under an individual Special Service Agreement (SSA) on a "fees only" basis (see below). By signing the service contract with UNEP /UNON, the consultant(s) certify that they have not been associated with the design and implementation of the project in any way which may jeopardize their independence and impartiality towards project achievements and project partner performance. In addition, they will not have any future interests (within six months after completion of the contract) with the project's executing or implementing units. All consultants are required to sign the Code of Conduct Agreement Form.

79. Fees will be paid on an instalment basis, paid on acceptance by the Evaluation Manager of expected key deliverables. The schedule of payment is as follows:

**Table 6: Schedule of Payment for the Evaluation Consultant:**

Deliverable	Percentage Payment
Approved Inception Report (as per annex document 8)	30%

Approved Draft Main Evaluation Report (as per annex document 15)	30%
Approved Final Main Evaluation Report	40%

80. Fees only contracts: Air tickets will be purchased by UNEP and 75% of the Daily Subsistence Allowance for each authorised travel mission will be paid up front. Local in-country travel will only be reimbursed where agreed in advance with the Evaluation Manager and on the production of acceptable receipts. Terminal expenses and residual DSA entitlements (25%) will be paid after mission completion.

81. The consultants may be provided with access to UNEP's Anubis information management system and if such access is granted, the consultants agree not to disclose information from that system to third parties beyond information required for, and included in, the evaluation report.

82. In case the consultants are not able to provide the deliverables in accordance with these guidelines, and in line with the expected quality standards by the UNEP Evaluation Office, payment may be withheld at the discretion of the Director of the Evaluation Office until the consultants have improved the deliverables to meet UNEP's quality standards.

83. If the consultant(s) fail to submit a satisfactory final product to UNEP in a timely manner, i.e. before the end date of their contract, the Evaluation Office reserves the right to employ additional human resources to finalize the report, and to reduce the consultants' fees by an amount equal to the additional costs borne by the Evaluation Office to bring the report up to standard.

**ANNEX VII. QUALITY ASSESSMENT OF THE EVALUATION REPORT**

Evaluand Title:

**Development of a Plan for Global Monitoring of Human Exposure to and Environmental Concentrations of Mercury  
 GEF ID 5409**

All UNEP evaluations are subject to a quality assessment by the Evaluation Office. This is an assessment of the quality of the evaluation product (i.e. evaluation report) and is dependent on more than just the consultant's efforts and skills.

	UNEP Evaluation Office Comments	Final Report Rating
<b>Substantive Report Quality Criteria</b>		
<p><b>Quality of the Executive Summary:</b></p> <p>The Summary should be able to stand alone as an accurate summary of the main evaluation product. It should include a concise overview of the evaluation object; clear summary of the evaluation objectives and scope; overall evaluation rating of the project and key features of performance (strengths and weaknesses) against exceptional criteria (plus reference to where the evaluation ratings table can be found within the report); summary of the main findings of the exercise, including a synthesis of main conclusions (which include a summary response to key strategic evaluation questions), lessons learned and recommendations.</p>	<p><b>Final report:</b></p> <p>The Executive Summary provides a concise summary of the report's findings.</p>	6
<p><b>I. Introduction</b></p> <p>A brief introduction should be given identifying, where possible and relevant, the following: institutional context of the project (sub-programme, Division, regions/countries where implemented) and coverage of the evaluation; date of PRC approval and project document signature); results frameworks to which it contributes (e.g. Expected Accomplishment in POW); project duration and start/end dates; number of project phases (where appropriate); implementing partners; total secured budget and whether the project has been evaluated in the past (e.g. mid-term, part of a synthesis evaluation, evaluated by another agency etc.)</p> <p>Consider the extent to which the introduction includes a concise statement of the purpose of the evaluation and the key intended audience for the findings?</p>	<p><b>Final report:</b></p> <p>Complete and concise section that highlights purpose of the Evaluation.</p>	6
<p><b>II. Evaluation Methods</b></p> <p>A data collection section should include: a description of evaluation methods and information sources used, including the number and type of respondents; justification for methods used (e.g. qualitative/quantitative; electronic/face-to-face); any selection criteria used to identify respondents, case studies or sites/countries visited; strategies used to increase stakeholder engagement and consultation; details of how data were verified (e.g. triangulation, review by stakeholders etc.).</p> <p>Methods to ensure that potentially excluded groups (excluded by gender, vulnerability or marginalisation) are reached and their experiences captured effectively, should be made explicit in this section.</p> <p>The methods used to analyse data (e.g. scoring; coding; thematic analysis etc.) should be described.</p> <p>It should also address evaluation limitations such as: low or imbalanced response rates across different groups; gaps in documentation; extent to which findings can be either generalised to wider evaluation questions or constraints on aggregation/disaggregation; any potential or apparent biases;</p>	<p><b>Final report:</b></p> <p>Detailed description of the approach taken.</p> <p>Ethics and Human Rights and Gender specifically addressed.</p>	6

<p>language barriers and ways they were overcome.</p> <p>Ethics and human rights issues should be highlighted including: how anonymity and confidentiality were protected and strategies used to include the views of marginalised or potentially disadvantaged groups and/or divergent views. Is there an ethics statement?</p>		
<p><b>III. The Project</b></p> <p>This section should include:</p> <ul style="list-style-type: none"> <li>• Context: Overview of the main issue that the project is trying to address, its root causes and consequences on the environment and human well-being (i.e. synopsis of the problem and situational analyses).</li> <li>• Results framework: Summary of the project's results hierarchy as stated in the ProDoc (or as officially revised)</li> <li>• Stakeholders: Description of groups of targeted stakeholders organised according to relevant common characteristics</li> <li>• Project implementation structure and partners: A description of the implementation structure with diagram and a list of key project partners</li> <li>• Changes in design during implementation: Any key events that affected the project's scope or parameters should be described in brief in chronological order</li> <li>• Project financing: Completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing</li> </ul>	<p><b>Final report:</b></p> <p>Comprehensive section covering all elements.</p>	<p>6</p>
<p><b>IV. Theory of Change</b></p> <p>The TOC at Evaluation should be presented clearly in both diagrammatic and narrative forms. Clear articulation of each major causal pathway is expected, (starting from outputs to long term impact), including explanations of all drivers and assumptions as well as the expected roles of key actors.</p> <p>This section should include a description of how the TOC at Evaluation<sup>23</sup> was designed (who was involved etc.) and applied to the context of the project? Where the project results as stated in the project design documents (or formal revisions of the project design) are not an accurate reflection of the project's intentions or do not follow UNEP's definitions of different results levels, project results may need to be re-phrased or reformulated. In such cases, a summary of the project's results hierarchy should be presented for: a) the results as stated in the approved/revised Prodoc logframe/TOC and b) as formulated in the TOC at Evaluation. The two results hierarchies should be presented as a two-column table to show clearly that, although wording and placement may have changed, the results 'goal posts' have not been 'moved'.</p>	<p><b>Final report:</b></p> <p>The TOC at Evaluation presented clearly in both diagrammatic and narrative forms. Detailed discussion of causal pathways and an effective diagram, including identification of Drivers and Assumptions.</p>	<p>6</p>
<p><b>V. Key Findings</b></p> <p><b>A. Strategic relevance:</b></p> <p>This section should include an assessment of the project's relevance</p>	<p><b>Final report:</b></p> <p>Detailed discussion of all elements</p>	<p>6</p>

<sup>23</sup> During the Inception Phase of the evaluation process a TOC at Evaluation Inception is created based on the information contained in the approved project documents (these may include either logical framework or a TOC or narrative descriptions), formal revisions and annual reports etc. During the evaluation process this TOC is revised based on changes made during project intervention and becomes the TOC at Evaluation.

<p>in relation to UNEP's mandate and its alignment with UNEP's policies and strategies at the time of project approval. An assessment of the complementarity of the project at design (or during inception/mobilisation<sup>24</sup>), with other interventions addressing the needs of the same target groups should be included. Consider the extent to which all four elements have been addressed:</p> <ul style="list-style-type: none"> <li>i. Alignment to the UNEP Medium Term Strategy (MTS) and Programme of Work (POW)</li> <li>ii. Alignment to Donor/GEF Strategic Priorities</li> <li>iii. Relevance to Regional, Sub-regional and National Environmental Priorities</li> <li>iv. Complementarity with Existing Interventions</li> </ul>		
<p><b>B. Quality of Project Design</b></p> <p>To what extent are the strength and weaknesses of the project design effectively <u>summarized</u>?</p>	<p>Final report:</p> <p>Good summary of assessment of project design.</p>	<p>6</p>
<p><b>C. Nature of the External Context</b></p> <p>For projects where this is appropriate, key <u>external</u> features of the project's implementing context that limited the project's performance (e.g. conflict, natural disaster, political upheaval<sup>25</sup>), and how they affected performance, should be described.</p>	<p>Final report:</p> <p>Provides accurate summation of external context during time of implementation</p>	<p>5</p>
<p><b>D. Effectiveness</b></p> <p><b>(i) Outputs and Project Outcomes:</b> How well does the report present a well-reasoned, complete and evidence-based assessment of the a) availability of outputs, and b) achievement of project outcomes? How convincing is the discussion of attribution and contribution, as well as the constraints to attributing effects to the intervention.</p> <p>The effects of the intervention on differentiated groups, including those with specific needs due to gender, vulnerability or marginalisation, should be discussed explicitly.</p>	<p>Final report:</p> <p>This section includes a detailed discussion of the availability of outputs and achievement of outcomes.</p>	<p>6</p>
<p><b>(ii) Likelihood of Impact:</b> How well does the report present an integrated analysis, guided by the causal pathways represented by the TOC, of all evidence relating to likelihood of impact? How well are change processes explained and the roles of key actors, as well as drivers and assumptions, explicitly discussed? Any unintended negative effects of the project should be discussed</p>	<p>Final report:</p> <p>Determining the Likelihood of Impact was challenging due to the nature<sup>26</sup> of this project</p> <p>Analysis of evidence relating to</p>	<p>5</p>

<sup>24</sup> A project's inception or mobilization period is understood as the time between project approval and first disbursement. Complementarity during project implementation is considered under Efficiency, see below.

<sup>25</sup> Note that 'political upheaval' does not include regular national election cycles, but unanticipated unrest or prolonged disruption. The potential delays or changes in political support that are often associated with the regular national election cycle should be part of the project's design and addressed through adaptive management of the project team.

<sup>26</sup> this project was designed to enhance coordination. The intended Impact was: Enhanced understanding and capacity of countries to implement the transparency framework of the Paris Agreement. The actual application of the resources and knowledge provided was entirely at the volition of the participants, over which CBIT GCP itself had little direct influence. CBIT was also a new concept and most CBIT countries have not yet, or only recently, embarked on CBIT implementation.



<p>under Effectiveness, especially negative effects on disadvantaged groups.</p>	<p>likelihood of impact could have included more detail.</p>	
<p><b>E. Financial Management</b></p> <p>This section should contain an integrated analysis of all dimensions evaluated under financial management and include a completed 'financial management' table.</p> <p>Consider how well the report addresses the following:</p> <ul style="list-style-type: none"> <li>• Adherence to UNEP's financial policies and procedures</li> <li>• completeness of financial information, including the actual project costs (total and per activity) and actual co-financing used</li> <li>• communication between financial and project management staff</li> </ul>	<p><b>Final report:</b></p> <p>Good discussion of elements of financial management with supporting tables. Discussion of communication could have been more descriptive.</p>	<p>6</p>
<p><b>F. Efficiency</b></p> <p>To what extent, and how well, does the report present a well-reasoned, complete and evidence-based assessment of efficiency under the primary categories of cost-effectiveness and timeliness including:</p> <ul style="list-style-type: none"> <li>• Implications of delays and no cost extensions</li> <li>• Time-saving measures put in place to maximise results within the secured budget and agreed project timeframe</li> <li>• Discussion of making use during project implementation of/building on pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc.</li> <li>• The extent to which the management of the project minimised UNEP's environmental footprint.</li> </ul>	<p><b>Final report:</b></p> <p>A clear and concise section in which the assessment of efficiency is made evident and all elements are included.</p>	<p>6</p>
<p><b>G. Monitoring and Reporting</b></p> <p>How well does the report assess:</p> <ul style="list-style-type: none"> <li>• Monitoring design and budgeting (including SMART results with measurable indicators, resources for MTE/R etc.)</li> <li>• Monitoring of project implementation (including use of monitoring data for adaptive management)</li> <li>• Project reporting (e.g. PIMS and donor reports)</li> </ul>	<p><b>Final report:</b></p> <p>Clear and concise discussion providing succinct information on all 3 sections.</p>	<p>6</p>
<p><b>H. Sustainability</b></p> <p>How well does the evaluation identify and assess the key conditions or factors that are likely to undermine or contribute to the persistence of achieved project outcomes including:</p> <ul style="list-style-type: none"> <li>• Socio-political Sustainability</li> <li>• Financial Sustainability</li> <li>• Institutional Sustainability</li> </ul>	<p><b>Final report:</b></p> <p>The discussion covers all three dimensions and adequately identifies and assesses factors within each, which determine the levels of likelihood in each dimension that underpins the overall rating.</p>	<p>6</p>
<p><b>I. Factors Affecting Performance</b></p> <p>These factors are <u>not</u> discussed in stand-alone sections but are</p>	<p><b>Final report:</b></p>	

<p><b>integrated in criteria A-H as appropriate.</b> Note that these are described in the Evaluation Criteria Ratings Matrix. To what extent, and how well, does the evaluation report cover the following cross-cutting themes:</p> <ul style="list-style-type: none"> <li>• Preparation and readiness</li> <li>• Quality of project management and supervision<sup>27</sup></li> <li>• Stakeholder participation and co-operation</li> <li>• Responsiveness to human rights and gender equity</li> <li>• Environmental and social safeguards</li> <li>• Country ownership and driven-ness</li> <li>• Communication and public awareness</li> </ul>	<p>Good summary of cross-cutting issues in general.</p>	<p>6</p>
<p><b>VI. Conclusions and Recommendations</b></p> <p><b>i. Quality of the conclusions:</b> The key strategic questions should be clearly and succinctly addressed within the conclusions section. It is expected that the conclusions will highlight the main strengths and weaknesses of the project and connect them in a compelling story line. Human rights and gender dimensions of the intervention (e.g. how these dimensions were considered, addressed or impacted on) should be discussed explicitly. Conclusions, as well as lessons and recommendations, should be consistent with the evidence presented in the main body of the report.</p>	<p><b>Final report:</b></p> <p>The conclusion brings together the main findings and insights contained in the report. The strategic question set out in the TOR is addressed in this section as well as being covered throughout the report.</p>	<p>6</p>
<p><b>ii) Quality and utility of the lessons:</b> Both positive and negative lessons are expected and duplication with recommendations should be avoided. Based on explicit evaluation findings, lessons should be rooted in real project experiences or derived from problems encountered and mistakes made that should be avoided in the future. Lessons are intended to be adopted any time they are deemed to be relevant in the future and must have the potential for wider application (replication and generalization) and use and should briefly describe the context from which they are derived and those contexts in which they may be useful.</p>	<p><b>Final report:</b></p> <p>The lessons are relevant and clear.</p>	<p>6</p>
<p><b>iii) Quality and utility of the recommendations:</b></p> <p>To what extent are the recommendations proposals for specific action to be taken by identified people/position-holders to resolve concrete problems affecting the project or the sustainability of its results? They should be feasible to implement within the timeframe and resources available (including local capacities) and specific in terms of who would do what and when.</p> <p>At least one recommendation relating to strengthening the human rights and gender dimensions of UNEP interventions, should be given.</p> <p>Recommendations should represent a measurable performance target in order that the Evaluation Office can monitor and assess compliance with the recommendations.</p> <p>In cases where the recommendation is addressed to a third party, compliance can only be monitored and assessed where a</p>	<p><b>Final report:</b></p> <p>Section complete, recommendations are relevant.</p>	<p>5</p>

<sup>27</sup> In some cases 'project management and supervision' will refer to the supervision and guidance provided by UNEP to implementing partners and national governments while in others, specifically for GEF funded projects, it will refer to the project management performance of the executing agency and the technical backstopping provided by UNEP.

<p>contractual/legal agreement remains in place. Without such an agreement, the recommendation should be formulated to say that UNEP project staff should pass on the recommendation to the relevant third party in an effective or substantive manner. The effective transmission by UNEP of the recommendation will then be monitored for compliance.</p> <p>Where a new project phase is already under discussion or in preparation with the same third party, a recommendation can be made to address the issue in the next phase.</p>		
<p><b>VII. Report Structure and Presentation Quality</b></p>		
<p><b>i) Structure and completeness of the report:</b> To what extent does the report follow the Evaluation Office guidelines? Are all requested Annexes included and complete?</p>	<p><b>Final report:</b> The report follows the UNEP guidelines.</p>	<p>6</p>
<p><b>ii) Quality of writing and formatting:</b> Consider whether the report is well written (clear English language and grammar) with language that is adequate in quality and tone for an official document? Do visual aids, such as maps and graphs convey key information? Does the report follow Evaluation Office formatting guidelines?</p>	<p><b>Final report:</b> The report is clear and well-written</p>	<p>6</p>
<p><b>OVERALL REPORT QUALITY RATING</b></p>		<p><b>5.2 Satisfactory</b></p>

A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1. The overall quality of the evaluation report is calculated by taking the mean score of all rated quality criteria.