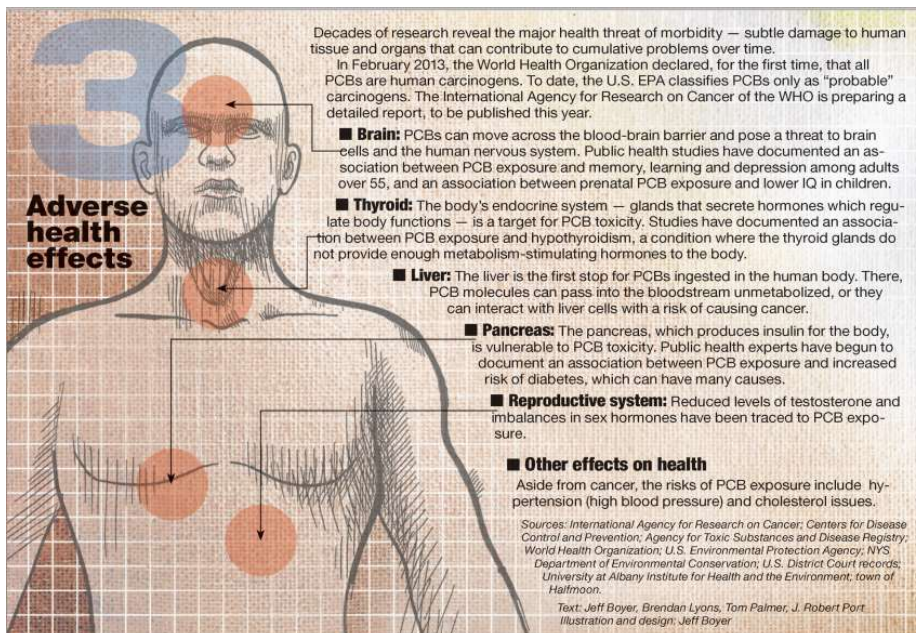


Terminal Evaluation of the UN Environment Project
 “Best Practices for PCB Management in the Mining Sector of
 South America” (GEF ID:3814)

Final Report

Adverse health effects

Decades of research reveal the major health threat of morbidity — subtle damage to human tissue and organs that can contribute to cumulative problems over time.

In February 2013, the World Health Organization declared, for the first time, that all PCBs are human carcinogens. To date, the U.S. EPA classifies PCBs only as “probable” carcinogens. The International Agency for Research on Cancer of the WHO is preparing a detailed report, to be published this year.

- **Brain:** PCBs can move across the blood-brain barrier and pose a threat to brain cells and the human nervous system. Public health studies have documented an association between PCB exposure and memory, learning and depression among adults over 55, and an association between prenatal PCB exposure and lower IQ in children.
- **Thyroid:** The body’s endocrine system — glands that secrete hormones which regulate body functions — is a target for PCB toxicity. Studies have documented an association between PCB exposure and hypothyroidism, a condition where the thyroid glands do not provide enough metabolism-stimulating hormones to the body.
- **Liver:** The liver is the first stop for PCBs ingested in the human body. There, PCB molecules can pass into the bloodstream unmetabolized, or they can interact with liver cells with a risk of causing cancer.
- **Pancreas:** The pancreas, which produces insulin for the body, is vulnerable to PCB toxicity. Public health experts have begun to document an association between PCB exposure and increased risk of diabetes, which can have many causes.
- **Reproductive system:** Reduced levels of testosterone and imbalances in sex hormones have been traced to PCB exposure.

■ **Other effects on health**
 Aside from cancer, the risks of PCB exposure include hypertension (high blood pressure) and cholesterol issues.

Sources: International Agency for Research on Cancer; Centers for Disease Control and Prevention; Agency for Toxic Substances and Disease Registry; World Health Organization; U.S. Environmental Protection Agency; NYS Department of Environmental Conservation; U.S. District Court records; University at Albany Institute for Health and the Environment; town of Halfmoon.

Text: Jeff Boyer, Brendan Lyons, Tom Palmer, J. Robert Port.
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“Best Practices for PCB management in the mining sector of South America”

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ABOUT THE EVALUATION¹

Joint Evaluation: No

Report Language(s): English

Evaluation Type: Terminal Project Evaluation

Brief Description: This report is a terminal evaluation of a UN Environment-GEF project that implemented most of its activities between August 2010 and February 2015, and a definitive closure was expected to occur in September 2018. The project's overall development goal was the establishment of a regional coordinated approach to obtain best environmental practices for sound management of PCB within the mining sector of South America and subsequently improve PCB sound environmental management through the awareness of potentially unknown PCB sources and the development of tools to identify them. The project had the following 4 outcomes: i) Development of regulations and technical standard for management of PCB in the Region; ii) Development of partnerships with mining industries and mining industry associations for profitable and environmental management sound of PCB; iii) PCB analytical assessment (including PCB skills, sampling, investigation and analysis by the laboratories) within the mining sector and; iv) Identification of good practices and reproducible elements for EMS of PCB for the mining sector.

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 learning, feedback, and knowledge sharing through results and lessons learned among UN Environment, the GEF and their executing partner BCRC and the relevant national environmental authorities of the project participating countries.

Key words: PCB; National inventories; sound PCB management; Lessons learnt; project terminal Evaluation; Latin American and Caribbean Countries; Basel Convention Regional Centre for South American Region for Training and Technology Transfer (BCRC); Mining sector company; Legal framework; interim storage; analytical capacity; GEF; environmental matrices; interlaboratory.

¹ This data is used to aid the internet search of this report on the Evaluation Office of UN Environment Website

TABLE OF CONTENTS

PROJECT IDENTIFICATION TABLE

ABBREVIATIONS TABLE

EXECUTIVE SUMMARY

| | |
|--|-----------|
| <i>Evaluation objective and scope</i> | i |
| <i>Key features of performance (strengths and weaknesses)</i> | ii |
| <i>Main findings of the evaluation</i> | iii |
| <i>Main conclusions</i> | iii |
| <i>Recommendations</i> | iv |
| <i>Selected lessons learned</i> | iv |
| <i>Overall project ratings</i> | v |
| I. INTRODUCTION | 1 |
| <i>Project Summary</i> | 1 |
| <i>Objectives and scope of the evaluation</i> | 1 |
| II. EVALUATION METHODS | 2 |
| <i>Limitations of the evaluation approach</i> | 4 |
| III. THE PROJECT | 5 |
| A. Context | 5 |
| B. Objectives and components | 6 |
| C. Stakeholders | 8 |
| D. Project implementation structure and partners | 10 |
| E. Changes in design during implementation | 11 |
| F. Project financing | 12 |
| IV. THEORY OF CHANGE AT EVALUATION | 15 |
| <i>Reconstructed Theory of Change at Evaluation</i> | 15 |
| <i>Main Assumptions</i> | 16 |
| <i>Main Drivers</i> | 16 |
| V. EVALUATION FINDINGS | 22 |
| A. Strategic Relevance | 22 |
| A.1. Alignment to UN Environment MTS and PoW | 22 |
| A.2. Alignment to UN Environment/GEF/Donor strategic priorities | 22 |
| A.3. Relevance to the regional, sub-regional and national issues and needs ... | 22 |
| A.4. Complementarity with Existing Interventions | 23 |
| <i>Factors affecting this criterion</i> | 23 |
| B. Quality of Project Design | 24 |
| C. Nature of the External Context | 26 |
| D. Effectiveness | 26 |
| D.1. Delivery of outputs | 26 |
| D.2. D.2 Achievement of direct outcomes | 33 |
| D.3. Likelihood of impact | 37 |
| E. Financial Management | 40 |
| E.1. Completeness of financial information, including the actual project costs (total and per activity) | 40 |
| E.2. Communication Between Finance and Project Management Staff | 40 |

| | |
|--|-----------|
| F. Efficiency | 42 |
| F.1. Implications of delays and no cost extensions | 42 |
| F.2. Cost and time-saving measures put in place to maximize results | 43 |
| F.3. Use of/building on pre-existing institutions and complementarities | 43 |
| F.4. The extent to which the management of the project minimized potential negative effects | 44 |
| G. Monitoring and Reporting | 44 |
| G.1. Monitoring design and budgeting | 44 |
| G.2. Monitoring implementation and reporting | 45 |
| H. Sustainability | 46 |
| H.1. Socio-political Sustainability | 46 |
| H.2 Financial Sustainability | 47 |
| H.3. Institutional Sustainability | 47 |
| I. Factors Affecting Performance | 48 |
| I.1 Quality of Project Management and Supervision | 48 |
| I.2 Stakeholders Participation and Cooperation | 48 |
| I.3 Responsiveness to Human Rights and Gender Equity | 48 |
| I.4. Country Ownership and Driven-ness | 48 |
| I.5. Communication and Public Awareness | 49 |
| VI. CONCLUSIONS AND RECOMMENDATIONS | 49 |
| A. Conclusions | 49 |
| Design | 49 |
| Management, reporting and M&E | 49 |
| Financial management | 50 |
| Achievements | 50 |
| Overall Project Ratings | 50 |
| B. Lessons Learned | 54 |
| C. Recommendations | 55 |

Project Identification Table

| | | | |
|---|--|--|--|
| GEF Project ID: | 3814 | | |
| Implementing Agency: | UN Environment | Executing Agency: | Basel Convention Regional Centre for South American Region for Training and Technology Transfer (BCRC) in Buenos Aires, Argentina |
| Sub-programme: | E: Chemicals and Waste (Harmful Substances and Hazardous Wastes) | Expected Accomplishment(s): | i) MTS 2010-2013: a) The capacity and financing of States and other stakeholders to assess, manage and reduce risks to human health and the environment posed by chemicals and hazardous waste are increased. Indicators of achievement: (a) (i) The number of countries and stakeholders demonstrating progress in implementing sound management of chemicals and hazardous waste, including through the identification of their needs in infrastructure strengthening, is increased. |
| UN Environment approval date: | 16.10.2008 | Programme of Work Output(s): | POW 2014-2015: Sub-Programme 5: "Chemicals and waste" and the indicator for achievement (i): "Increase in number of countries reporting the adoption of policies for the sound management of chemicals and waste, with the assistance of UNEP". |
| GEF approval date: | 06.05.2010 | Project type: | MSP |
| GEF Operational Programme #: | CHEM 01 | Focal Area(s): | Persistent Organic Pollutants/Chemicals |
| | | GEF Strategic Priority: | GEF IV Strategic Priority 1: strengthen capacities for NIP implementation; Priority 3: identify good practices in PCB management and identify and enhance local capacity for PCB management and destruction. |
| Expected start date: | August 2010 | Actual start date: | 01.08.2010 |
| Planned completion date: | February 2012 | Actual completion date: | May 2019 Validity of legal instrument: 31st March 2019 |
| Planned project budget at approval: | 2,392,461.20 | Actual total expenditures reported as of May 2019 | 2,914,627 |
| GEF grant allocation: | 818,300 USD | GEF grant expenditures reported as of May 2019 | 780,200 |
| Project Preparation Grant - GEF financing: | 40,000 USD | Project Preparation Grant - co-financing: | 78,900 USD |
| Expected Medium-Size Project co-financing: | 1,574,161 USD | Secured Medium-Size Project co-financing: | 2,134,427 (May 2016) |
| First disbursement: | 26.08.2010 | Date of financial closure: | After Terminal Evaluation |
| No. of revisions: | 4 | Date of last revision: | 01 December 2017 |

| | | | | |
|--|---|--|---|--------------|
| No. of Steering Committee meetings: | 3 | Date of last/next Steering Committee meeting: | Last: 4 December 2013 | Next: |
| Mid-term Review/ Evaluation (planned date): | NA | Mid-term Review/ Evaluation (actual date): | NA | |
| Terminal Evaluation (planned date): | September 2015 | Terminal Evaluation (actual date): | May 2018 | |
| Coverage - Countries: | Chile and Peru | Coverage - Region(s): | Regional – Latin America and the Caribbean | |
| Dates of previous project phases: | NIPs for POPs project. Chile (30/05/2006) and Peru (19/12/2007) | Status of future project phases: | BCRC conducted a life cycle assessment with the project unspent balance to assess the economic efficiency of replacing PCB contaminated transformers by more efficient and non-contaminated ones during 2018. This report was finished on April 2019 when the TE was still ongoing. | |

Abbreviations Table

| Acronym | Definition |
|----------|---|
| AWP | UN Environment Annual Work Plan |
| BAT | Best Available Technics |
| BCRC | Basel Convention Regional Centre |
| BCRC | Basel Convention Regional Centre for South American Region for Training and Technology Transfer |
| BCRC | Basel Convention Regional Centre for the South American Region in Argentina |
| BCRC-CAM | Basel Convention Regional Centre for the Central America Sub-region including Mexico in El Salvador |
| BEP | Best Environmental Practices |
| CENMA | Chile's National Environmental Centre |
| COCHILCO | Cooper Commission of Chile |
| CODELCO | Chile's National Cooper Corporation |
| CONADE | Peru's National Development Corporation |
| CONAM | National Environment Council (Peru) |
| CONAMA | National Commission for the Environment (Chile) |
| CORLAB | Private Sector Analytical Lab (Peru) |
| CSCI | State Council for Scientific Research from the Ministry of Science and Innovation of Spain, Barcelona |
| DIGESA | Directorate General of Environmental Health and Food Safety (Peru) |
| DMT | Decision Making Tool |
| DTIE | Division of Technology, Industry, and Economics |
| EFE | Railroad State Company (Chile) |
| EMS | Environmental Management System |
| ESM | Environmental Sound Management |
| EULA | Environmental Science Centre, University of Concepción, Chile) |
| FONAM | Peru's National Environmental Fund |
| GDP | Gross Domestic Product |
| GEF | Global Environment Facility |
| HIDRONOR | Industrial Waste Treatment (Private Sector Company, Chile) |
| IDB | Inter-American Development Bank |
| INTI | National Institute of Industrial Technology |
| LAC | Latin-American Countries |
| MADS | Ministry of Environment and Development (Colombia) |
| MINAM | Ministry of Environment (Peru) |
| MINSA | Ministry of Health (Peru) |
| MOU | Memorandum of Understanding |
| MSP | Medium Sized Project |

| Acronym | Definition |
|----------------|---|
| MTM | Man-Technology-Environment research centre, Örebro University, Sweden |
| MTS | Medium-Term Strategy |
| NGO | Non-Government Organization |
| NIP | National Implementation Plan |
| OEFA | Environmental Evaluation and Enforcement Body |
| OSINERGMIN | Energy and Mining Investment Supervisory Agency |
| PCB | Polychlorinated Biphenyls |
| PIMS | UN Environment's Programme Information and Management System |
| PIR | Project Implementation Report |
| POP | Persistent Organic Pollutant |
| POW | UN Environment Program of Work |
| PPG | Project Preparation Grant |
| PRC | Project Review Committee |
| PRODOC | Project Document |
| PRTR | Pollutant Release and Transfer Register |
| PSC | Project Steering Committee |
| SAG | Agricultural and Livestock Service |
| SERNAGEOMIN | National Geology and Mining Service |
| SGS | Standard Global Services |
| SONAMI | National Mining Society (Chile) |
| SQM | Lithium Company |
| TERRAM | Environmental Foundation Organization |
| ToC | Theory of Change |
| TOR | Terms of Reference |
| UNDP | United Nations Development Programme |
| UNEP | United Nations Environment Programme |
| UNIDO | United Nations Industrial Development Organization |

Executive Summary

Evaluation objective and scope

1. The UN Environment evaluation office appointed an international consultant to carry out the terminal evaluation of the GEF medium-sized project “Best Practices for PCB management in the mining sector of South America” (GEF ID 3814). The project had two participant countries: Chile and Peru, and the “Basel Convention Regional Centre for South American Region for Training and Technology Transfer” (BCRC) located in Buenos Aires, Argentina was the executing agency, whereas UN Environment acted as GEF implementing agency. This project was elaborated to help both countries’ compliance regarding sound management and phase-out of polychlorinated biphenyls included in the Stockholm Convention provisions.
2. GEF resources allocated were US\$ 818,300 and co-financing commitments amounted to US\$ 1,574,161. GEF resources spent until May 2019 amounted US\$ 780,200 (95%) and co-financing reached was approx. US\$ 2,134,427 (136% by May 2016).
3. The overall project objective was the establishment of a regional coordinated approach to obtain best environmental practices for sound management of PCB within the mining sector of South America and subsequently improve sound environmental management of PCB, through the awareness of potentially unknown PCB sources and the development of tools to identify them.
4. To reach this objective, the following 4 outcomes were defined: i) Development of regulations and technical standard for management of PCB in the Region; ii) Development of partnerships with mining industries and mining industry associations for profitable and environmentally sound management of PCB; iii) PCB analytical assessment (including PCB skills, sampling, investigation and analysis by the laboratories) within the mining sector and; iv) Identification of good practices and reproducible elements for EMS of PCB for the mining sector.
5. Terminal Evaluations (TE) are mandatory for all GEF projects². This TE is aimed to assess the project’s relevance, efficiency and effectiveness in achieving its intended results, impact and sustainability. This TE has a dual purpose to serve accountability purposes but also to share experiences and lessons learnt distilled from the implementation of the project to inform the design and implementation of new projects. Therefore, this TE should encourage thinking and learning among UN Environment staff and key project stakeholders.
6. The evaluation should report evidence of attribution between UN Environment’s intervention and direct outcomes. The TE assessed nine evaluation criteria of relevance, quality of Project design, nature of the external context, effectiveness (delivery of outputs, achievement of direct outcomes, likelihood of impact), financial management, efficiency, monitoring & reporting, sustainability, and factors and processes affecting project performance as defined by the UN Environment methodology. The evaluation rated each of these criteria using a six points predefined scale (see **Evaluation Methods** for details).
7. ToR for this TE also included additional strategic questions to be answered and are related with: i) the extent and manner by which the project contributed to a better understanding of the PCB lifecycle in the mining sector and to inform regulatory and analytical innovations in PCB life cycle management in the participant countries; ii) the extend and how did medium and large mining companies contribute to the development and implementation of pilot projects for the sound management of PCB in the mining sector in

² Exception being small enabling activities

Chile and Peru; iii) the extend and how did the project promote replication of best environmental practices (BEP) in compliance with the Stockholm Convention on POPs in other Latin American countries and world regions and; iv) the impacts of the several 'no cost extensions' on the GEF trust fund and if applicable, how and whom covered these costs.

Key features of performance (strengths and weaknesses)

8. This project started its implementation in August 2010, and it was planned to end in February 2012 (18 months), but issues in its implementation led to completion of activities in September 2018 (approx. 98 months), but some activities were still underway until May 2019.

9. The project had significant shortcomings and delays due to the unavailability of proper financial intermediates that would manage project funds at country level. On the other hand, changes in government in Peru and Chile, the lack of interest of the mining sector in Chile, plus the unrealistic schedule set for achieving project outcomes and outputs contributed to these significant delays.

10. By December 2018, there are some activities that need to be finished in order to close the project according GEF procedures: i) the final financial audit is pending³; iii) the GEF tracking tools are to be applied for the project's initial, mid-term and end-closure stages; iii) the final project report is outdated and needs updating to inform all project outcomes and outputs⁴. The consultancy "Manual for sampling and chemical analysis of sites with potential presence of PCB and other metals of interest in the mining sector in Chile" could not be finished.

11. The project reached most of its outputs, but direct outcomes were partially or marginally achieved. Both countries received training and updated procedures to implement sound PCB management systems in their respective mining sectors (PCB identification, sampling, inventory, interim storage, treatment of contaminated equipment and disposal).

12. New analytical capacities were introduced through the training for technical staff of seven laboratories from Argentina, Chile and, along with the provision of reagents and equipment to support field-sampling and analytical quantification of PCB contents during the implementation of PCB inventories in nine mines (two in Chile and seven in Peru) and at the Chile's state railroad company. Although Argentina was not a participant of the project, BCRC is part of INTI's structure, and as training carried-out by experts from Barcelona was performed at INTI's analytical laboratory, this activity also benefited technical staff from this institution.

13. Additional activities such as elimination of 50 tons of PCB contaminated oil from three mines companies in Peru and the elaboration of a series of procedures to determine PCB contents in several environmental matrices (soil, water, air and oils) were also developed during project implementation.

14. Peru was able to develop a regulatory proposal to control its PCB which was published for public consultation in July 2018. Besides, the Decree No 014-2019-EM from the Energy and Mining Ministry was approved in July 2019, by which elaboration of PCB management plans are compulsory for the electricity sector. This is a large step forward generated by the project, considering that in 2010 Peru did not have any regulations on this issue.

³ According to the project team, the final financial audit will take place in August 2019.

⁴ The project team reported that the project final report is being updated and it is expected to finish by end of August 2019.

15. Twelve documents regarding procedures for PCB management and analytical techniques were developed and are available at BCRC website: <http://www.inti.gov.ar/pcb/index.php>.

16. To attain these results, the project formed a Regional Project Steering Committee composed by the Executing Agency, UN Environment staff and the National Coordinators, who in turn appointed National Coordination Committees in each participant country.

Main findings of the evaluation

17. Regarding the findings related with the nine UN Environment criteria, it can be stated that the project is still relevant to UN Environment, GEF and participant countries and PCB issues have been incorporated in the agenda and planning of all project participant countries.

18. Although the project experienced several delays, its effectiveness was rated as moderately satisfactory, since most project products were delivered and additional activities were implemented, but there are a couple of activities that have not been finished at December 2018. Most outcomes were partially achieved in each of the countries and intermediate states were marginally or partially attained. Coordination among Chilean and Peruvian mining companies was marginal, and the same applies to cross-country coordination since this project was implemented independently in each of the participating countries.

19. On the other hand, project implementation was strongly geared towards technical aspects, thus participation of NGOs, community organizations and minority groups was of very limited scope and awareness activities were focused at technical personnel from Government and mining companies.

20. Sharing of project experience with other Latin-American countries was made through a regional workshop (February 2011 in Panama, 11 countries participated), technical cooperation and policy advice between BCRC and Colombia, participation of PCB experts from Uruguay and the Basel Convention Regional Centre for the Central America Sub-region including Mexico in El Salvador who assisted participant countries in the revision of technical reports and in national workshops organized by the project.

21. The project also did not specifically take into consideration gender issues, since this question was not planned during the elaboration of the project.

22. The financial management followed the standard guidelines and report formats used by UN Environment. However, the financial information was presented by general budget-line categories that do not show expenditures by project components required by evaluations, and the same is applied to co-financing reports. With these formats, it is difficult to assess disbursement rates by year and component and examine re-allocations of resources among categories. The above made it difficult to assess project efficiency since costs related with project extension and savings obtained could not be calculated properly.

Main conclusions

23. In despite that serious delays experienced during implementation impacted project performance – most of project outputs were achieved and additional important activities were implemented thanks to project management that reacted properly to complex changes in external conditions. However, direct outcomes and intermediate states were either marginally or partially achieved.

24. BCRC, UN Environment staff and national coordinators showed good adaptive management by identifying new partners and revised project activities according the new requirements that rose from changes in political and institutional contexts in both countries during the implementation of the project.

25. Chile and Peru strengthened their capacities and ability to set proper PCB management systems and use of reliable analytical technics to determine PCB contents in several environmental matrices. The project contributed to improved understanding of PCB issues related with mining operations in Chile and Peru, and transferred know-how on sound management practices for PCB containing equipment during their life-cycle, and provided updated analytical procedures for analytical laboratories to support elaboration of PCB inventories, monitoring of this contaminant in different environmental matrices and elaboration of new regulations.

26. Participation of mining companies was high in Peru and less strong in Chile. However, as the implementation of the project was focused on resolution of technical issues, participation of NGOs, community organizations, women and marginalized groups was marginal.

27. There is evidence of exchange and dissemination of the project experience with PCB experts from other LAC's government officials, organization of regional workshops and with other Basel's sub-regional centres.

28. Financial analysis was difficult to make during this evaluation, mainly due to financial report formats based on UN Environment budgets lines that prevent the analysis of expenditures by project component, outcomes and activities. In addition, these formats are not in line with evaluation requirement regarding financial reports that must be based on components.

Recommendations

29. Main recommendations made are related with the completion of the final financial audit, and the update of the project final report written in November 2015 which did not include all outputs obtained by the project.

Selected lessons learned

30. Perhaps, the main lesson learnt from this project is the importance of assessing national capacities of partners during the project preparation stage in terms of their capability to manage project funds. As this assessment was not made, it had a significant effect on project performance that persisted during the first two years of implementation. On the other hand, as the executing agency (BCRC) is hosted by Argentina, a lack of awareness and analysis of local regulations in this country dealing with currency exchange resulted in a loose of 8%-10% of the transferred funds from UN Environment to BCRC, since this institution had to comply with these national regulations and must change the full amount of each cash advance into Argentinian currency.

Overall project ratings

| Evaluation criteria | | Summary Assessment | Rating |
|-----------------------|--------------------------------------|---|----------------------------------|
| A | <i>Strategic Relevance</i> | <i>In line with UN Environment, GEF and regional priorities</i> | <i>Highly Satisfactory</i> |
| B | <i>Quality of Project Design</i> | Unrealistic timeframe for project execution, no assessment for financial capacities in participant countries, confusing language for some key concepts, indicators, roles for mining companies not specified, no smart indicators. | Moderately Unsatisfactory |
| C | <i>Nature of External Context</i> | Strong earthquake in Chile redefined some country priorities. Institutional and political changes in Chile and Peru affected project performance. | Moderately Favourable |
| D | <i>Effectiveness</i> | Most of outputs achieved with additional activities implemented, but most of direct outcomes partially achieved. <i>Most intermediate states were marginally or partially achieved.</i> | Moderately Satisfactory |
| E | <i>Financial Management</i> | <i>Financial report formats based on budget lines do not provide information for an in-depth assessment on project finances. Incomplete information provided.</i> | <i>Moderately Satisfactory</i> |
| F | <i>Efficiency</i> | <i>Poor performance with 4 project extensions, with some pending activities.</i> | <i>Unsatisfactory</i> |
| G | <i>Monitoring and Reporting</i> | <i>Modest M&E system based on activities. No use of GEF TT and no smart indicators in place.</i> | <i>Moderately Unsatisfactory</i> |
| H | <i>Sustainability</i> | <i>Governments have willingness to support direct project outcomes, but financing is partially secured by new regulations. Institutions have been strengthened but dissemination and exchange of project results with other LAC countries are absent and no mechanism to sustain project results at this level is in place.</i> | <i>Moderately Likely</i> |
| I | <i>Factors Affecting Performance</i> | <i>Governance arrangements in place with no financial intermediates identified during project elaboration. Limited participation of a broader group of stakeholders, with no dissemination activities or sharing experience with wider groups. Sharing of experience with other LAC countries was noted.</i> | <i>Moderately Satisfactory</i> |
| Overall Rating | | Project achieved most outputs and outcomes and performed additional activities, but poor efficiency and significant shortcomings and delays were noted. | <i>Moderately Satisfactory</i> |

I. Introduction

Project Summary

31. The project “Best Practices for PCB management in the mining sector of South America” was a GEF medium-sized project that involved Chile and Peru. The project was first reviewed in October 16, 2008 by the UN Environment Project Approval Group (PAG), and it had a further revision by the Project Review Committee (PRC) in March 4, 2010. This project was finally approved by GEF in May 2010.

32. The GEF Implementing Agency was the UN Environment, Chemicals and Health Branch, within the Economy Division (Geneva), and the Executing Agency was the “Basel Convention Regional Centre for South American Region for Training and Technology Transfer” (BCRC) located in Buenos Aires, Argentina. National partners implementing the project at local level were the Ministries of Environment from Chile and Peru.

33. The project was planned to last 18 months (August 2010 through February 2012) and had a GEF Grant of US\$ 818,300 and a co-financing commitment of US\$ 1,574,161.

34. Regarding UN Environment’s Medium Term Strategy (MTS) 2010-2013, the project fits into Strategic Direction E: “Harmful substances and hazardous waste” (to minimize the impact of harmful substances and hazardous waste on the environment and human beings) and its expected accomplishments (EA): a) The capacity and financing of States and other stakeholders to assess, manage and reduce risks to human health and the environment posed by chemicals and hazardous waste are increased.

Objectives and scope of the evaluation

35. Terminal evaluations (TE) are mandatory for all GEF Medium-Sized Projects. They serve a dual purpose of providing evidence to support accountability and to share experiences and lessons learnt to inform future projects. Therefore, this TE should encourage thinking and learning among UN Environment staff and key project stakeholders.

36. The period covered by this TE extends from August 1st, 2010 through September 30, 2018 (eight years and one months). The project was not required to undertake a midterm review, but a self-evaluation exercise was made in October 16, 2016. The project finished its activities in February 2015, but there was a fourth project revision in December 4, 2017 that extended the project until September 2018 in order to use a remaining of US\$ 50,000 in a socio-economic study considered strategic to sustain the project results.

37. The results from this Terminal Evaluation are intended to be of use by program managers executing GEF projects in government institutions, GEF and UN implementing agencies. Other target audiences are managers and decision makers from government and private sector dealing with mining, health and environmental issues. This report is also useful for those stakeholders that have the responsibility of elaboration and implementation of sound policies and practices for PCB management, along with high-level technical staff focused on the development of analytical methods to determine PCB pollution in humans and other environmental matrices (air, water, soil, fish, etc.).

II. Evaluation Methods

38. This TE was an in-depth review which used a participatory approach whereby key stakeholders were kept informed and were consulted throughout the whole evaluation process. Both quantitative and qualitative evaluation methods were used as appropriate to determine project achievements against the expected outputs, outcomes and potential impacts. Theory of Change is used during this evaluation, where the logframe is analysed and deconstructed as necessary in order to assess the project logic, its objectives, outcomes, main drivers, stakeholders and assumptions.

39. According to the Terms of Reference (TOR) for this TE, the evaluation should go beyond assessing what happened but seek to understand the reasons determining project performance, as learning is one of the key principles underlying this evaluation process.

40. The evaluation should report evidence of attribution between UN Environment's intervention and direct outcomes. In cases of normative work or where several actors are collaborating to achieve common outcomes, evidence of the nature and magnitude of UN Environment's substantive contribution' should be included and/or 'credible association' established between project efforts and the direct outcomes realized.

41. This TE assessed the following nine evaluation criteria as defined in the UN Environment guidelines for evaluations⁵:

- A. Relevance;
- B. Quality of Project design;
- C. Nature of the external context;
- D. Effectiveness (delivery of outputs, achievement of direct outcomes, likelihood of impact);
- E. Financial management;
- F. Efficiency;
- G. Monitoring & Reporting;
- H. Sustainability;
- I. Factors and processes affecting project performance;

42. According to the UN Environment methodology, evaluator should rate each of these criteria using a six points predefined scale: Highly Satisfactory (**HS**); Satisfactory (**S**); Moderately Satisfactory (**MS**); Moderately Unsatisfactory (**MU**); Unsatisfactory (**U**); Highly Unsatisfactory (**HU**). **Sustainability and Likelihood of Impact** are rated from Highly Likely (**HL**) down to Highly Unlikely (**HU**) and **Nature of External Context** is rated from Highly Favourable (**HF**) to Highly Unfavourable (**HU**).

43. The evaluation reconstructs the Theory of Change of the project and is used as a foundation of the evaluation. The approach to the use of TOC in project evaluations is outlined in a guidance note⁶ issued by the UN Office of Evaluation and is supported by an excel-based flow chart⁷. Essentially the approach follows a 'likelihood tree' from direct outcomes to impacts, taking account of whether the assumptions and drivers identified in the reconstructed TOC held, and a discussion on the likelihood of/or the extent of achieving the intermediate is also required.

⁵ http://www.unep.org/QAS/Documents/UNEP_Programme_Manual_May_2013.pdf. This manual is currently under revision.

⁶ "Use of Theory of Change in Project Evaluations", Last reviewed: 26.10.17; Evaluation Office of UN Environment.

⁷ "Likelihood of Impact Assessment Decision Tree" (12_Likelihood_of_Impact_Decision_Tree_17.04.18.xls); Evaluation Office of UN Environment.

44. ToR for this TE also included additional strategic questions to be answered and are related with: i) the extent and manner by which the project contributed to a better understanding of the PCB lifecycle in the mining sector and to inform regulatory and analytical innovations in PCB life cycle management in the participant countries; ii) to what extent and how did medium and large mining companies contribute to the development and implementation of pilot projects for the sound management of PCB in the mining sector in Chile and Peru; iii) to what extent and how did the project promote replication of best environmental practices (BEP) in compliance with the Stockholm Convention on POPs in other Latin American countries and world regions and; iv) the impacts of the several 'no cost extensions' on the GEF trust fund and if applicable, how and whom covered these costs.

45. Evaluation findings and judgements are based on evidence and analysis derived from documents and stakeholders' interviews. Information was triangulated (i.e. verified from various sources) to the extent possible. Verification of evaluation findings was presented - via skype conference - to UN Environment staff, BCRC and project national coordinators, and the draft report underwent a throughout review by these stakeholders in order to validate the completeness of the information collected, the logic of its analysis, conclusions and recommendations.

46. Quantitative information was taken from progress reports and statistics extracted from them. Qualitative information was also collected from documentation and interviews.

47. The evaluation matrix (Evaluation questions matrix

48.) presents broad categories addressed by the TE and key questions/issues reviewed and discussed during the documentary review and interview processes. These questions were useful guidelines, but they were not intended to be a formal survey or questionnaire applied in the same way to all stakeholders consulted, but according to the role played by each relevant stakeholder.

49. In the interviews conducted during the field mission, the evaluator also formulated questions in order to obtain a self-assessment from these stakeholders on what was done by the project and asked if there were other approaches that would have obtained better project performance or results and missing steps that could have been taken during project. All these issues were discussed in order to promote learning and thinking on lessons distilled from the project implementation.

50. Therefore, the TE consisted of a mix of desk review, in-depth interviews (face-to-face, by Skype or telephone, or email) with relevant UN Environment, BCRC and government staff involved in the design and implementation of the project as follows:

- a) Desk Review: all relevant contextual information on socio-economic situation for each country, inter alia, national regulations related with PCB wastes and compliance with Stockholm Convention provisions, sectoral gold mining policies, GEF operational programs and guidelines, UN Environment MTS and POW;
- b) Project design documents, including those related to the PPG phase; STAP and PRC reviews;
- c) Project Steering Committee (PSC) and national level steering committees meeting minutes; annual project Implementation Reviews (PIRs), financial reports, final countries' reports and the draft final project report;
- d) Project Audit report(s), Annual Work Plans and Budgets or equivalent and revisions to project financing;
- e) Project documentation related to the strategy for project replication and communication.

51. The field mission to Argentina (Buenos Aires) and Peru (Lima) was undertaken between November 28 through December 7, 2018. Interviews in Chile were made in December 2018 in Santiago, and in March 2018 in Concepción. As there was budget restriction for this evaluation, this mission was made at the same time with that from the other UN Environment regional project “Development of mercury risk management approaches in Latin America (Argentina, Ecuador, Nicaragua, Peru and Uruguay)”.

52. Selection of interviewees was based on their level of direct or indirect participation in the project in both countries. Thus, national project coordinators, representatives from the laboratories and universities that received training, BCRC staff that coordinated the project regionally, the Peru’s mining sector association and staff from mining companies in Peru were all interviewed. Meetings with national coordinators in Chile were also requested, but none of them were working at the Ministry of the Environment. The evaluator also requested interviews with NGOs that participated in the beginning of the project, whose role was to engage and aware local communities near of mines selected to carry-out project activities. Other actors like the Ministries of Health and Mining from Chile and Peru were also selected for interviews, considering that they are actors that are needed to regulate PCB issues in each country involved. Communities affected by PCB issues were also selected for interviews.

53. The evaluation mission provided an opportunity to hold interviews with key stakeholders from the Ministries of Environment, Mining and Health, and analytical laboratories from Chile and Peru. Annex 5 shows the full list of interviewees.

54. Findings from this evaluation can be applied to the design and implementation of future projects, since lessons learnt on financial reporting, financial intermediate arrangements, savings and synergies achieved in both countries and improvement on report contents, are all common situations that would be presented in most projects.

Limitations of the evaluation approach

55. One of the main limitations of this evaluation was the long-time elapsed between the conclusion of activities (2015) and this evaluation (2018). The national project coordinator in Chile was not available for interviews and the same situation was applicable to representatives of the mining sector. The consultant had an interview with an official from the Chile’s Ministry of Environment responsible for chemicals and hazardous wastes and reported that no meetings with relevant stakeholders from mining sector and government could be arranged due to unavailability of these actors. The change of government authorities in Chile in March 2018 made the task more difficult since many government authorities and officials also changed. In addition, information on this project in Chile was not available at the Ministry of the Environment for the reasons explained before.

56. A total of 14 interviews were performed during the field mission in Argentina, Peru and Chile. In Argentina, interviews with BCRC personnel, the dechlorination company Kioshi and the project’s regional consultant were held, and interviews in Peru were with staff from the private mining sector, the Ministry of Environment and national consultants. Finally, meetings in Chile were held with personnel from the National Health Institute (ISP) analytical laboratory, EULA, the national consultant who worked for the project and the Ministry of Environment. No meetings with mining sector officials were possible in Chile.

57. Therefore, there would be a bias in the analysis since views from the mining sector in Chile affected by new regulations on PCB are missing.

47. Marginalized groups or local women’s groups were not reached during the field mission, since most of them are located in remote areas difficult to access or communicating by internet or phone. However, to mitigate in part this limitation, during interviews and document revision, the evaluator set some “indicators” that would bring some proxy on how this project

addressed gender and human rights issues: i) by assessing equity for women at project management level; ii) by assessing the number of outcomes that would impact - positive or negatively - women and vulnerable groups and, iii) by assessing if management in BCRC included – explicit or implicit – some of these issues in its planning or budget.

48. Another limitation is derived from the information received on financial accountability, since formats used by UN Environment for reporting expenditures makes very difficult to make a deeper analysis on cost by project component in order to identify savings and re-allocations made during the project execution.

III. The Project

A. Context

58. Mining is one of the most important economic activities for Chile and Peru. Chile and Peru own approximately 38% and 13%⁸ of the worldwide copper reserves respectively. In 2017, mining accounted for 10% of Peru's GDP and close to 62% of its exports⁹, whereas copper contributes approximately 10% to the Chile's GDP, representing nearly 50% of its exports¹⁰.

59. Therefore, the mining sector is a critical activity for economic development in both participant countries, and it is responsible for a large amount of PCB stock in Chile (90% of stored PCB and 60% of national PCB inventory) and Peru (approx. 14.7% of the PCB electric equipment).

60. Data for PCB stocks in both countries come from inventories elaborated during NIP activities. These inventories proved to be preliminaries and incomplete, thus a detailed PCB inventory was needed for the mining sector in Chile and Peru. At the time of preparation of this project, open uses of PCB in the mining industry were almost unknown.

61. Regarding management of PCB containing equipment, it was found that the information for this sector was unclear, not well elaborated and in some cases not available¹¹. For example, some companies elaborated plans for disposal of PCB equipment regardless their condition, and without a proper cost-benefit and/or risks analysis, thus they were discarded without a real prioritization process based on risks and/or economic criteria.

62. In terms of analytical capacity, the capacity was found to be low in Peru since Peru did not have in place restrictions to imports of PCB equipment. However, an adequate number of laboratories that could perform this type of analysis were identified during the project preparation phase. Both countries have laboratories with the required equipment and infrastructure to carry out PCB analysis, but no collaboration or communication among them was detected, and training was identified as a need in order to introduce PCB analysis that comply with international standards.

63. Although Chile and Peru had some regulations addressing hazardous wastes, these were incomplete and noted the lack of technical standards to set a robust PCB management system for maintenance of PCB equipment, its decommissioning, interim storage and sound disposal. Enforcement was also weak in both countries, since no PCB inspection programs were in place, especially when PCB equipment were located at mines¹².

⁸ <https://gerens.pe/blog/peru-reservas-de-cobre-mas-grandes/> : “Maestría en Minas: Perú se encuentra entre las 5 reservas de cobre más grandes”, December 28, 2017.

⁹ <https://andina.pe/ingles/noticia-peru-mining-sector-accounted-for-nearly-10-of-gdp-in-2017-711181.aspx> : “Peru: Mining sector accounted for nearly 10% of GDP in 2017”, May 25, 2018.

¹⁰ <https://www.export.gov/article?id=Chile-Mining-and-Minerals> : “Chile - Mining and Minerals”; January 2018.

¹¹ Prodoc, Section 2.6: “Initial Analysis and Gaps”, pg. 32.

¹² Prodoc, page 21.

B. Objectives and components

64. The overall objective of the project was to establish a regional coordinated approach to obtain best environmental practices for sound management of PCB within the mining sector of South America and subsequently improve environmentally sound management of PCB through enhancing awareness of potentially unknown PCB sources and the development of tools to identify them.

65. The project also had the following specific objectives:

- a. To develop standard technical procedures and regulations for sound management of PCB within the mining sector;
- b. To develop partnerships with mining industries that will help achieve sound management of PCB;
- c. To develop analysis skills to support sound management of PCB within the mining sector and;
- d. To identify and disseminate best practices regarding the sound management of PCB within the mining sector.

66. The project was organized around 5 components defined as follows:

1. Regional coordination and upgrade within the mining sector of the participating countries, of national regulatory elements and procedures regarding PCB life cycle management;
2. Development of partnerships with mining industries and mining associations for profitable and environmentally sound management of PCB;
3. PCB analytical assessment (including PCB skills, sampling, and analysis by the laboratories) within the mining sector;
4. Identification of good practices and reproducible elements for EMS of PCB for the mining sector;
5. Project management, supervision, monitoring and evaluation.

67. These above components were to be delivered in a timeframe of 18 months, this is, the project should have finalized by February 2012, as seen in Table 1.

Table 1: Summary of main project outputs and outcomes.

| Type | Description | Indicator | Target | Approx. date for achievement |
|------------------|--|--|--|------------------------------|
| Outcome 1 | Regional coordination and regulatory elements and procedures on PCBs management in the mining sector are upgraded | Number of mining companies and regulatory entities participating in developing the regulatory elements and procedures for PCB management in the mining sector | No targets | |
| | Development of technical standard procedures and regulations for EMS of PCB within the mining sector for PCB holders and suppliers of mining companies | Technical standards procedures and regulations developed | No number of technical standards and procedures provided | May-11 |
| | Updating or adjusting technical guidelines evaluate in detail PCB management within the mining sector | Number of technical guidelines updated and available | No number of technical standards provided. | Jan 2011 |
| Outcome 2 | Mining companies and mining association working in close cooperation with other relevant sectors on ESM of PCBs | Number of mining companies participating in the partnership program for ESM of PCBs | No targets | No dates |
| | Assessment of the PCB situation within the mining sector | Assessment report on PCB situation in the mining sector available | One report | Aug-2011 |
| | Registering and monitoring of PCB inventories within the mine and at government level | Number of PCB inventories developed | No targets | Feb-12 |
| | Development of partnerships between mining companies, the government and mining equipment suppliers | Number of partnerships developed between the government, mining companies and equipment suppliers | No number of partnerships | May-11 |
| | Development of two PCB management plans within mining facilities | Number of PCB management plans developed | 2 | Nov-11 |
| | Implementation of two PCB management plans within mining facilities | Number of PCB management plans implemented | 2 | Feb-12 |
| Outcome 3 | National laboratories are able to carry out sampling and analysis of PCBs | Number of laboratories trained and able to perform PCB analysis | 2 | Aug-2011 |
| | Identification of equipment and other items contaminated or containing PCB | Number of equipment and samples analysed, and mine staff trained | 600; 300 | Jan-2011; Aug-2011 |
| | Standardization of procedures for the analysis of soil, oils, contaminated materials, equipment and other applications | Number of laboratories participating in the standardize procedures activity | 2 | Aug-2011 |
| Outcome 4 | Good practices identified and available for use of any mining company around the world. | Number of mining companies and PCB regulatory entities participating in identifying good practices | No targets | Feb-12 |
| | Evaluation of PCB management practices within the mining sector | Number of mining companies participating | No targets | Feb-12 |
| | Identification of good practices for PCB management | Number of mining companies participating | 2 | Feb-12 |
| | Identification of BAT/BEP regarding PCB life cycle management | Number of mining companies participating | 1 | Feb-12 |

C. Stakeholders

68. Section 2.5 from project document presents an exhaustive stakeholder list, where main actors were identified (mining companies, government institutions, analytical analysis labs).

69. Analysis and identification of affected communities and their organizations, as well as local authorities was not performed during the project elaboration, and these groups do not play any role as the project document just mentions that an awareness campaign will be implemented in order to avoid misunderstandings and miscommunication about the activities performed by the project. Thus, stakeholder analysis was made considering only technical and regulatory aspects of the PCB problem.

70. Regarding gender analysis, the project document stated that they are vulnerable to negative effects from PCB exposure. However, participation of women is restricted to attendance to informative workshops and awareness activities.

71. Section 5 of the project document shows an indicative list of stakeholders identified in each country. However, there is no analysis on how they will be engaged in the project, since the list is rather an outline of project activities where these actors would participate.

72. The project document also presents a summary of strengths and weakness of different actors regarding with PCB analysis, elaboration of regulations and the situation of PCB management made by mining companies.

73. Table 2 shows the list of stakeholders and their importance for the project, according the project document and other documents reviewed.

Table 2: Stakeholders participating in the project, their roles and importance.

| No | Country | Name | Sector | Actor type | Role | Importance |
|----|---------|---|----------------------------|----------------|--|------------|
| 1 | Chile | CONAMA (currently ministry of environment) | Environment authority | Government | Regulations, national project coordinator, co-financing | A |
| 2 | Chile | Agricultural and Livestock Service (SAG) | Agriculture and feedstock | Government | Regulations, enforcement, project partner | B |
| 3 | Chile | National Geology and Mining Service (SERNAGEOMIN) | Mining | Government | Enforcement, environmental control and environmental liabilities, sectoral regulations | A |
| 4 | Chile | National Council of Cleaner Production | Industry | Public-Private | Facilitation, cleaner production agreements with private and public companies | B |
| 5 | Chile | Superintendence of Electricity and Fuel | Energy | Government | Enforcement, sectoral regulations related with fuels and electricity | B |
| 6 | Chile | Chilean Copper Commission (COCHILCO) | Mining | Government | It advises Chilean government on production of copper, copper by-products and metals and industrial minerals mining, except coal and fuels | A |
| 7 | Chile | HIDRONOR | Hazardous waste management | Private | PCB management and disposal, it provides services to mining companies | B |

| No | Country | Name | Sector | Actor type | Role | Importance |
|-----------|----------------|--|---|--|--|-------------------|
| 8 | Chile | Bravo Energy Chile S.A. | Hazardous waste management | Private | Hazardous wastes management and disposal. Provides services to mining companies | B |
| 9 | Chile | Association of Electric Companies | Electricity | Private | Association of electricity and power companies | C |
| 10 | Chile | CODELCO | Mining | Government | World largest copper company | A |
| 11 | Chile | Mining Council | Mining | Public-Private | Large mining companies' association | A |
| 12 | Chile | Mining National Society (SONAMI) | Mining | Private | Large, small and medium size private mining companies' association | A |
| 13 | Chile | National Environmental Centre (CENMA) | National environmental reference laboratory | Private-Public | Participated in analytical strengthening activities and training | A |
| 14 | Chile | Environmental Science Centre in the Concepcion University (EULA) | Analytical, research and policy support | University of Concepción | Participated in analytical strengthening activities and training | A |
| 15 | Chile | Fundación TERRAM | Civil society organization | NGO | Dissemination of project activities amongst local communities | C |
| 16 | Argentina | Basel Convention Regional Centre for South American Region for Training and Technology Transfer (BCRC) | International Center | Government | Project executing agency | A |
| 17 | Argentina | KIOSHI | De-chlorination of PCB contaminated oils. | Private sector company from Argentina with local offices in Chile and Peru | It decontaminated 13 transformers in Peru | A |
| 18 | Peru | Ministry of Health | Health sector | Government | Enforcement, hazardous wastes | B |
| 19 | Peru | Ministry of Energy and Mines | Mining | Government | Regulations, technical standards, enforcement for mining sector, project partner | B |
| 20 | Peru | Ministry of Production | Industry | Government | Regulations and supervision of imported and nationally produced industrial equipment | B |
| 21 | Peru | Supervising Organization of the Investment on Energy and Mines (OSINERGMIN) | Mining | Government | Supervision of mining companies' operations | B |
| 22 | Peru | Minera Sta. Luisa | Mining | Private | Co-financing, mining company, project partner | A |

| No | Country | Name | Sector | Actor type | Role | Importance |
|----|--------------|--|----------------------------|---|---|------------|
| 23 | Peru | Asociación Civil Labor | Civil society organization | NGO | Dissemination of project activities amongst local communities | C |
| 24 | Chile & Peru | Communities from the participant mines' livelihood | Social marginalized groups | Affected directly by PCB issues and mines' activities. | Awareness and community readiness | C |
| 25 | Chile & Peru | Subcontractors responsible of electrical equipment maintenance | Servicing | Affected directly when handling PCB contaminated equipment. | Potential responsible for cross-contamination | C |

Importance: 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= Leas

D. Project implementation structure and partners

74. The project was organized as shown in Figure 1. UN Environment was the GEF's Implementing Agency where its main responsibilities were the overall coordination and supervision of the project and provision of technical, financial and management advise.

75. The Project Steering Committee (PSC) was conformed and met three times between 2010 and 2015. Members of this PSC were UN Environment Task Manager, BCRC and the same institutions that implemented the project at national level.

76. BCRC was the project regional executing partner and it coordinated all project activities implemented by the participant countries, and it also provided technical assistance and guidance to these countries. It also managed the project funds and submitted quarterly reports on project progress and financing to the implementing agency. The UNDP Country Office and the National Environmental Fund (FONAM) were appointed to locally manage the project funds in Chile and Peru respectively.

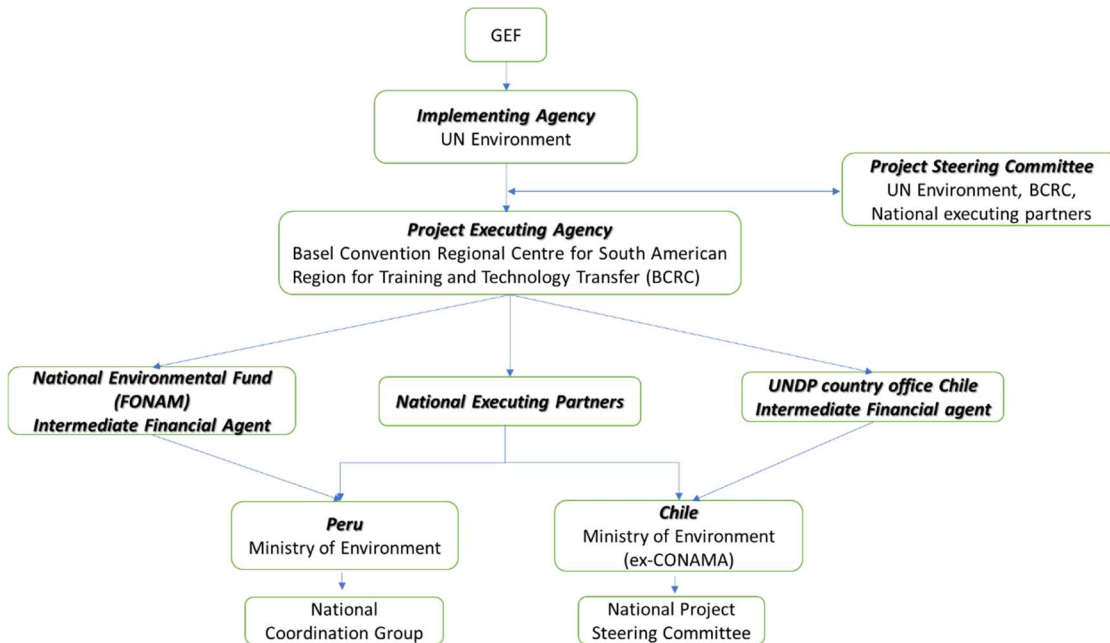
77. Both countries implemented the activities through their respective Ministries of Environment and set up either a National Coordination Group or a National Steering Committee to keep the main stakeholders informed and participating in the different project activities.

78. The National Steering Committee in Chile was composed of the National Project Coordinator (Ministry of Environment), SONAMI, SQM, the Mining Council, CODELCO, CENMA, the NGO Terram, COCHILCO and the National Association of Electricity Companies.

79. The National Coordination Group in Peru was conformed by DIGESA, OEFA, NGO Calandria, OSINERMIN, MINAM, mining companies and private laboratories.

80. UNDP Country Office in Chile and the National Environmental Fund (FONAM) in Peru were the intermediate financial agents which canalized the funds for each country and set a proper accounting and disbursement system.

Figure 1: Project organization and main partners



E. Changes in design during implementation

81. BCRC started the project activities in August 2010 and they were planned to finish in February 2012 (18 months). Chile and Peru had serious difficulties to appoint local institutions to manage their project funds, but eventually, national activities started officially in April and June 2011 in Chile and Peru respectively.

82. The project was extended three times and the actual date of operational completion was September 2018, this translated to 98 months of execution.

83. There were some changes to the planned activities. Peru implemented a pilot project for de-chlorination of PCB contaminated oils from electric transformers in Peru. Chile did not implement PCB management plans in the mining sector since all companies had already elaborated and performed these plans in the country. Therefore, the country focused on strengthening its analytical capacity (Component 3) through training activities and elaboration of several guidelines for sampling and analysis of PCB in different matrices like soil, contaminated sites and water. As large mining companies in Chile were not interested in PCB management plans, sampling and elaboration of inventory was performed in the national state railroad company (EFE). The activity 2.4 was development of two PCB management plans in both countries but only Peru implemented these plans in two mines. Chile stated that all mining companies had already developed and implemented this type of activity.

F. Project financing

84. The project had a total budget of US\$ 2,392,461.20. GEF grant amounted US\$ 818,300 in cash, whereas in kind contributions from participant countries, mining companies, BCRC and UN Environment totalled US\$ 1,574,161 USD. From this amount, the co-financing from mining companies would be US\$ 633,161.

85. The project had 4 components. The Component 4 (identification of good practices and replicable elements) had the largest GEF budget (39%), whereas 53% of Component 2 (partnerships with mining companies) was funded from co-financing resources mainly coming from participant mining companies to implement PCB sampling and elaboration of management plans.

86. The project had four cash advance disbursements totalizing US\$ 619,105: 1) US\$ 450,00 in August 26, 2010; 2) US\$ 123,105 in October 18, 2013 and; 3) US\$ 46,000 in September 26, 2014. BCRC also signed a MOU with UN Environment Economy Division for US\$ 120,800 for execution of the project Component 3 (PCB analytical assessment within the mining sector), thus cash advances plus this MOU amounted US\$ 739,905.

87. According to the information made available to the evaluator, US\$ 780,200 (95%) of GEF resources were spent by May 2019, whereas US\$ 2,134,427 of co-financing was attained, thus exceeding the initial commitment by 36%. These co-financing resources came mainly from mining companies that participated in the dichlorination activities in Peru and BCRC (69%).

88. According to BCRC, there still was a socio-economic assessment for the replacement of transformers containing PCB oils in process, and approximately US\$ 50,000 were allocated for this purpose. The final report of this study was available in April 2019, when the evaluation was still ongoing.

89. Therefore, there is approximately a remaining of US\$ 38,100 from the GEF grant by May 2019. As noted in Table 6,84% of project expenditures occurred from 2012 through February 2015.

90. Tables 3 and 4 show project expenditures and co-finance according to UN Environment and GEF formats respectively, whereas Table 5 shows a summary of main institutions committed with co-financing and the status of compliance until February 2015, with no changes by May 2019.

91. It is worth noting that UN Environment financial report formats are based on budget lines, thus it is not possible to present a breakdown of expenditures by project outcomes. This also makes it very difficult to analyse the impacts to the overall budget resulting from the four project extensions. This format does not allow for analysis of allocation of funds by country.

Table 3: Project budget at design and actual expenditures and co-financing by May 2019.

| Component/sub-component/output | Estimated cost at design | | Actual Cost/ expenditure (*) | | Expenditure ratio (actual/planned) | |
|--|--------------------------|------------------|------------------------------|------------------|------------------------------------|-------------|
| | GEF | Co-financed | GEF (*) | Co-financed | GEF | Co-financed |
| Component 1: Regional coordination and upgrading in the mining sector in participating countries, of national regulatory elements for PCB life cycle management and administration | 136.500 | 139.653 | | | | |
| Component 2: Development of partnerships with mining sector industries and associations for cost-effective ESM of PCBs | 136.300 | 827.148 | | | | |
| Component 3: Analytical assessment of PCBs within the mining sector | 130.300 | 138.090 | | | | |
| Component 4: Identification of good practices and replicable elements on PCB ESM for the mining sector | 320.200 | 104.670 | | | | |
| Project Management and supervision | 95.000 | 364.600 | | | | |
| Total (US\$) | 818.300 | 1.574.161 | 780.200 | 2.134.427 | 95% | 136% |

Table 4: Co-financing table according GEF format as February 2015.

| Co-financing | UN Environment own Financing (US\$1,000) | | Governments (US\$1,000) | | Other (US\$1,000) | | Total (US\$ 1,000) | | Total Disbursed (US\$ 1,000) |
|----------------------|--|------------|-------------------------|------------|-------------------|--------------|--------------------|--------------|------------------------------|
| | Planned | Actual | Planned | Actual | Planned | Actual | Planned | Actual | |
| - Grants (in cash) | | | | | 693 | 82 | 693 | 82 | 82 |
| - Loans | | | | | | | - | - | - |
| - Credits | | | | | | | - | - | - |
| - Equity investments | | | | | | | - | - | - |
| - In-kind support | 25 | 124 | 550 | 447 | 306 | 1.481 | 881 | 2.052 | 2.052 |
| Totals | 25 | 124 | 550 | 447 | 999 | 1.564 | 1.574 | 2.134 | 2.134 |

Table 5: institutions participating in project co-financing and compliance.

| Co-financing by entity | Prodoc | Actual | % (actual/planned) |
|---|------------------|------------------|--------------------|
| In Cash | | | |
| Government of Finland through Basel Secretariat | 100.000 | 82.373 | |
| Minera El Volcán | 593.161 | - | |
| Sub-Total in cash | 693.161 | 82.373 | 12% |
| In kind Support | | | |
| Chile | | | |
| Ministry of Environment | 150.000 | 200.000 | |
| Mining Council | 150.000 | - | |
| Sub-total Chile | 300.000 | 200.000 | 67% |
| Peru | | | |
| Ministry of Environment +DIGESA | 150.000 | 246.681 | |
| OSINERGMIN | 100.000 | | |
| Mining Companies | 40.000 | 821.373 | |
| Sub-total Peru | 290.000 | 1.068.054 | 368% |
| Multilateral organizations | | | |
| Basel Convention Secretariat | 16.000 | - | |
| UNEP DTIE Chemicals | 25.000 | 124.000 | |
| Basel regional Center for South America (BCRC) | 250.000 | 660.000 | |
| Sub-total Multilateral | 291.000 | 784.000 | 269% |
| Sub-total in Kind support | 881.000 | 2.052.054 | 233% |
| Total Co-financing | 1.574.161 | 2.134.427 | 136% |

Table 6: Pace of annual expenditures and distribution of funds by institution/country until May 2019¹³.

| Institution/ country | 1st PSC meeting | 2010 | 2011 | 2012 | 2013 | 2014-febr 2015 | March 2015- May 2019 | Total (US\$) |
|-----------------------------------|--------------------|---------------|---------------|----------------|----------------|-------------------|-------------------------|-----------------|
| Chile | 182.750 | | | | 46.935 | | | |
| Peru | 182.750 | | | | | | | |
| BCRC | 292.000 | | | | 287.845 | 67.337 | | |
| UNEP-DTIE | 120.800 | | | | | 120.800 | | |
| Support to mining companies | 40.000 | | | | | | | |
| Project expenses (US\$) | 818.300 | 27.322 | 50.392 | 134.418 | 334.780 | 188.137 | 45.151 | 780.200 |

(*): data for 2010 seems to have been reported in 2011, and this is the difference noted in the totals' column and Table 4.

¹³ Source: PSC minutes and annual expense reports from BCRC and Final Expense Report submitted in 2019.

IV. Theory of Change at Evaluation

Reconstructed Theory of Change at Evaluation

92. The environmental objective of this project is to protect the human health and environment by preventing PCB releases, and to support participant countries to comply with the provisions of the Stockholm Convention.

93. The main development objective is to reach “a coordinated regional approach” to obtain best environmental practices for sound management of PCB in the mining sector of South America. However, the intervention logic presented is based on the fact that no coordination between mining companies and national governments was detected during project preparation. Moreover, it was noted that little information about how these companies were managing their PCB stocks and equipment was available and thus, development of technical standards and regulations was necessary for both countries to comply with their international commitments under Stockholm Convention.

94. Therefore, in practice, the project focused on attaining a good coordination between national governments and their mining sector, and not a regional coordination. Regional benefits from the project would be the sharing of the experience of these countries with others with similar conditions, where replication would take place.

95. For outcomes, the situation would be the same as the development objective and as such, outcome 1 would be “regulations and PCB sound management practices developed at each country”, rather than “regional coordination and regulatory elements....”.

96. The rationale of this project was that national governments and their mining sector would work together to develop national regulations and technical standards to establish an environmentally sound management system for PCB in the mining sector (outcomes 1 and 2). This partnership would commit mining companies to identify their PCB inventories and implement sound management practices for their PCB stocks through management plans (outcome 2).

97. The elaboration of inventories would be supported by improving analytical skills of national laboratories that provide analytical services to mining companies and authorities for determining PCB levels in different matrices such soil, water, concrete, air, electric oils and contaminated equipment (outcome 3). The experience should lead to distil lessons learnt and good practices that would be shared with other countries of similar conditions (outcome 4).

98. Regarding the causal chain of this project, it is supposed that partnerships between national government and mining companies will foster cooperation and understanding of PCB stocks and their current management. In addition, training of analytical labs would result in improvements in assessments made for PCB equipment and wastes, and this would provide a reliable inventory of PCB for the mining sector, and a better understanding of their impacts on environment and human health.

99. Once inventories would be completed, the next step is to set PCB management plans and to identify best practices for maintenance and decommissioning, interim storage and disposal of contaminated equipment and oils in a sound environment manner. In turn, these best practices would result in an upgraded legal framework covering all aspects of the life cycle of the PCB equipment, including technical standards and provisions for dealing with their wastes.

100. The new regulations and technical standards would be reinforced by establishing alliances with mining associations at national and international levels to maximize project results and promote wide adoption of these good practices among the mining industry.

Main Assumptions

101. The project approach relies on several assumptions, the most important being those related with the willingness of the mining industry to disclose their information to the governments, understand the complexity of PCB issues and the commitments of the project participant countries as parties of the Stockholm Convention, and that mines would grant access to their sites for analysing PCB equipment and storehouses. If these assumptions are fulfilled, both countries would have first-hand information in order to develop reliable PCB inventories and identify best management practices and available technologies for disposal or destruction of PCB wastes.

102. The project also assumes that awareness activities would be enough to produce a shift of the mining industry towards sound PCB management and therefore, if the mining sector is conscious about this issue, then technical standards and regulations would be developed and established through discussions between government agencies and mining sector representatives.

103. The establishment of a financial mechanism to sustain the application and enforcement of new regulations and technical standards is an implicit assumption within the project. Regulations would ensure a “market” to public and private sector analytical laboratories for regular maintenance and update of PCB inventory data, and the same would apply to waste treatment companies, who would incorporate either destruction or disposal technologies that would have demand from mining sector companies. Mining companies should also allocate financial resources in order to comply with these new legal provisions.

104. Improving of enforcement capacities to involved government agencies is also an implicit assumption in the project. If regulations are approved, there would be a need for training for public officials able to identify PCB in different equipment and environmental matrices.

Main Drivers

105. Finally, the project assumes that the main driver for changing PCB practices and access to information on PCB in the mining sector is a partnership between government and the private mining sector and that regulations, technical standards and introduction of best practices would be introduced into this sector. The main responsibility to boost these partnerships is in the government agencies from Chile and Peru, where building trust with the mining sector has a direct impact on project objectives and openness from the mining sector. In the case of this project, main drivers are the public officials from the Ministries of Environment, Health and Mining who are participating in this project. Other drivers are the mines’ personnel responsible for implementing sound environmental management systems in their respective companies, who should continue working on PCB sound management once the project is finished.

106. Sharing best practices, best available technologies and regulations is responsibility of the ministries of Environment from Chile and Peru, who will constitute the main driver for dissemination of these instruments amongst other LA countries and small mining sector.

107. Table 7 and Figure 2 show a representation of the ToC for the project according to what the evaluator concluded from the document review and the project intended outcomes. This ToC includes intermediate states that are necessary to achieve the impact stated in the project document.

Table 7: Reconstructed ToC at evaluation (*)

| ToC at design | | Reconstructed ToC | | | |
|--|---|---|---|--|---|
| "Objective: Participating countries develop a regional coordinated approach to obtain best environmental practices for sound management of PCBs in the mining sector. | | Objective: Participating countries develop a regional coordinated approach to obtain best environmental practices for sound management of PCBs in the mining sector. | | | |
| Output | Outcome | Output | Outcome | Intermediate State | Impact |
| 1.1 Development of technical standard procedures and regulations for EMS of PCB within the mining sector for PCB holders and suppliers of mining companies | 1. Regional coordination and regulatory elements and procedures on PCBs management in the mining sector are upgraded | 4.2 Awareness of the countries on PCB raised | 1. Regional coordination in the mining sector is upgraded. | Missing: LAC countries implement coordination and participation mechanisms among government, mining sector and communities to accord PCB sound management practices and regulations in the mining sector based on project's experience. | To protect human health and the Environment |
| | | Additional output: Lessons Learnt identified and shared among LAC countries | | | |
| 1.2 Updating or adjusting technical guidelines evaluate in detail PCB management within the mining sector | | 1. Regulatory elements on PCBs management in the mining sector are upgraded. | 1.2 A legal framework for PCB management within the mining sector (created or updated). | | |
| | | 2.1 Assessment of the PCB situation within the mining sector developed shared | 1. Upgraded PCB management procedures applied in the mining sector | | |
| | | 1.1 Technical standard procedures and regulations developed for EMS of PCB within the mining sector for PCB holders and suppliers of mining companies. | | | |
| 1.2 An evaluation report on current PCB management schemes, legal framework, regulation elements, barriers and opportunities for ESM for PCBs and current practices within the mining sector. | | 1.2 Technical guidelines developed for the mining sector to: a) develop or update PCB inventories; b) prioritize PCB actions; | Missing: Countries coordinate collaboration between governments, the mining sector and affected populations to implement sound management systems for PCB, | | |

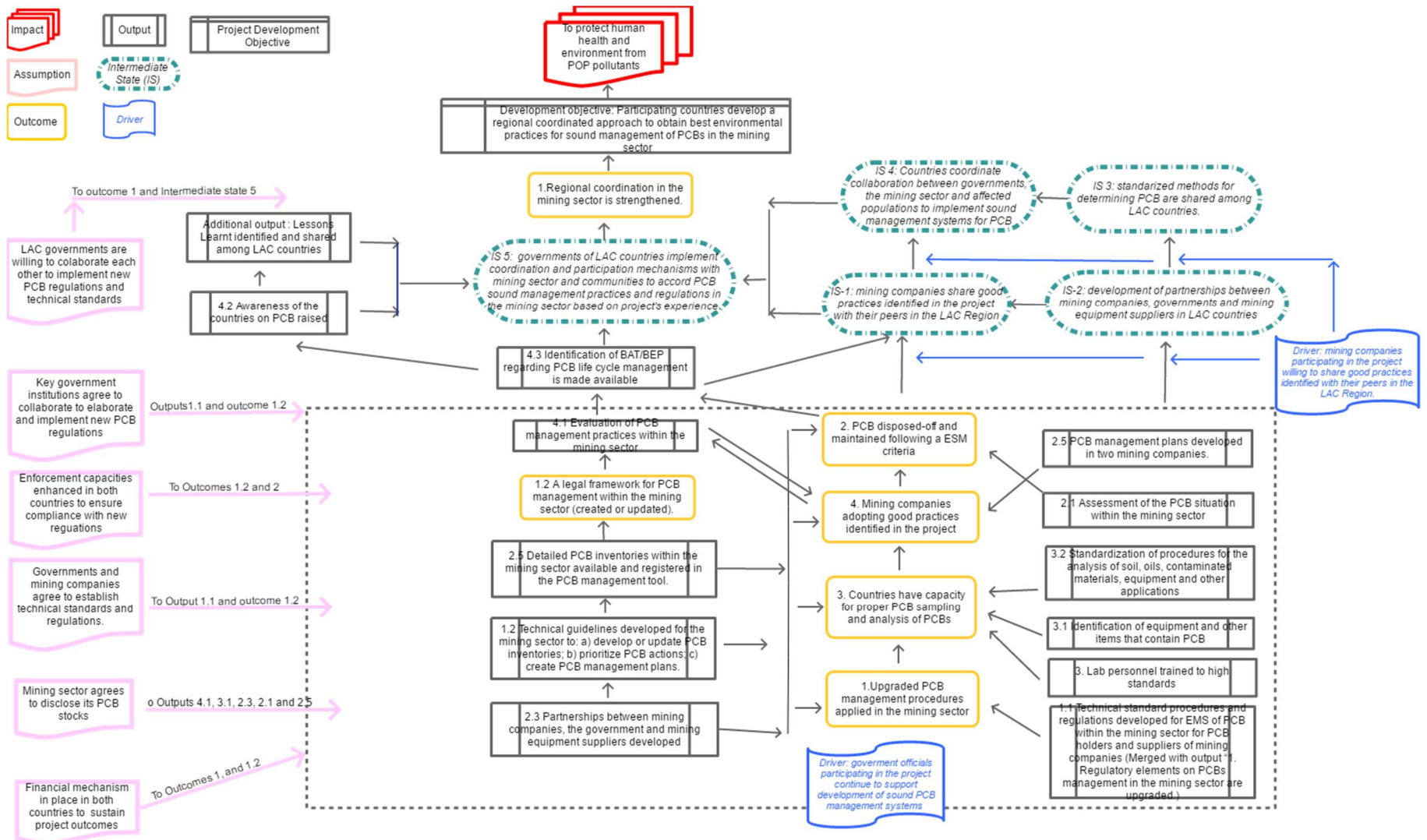
| ToC at design | | Reconstructed ToC | | | |
|--|--|---|---|--|---------------|
| "Objective: Participating countries develop a regional coordinated approach to obtain best environmental practices for sound management of PCBs in the mining sector. | | Objective: Participating countries develop a regional coordinated approach to obtain best environmental practices for sound management of PCBs in the mining sector. | | | |
| Output | Outcome | Output | Outcome | Intermediate State | Impact |
| | | c) create PCB management plans. | | | |
| 1.2 A legal framework for PCB management within the mining sector (created or updated). | | | | | |
| 1.2 Technical guidelines for the mining sector to: a) develop or update PCB inventories; b) prioritize PCB actions; c) create PCB management plans. | | | | | |
| 2.1 Assessment of the PCB situation within the mining sector | 2: Mining companies and mining association working in close cooperation with other relevant sectors on ESM of PCBs | 2.1 Assessment of the PCB situation within the mining sector | | | |
| 2.2 Registering and monitoring of PCB inventories within the mine and at government level | 2. Effective partnerships between industry and government upon compromising PCB holders to commission responsible and sound PCB management. | 2.3 Partnerships between mining companies, the government and mining equipment suppliers developed | 2. PCB disposed of and maintained following ESM criteria | Missing: development of partnerships between mining companies, the government and mining equipment suppliers in LAC countries | |
| 2.3 Development of partnerships between mining companies, the government and mining equipment suppliers | | 2.5 Detailed PCB inventories within the mining sector available and registered in the PCB management tool. | | | |

| ToC at design | | Reconstructed ToC | | | |
|--|--|---|--|--|---------------|
| "Objective: Participating countries develop a regional coordinated approach to obtain best environmental practices for sound management of PCBs in the mining sector. | | Objective: Participating countries develop a regional coordinated approach to obtain best environmental practices for sound management of PCBs in the mining sector. | | | |
| Output | Outcome | Output | Outcome | Intermediate State | Impact |
| 2.4 Development of two PCB management plans within mining facilities | 2. PCB disposed of and maintained following ESM criteria | 2.5 PCB management plans developed in two mining companies. | | | |
| 2.5 Implementation of two PCB management plans within mining facilities | | | | | |
| 2.5 Detailed PCB inventories within the mining sector available and registered in the PCB management tool. | | | | | |
| 2.5 PCB management plans developed and executed in two mining companies. | | | | | |
| 2.5 Reports on PCB training, identification and registration of PCB inventories | 2. Technicians and operators involved in PCB management trained to high standard. | | | | |
| 3.1 Identification of equipment and other items that contain PCB | 3: national laboratories are able to carry out sampling and analysis of PCBs. | 3.2 Standardization of procedures for the analysis of soil, oils, contaminated materials, equipment and other applications | 3. Countries have capacity for proper PCB sampling and analysis of PCBs | Missing: standardized methods for determining PCB are shared among LAC countries. | |
| 3.2 Standardization of procedures for the analysis of soil, oils, contaminated materials, equipment and other applications | 3. Lab personnel trained to high standards | 3.1 Identification of equipment and other items that contain PCB | | | |
| 3.2 Report on training, sampling and PCB analysis exercise of 600 transformers and 300 PCB containing articles. | 3. PCB sampling and analysis of PCBs done properly in countries | 3. Lab personnel trained to high standards | | | |

| ToC at design | | Reconstructed ToC | | | |
|--|---|---|--|--|---------------|
| "Objective: Participating countries develop a regional coordinated approach to obtain best environmental practices for sound management of PCBs in the mining sector. | | Objective: Participating countries develop a regional coordinated approach to obtain best environmental practices for sound management of PCBs in the mining sector. | | | |
| Output | Outcome | Output | Outcome | Intermediate State | Impact |
| 3.2 Intercalibration study report | | | | | |
| 4.1 Evaluation of PCB management practices within the mining sector | 4: Good practices identified and available for use of any mining company around the world. | 4.1 Evaluation of PCB management practices within the mining sector | 4. Mining companies adopting good practices identified in the project | Missing: Mining companies shared the good practices identified in the project with their peers in the LAC Region. | |
| 4.2 Identification of good practices for PCB management | 4. Mining companies adopting good practices identified in the project | 4.3 Identification of BAT/BEP regarding PCB life cycle management is made available | | | |
| 4.2 PCB management schemes in the mining sector evaluated | | | | | |
| 4.2 Awareness raising reports, by sector, available | | | | | |
| 4.3 Identification of BAT/BEP regarding PCB life cycle management | | | | | |

Note: i) Output and outcome numbers **in black** are from the logic-framework; ii) outcomes and outputs **in red** are from the prodoc's section 3.3 and they did not have any number for identifying them (Description of the project); iii) outputs and outcomes **in blue** are from the logic framework and retain their original numbers from the prodoc, but they were split by the evaluator because they have two or more components.

Figure 2: Reconstructed ToC at evaluation.



V. Evaluation Findings

A. Strategic Relevance

A.1. Alignment to UN Environment MTS and PoW

108. Regarding UN Environment Medium Term Strategy (MTS) 2010-2013, the project fits into Strategic Direction E: “Harmful substances and hazardous waste” (to minimize the impact of harmful substances and hazardous waste on the environment and human beings) and its expected accomplishments: a) “States and other stakeholders have increased capacities and financing to assess, manage and reduce risks to human health and the environment posed by chemicals and hazardous waste”; b) “Coherent international policy and technical advice is provided to States and other stakeholders for managing harmful chemicals and hazardous waste in a more environmentally sound manner, including through better technology and best practices”; c) Appropriate policy and control systems for harmful substances of global concern are developed and in place in line with States’ international obligations”¹⁴.

109. The project is also in line with POW 2010-2011 and it is included in the Sub- Programme “Harmful substances and hazardous waste” and the indicator for achievement is “Increased number of countries and stakeholders demonstrating progress in implementing sound management of chemicals and hazardous waste, including having identified their needs in infrastructure strengthening”.

Sub-section Rating: Highly Satisfactory (HS)

A.2. Alignment to UN Environment/GEF/Donor strategic priorities

110. The environmental issues related with this project are in line with GEF-4 for POPs’ Strategic Objective: “To reduce and eliminate production, use and releases of POPs”, and with the Strategic Programmes SP-1: “Strengthening Capacities for NIP Implementation” and SP-3: “Partnering in the Demonstration of Feasible, Innovative Technologies and Best Practices for POPs Reduction and Substitution”. GEF priorities are specified in published programming priorities and focal area strategies.

111. This project is also in line with UN Environment strategic priorities including the Bali Strategic Plan for Technology Support and Capacity Building (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.

Sub-section Rating: Highly Satisfactory (HS)

A.3. Relevance to the regional, sub-regional and national issues and needs

112. The project is important and innovative since this is the first attempt to address PCB issues in the mining sector in LAC countries. Conclusions and lessons learnt from this experience could be shared with other countries that have this type of economic activity, like Ecuador, Paraguay, Brazil and other central American countries.

113. As signatories of the Stockholm Convention, Peru and Chile have developed a body of public policies and regulations that pursue compliance with the objectives of this Convention. These regulations partially addressed PCB issues and need to be improved, and development of technical skills and technology transfer to key economic activities (mining in

¹⁴ United Nations Environment Programme Medium-term Strategy 2010–2013: Environment for Development, pages 12, 28.

this project) were also needed as well, to allow proper management and disposal of PCB contaminated equipment.

114. The project is also relevant in terms of strengthening technical and regulatory capacities of both participant countries, by working together in a coordinated manner to identify good practices in the mining sector, and then introduce them in a set of technical standards and regulations that would lead to implementing national sound PCB management systems to protect human health and environment from dangerous PCB emissions. This set of good practices, regulations and technical standards would then be spread through countries of similar conditions to help them to establish their own PCB management systems accordingly.

115. The project is very relevant for Chile and Peru, since data available at the time of its elaboration showed several gaps in information of current PCB management practices performed by mining companies and showed limited national capacities to perform chemical analysis for these substances according to international standards.

116. Although the large mining sector in Chile had already eliminated an important amount of PCB in 2007¹⁵ and established management plans in the mines, the most relevant aspect of the project for this country was the development of analytical procedures and strengthening of national laboratories to measure PCB in several matrices. Update of current regulations was also relevant for Chile in order to address PCB management gaps.

117. Peru strove to emphasize identification, training and elimination of PCB in several mines, along the elaboration of regulations to address this issue at national level.

Sub-section Rating: Satisfactory (S)

A.4. Complementarity with Existing Interventions

118. The project was in line with the implementation of the National Action Plans (NIP) in Chile and Peru. On the other hand, Chile was implementing its “Pollutant Release and Transfer Register” (PRTR) to track chemicals of concern such as PCB, thus project activities were consistent with the implementation of this register.

119. During its implementation in Peru, the project served well as an input for the GEF UNIDO- implemented project approved in 2009 “Enabling Activities to Review and Update the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs)”.

Sub-section Rating: Satisfactory (S)

Factors affecting this criterion

120. During this review process, it was noted that partners from Chile and Peru were committed to achieve the desired products and results of the project. Thus, this engagement was very positive and triggered participation of each country’s internal actors, both from government institutions and private sector stakeholders involved in this area. Several institutions involved - such as the Ministries of Health, Environment and Mining and the mining industry cooperated to collect the required information to implement the project. The regional coordination agency also assisted both partner countries when required, facilitated the financial management and helped with the appointment of national and international experts that would implement the project products and established a participative approach where involved countries could redefine some project activities to fit them into each country’s reality and capacities.

¹⁵ According to the Chile National Inventory, 800 tons of PCB wastes were eliminated in 2007 and mostly attributed to CODELCO and other large cooper mining companies.

121. However, as Chilean companies had already elaborated and implemented PCB management plans, the national project coordination focused on activities to strengthen the country's analytical capacity and thus, several guidelines for detection of PCB in soils, water, air and contaminated sites elaborated along training for the two main national environmental laboratories (CENMA in Santiago and EULA in Concepción).

Overall Section Rating for Strategic Relevance: Highly Satisfactory (HS)

B. Quality of Project Design

122. There were two versions of the project document: one in Spanish and another one in English. Results matrices for these two versions are different in both, format and contents. Columns and rows for objectives and outcomes refer to different concepts in both matrices, thus this would lead to confusion between UN Environment staff (English speakers) and regional and national implementers (Spanish speakers). In the analysis of this document, the evaluator considered just the English version as the official one for GEF and UN Environment. As an example of above the logic framework is presented in a different way in both versions. The English version uses just one table (Appendix 4) with a format with a horizontal logic going from objectives/outcomes/outputs through baseline, targets, outputs, indicators, means of verification and assumptions.

123. The Spanish version is a table showing a horizontal format going from Objectives/Results/Activities/indicators through Components 1 to 5. Expected outputs and means of verification are shown in different tables (Tables 6.4 and 6.5).

124. Regarding contents, the English version sets a target for the development objective stating that the "regional coordinated approach in the mining sector demonstrated to be cost-effective", whereas the Spanish version does not include any target nor paragraph requiring that this approach should have this feature.

125. Outcome 1 in the English version becomes an objective in the Spanish document, whose outcome is "industry and government working together". This applies to all outcomes from the English version. Outputs in the English version become activities in the Spanish version.

126. The project was innovative in the sense that it tried to address an environmental issue in a sector that it is usually difficult to reach, mainly due to its strong influence on the economic growth of Chile and Peru. As the project document remarks, several gaps in information -mainly referred to companies' practice to manage PCB contaminated equipment and disposal- were detected during the project preparation stage.

127. The strength of this initiative is the partnerships that would be developed between the government and the formal, large scale mining companies in both countries. On the other hand, this project was relevant to the national priorities of Chile and Peru for its contribution to the improvement of PCB management and data collection for inventories in the mining sector, and for the proposals to update national technical standards and regulations during project execution.

128. However, the timeframe designed for the project was unrealistic (18 months) considering the ambitious targets for the expected outcomes. In fact, elaborating regulations and having them implemented is a task that usually takes several years to achieve, since every country has its own political and technical limitations that make it difficult to approve these regulations in such a short timeframe. On the other hand, making PCB inventories for this important economic sector is a challenge to achieve in only 18 months, since mining companies keep secrecy about their operations, and collecting baseline information from these types of companies is difficult considering the large number of equipment in existence

in the field and the numerous external subcontractors providing maintenance services for these equipment.

129. Other weakness detected in the project design was the confusing language used in the project document when defining the project development objective as “to establish a regional coordinated approach to obtain best environmental practices for sound management of PCB within the mining sector of South America and subsequently improve PCB sound environmental management”. The “regional coordinated approach” is not defined and it would be understood as the development of a coordination of two or more countries to establish common goals and objectives through an exchange of experience and discussions to collectively develop national policies and regulations that consider regional and local aspects for sound PCB management.

130. The project document included only two steering committee meetings (at project beginning and end) where participating countries have the opportunity to exchange views and experiences and discuss strategic questions relevant for the LAC region. The rationale of the activities described in the project document suggest that these were designed to be implemented as separate pathways for both countries, and coordination is achieved only between national governments and their mining companies, thus the project design did not clarify how the regional coordination would be promoted.

131. Another example of confusing language is “developing of regulatory elements”, whose meaning is not defined and would also lead to wrong conclusions. This term is used when referring to the update of current regulations or technical standards dealing with PCB wastes in each participant countries.

132. Other weakness is related with indicators for outcomes and outputs. As an example, for outcome 1: “Regional coordination and regulatory elements and procedures on PCBs management in the mining sector are upgraded” and its indicator “Number of mining companies and regulatory entities participating in ...”, the number of entities participating would not be an indicator for the result, since this is not sufficient to have a coordination, but the right indicator would be: “ number of regulations and sound PCB management practices elaborated/implemented”. Another example is an indicator “number of laboratories trained” which does not measure the result “national laboratories are able to carry out sampling and analysis of PCB”, and an indicator such as “number of labs making analysis according international standards” would be more adequate. Other indicators like “number of technical standards”, “number of PCB inventories”, “an assessment report” are products rather than a measure of a result.

133. Regarding stakeholders and their roles, they are not specified for the mining companies, and communities living near mines are not considered at all. The participation of civil society organizations was not considered in the project design, neither gender issues or marginalized groups.

134. Another identified weakness of the project design was the unrealistic assumptions, such as the large mining companies would like to cooperate with the project and disclose their information about the management of PCB at their mines and allow visits to their facilities to corroborate the sound PCB management. The experience indicated that these assumptions were partially true.

135. Considering the elements described earlier and other issues arising during the document review and exchanges with BCRC staff, the evaluation rating for the quality of project design according to UN Environment Guidelines is Moderately Unsatisfactory.

Rating for Quality of Project Design: Moderately Unsatisfactory (MU)

C. Nature of the External Context

136. Chile is a highly seismic country. In 2010, an earthquake of 8.8 degree in the Richter's scale was experienced and although it did not have direct impacts on project locations, it changed priorities in the country, which focused all its efforts in the reconstruction of most severely destroyed cities. This left this project and other environment issues in a secondary place.

137. Another factor that impacted project performance was the transition from CONAMA and CONADE to the newly created environment ministries in Chile (2010-2012) and Peru (2008-2011) respectively, resulting in considerable delays in the implementation of project activities between 2010-2012. Chile started the transition from a national environmental secretariat with limited authority in 2007 to a new Ministry with more legal capabilities and duties in October 2010, thus the project started in the middle of the major transformation of the Chile's main environmental institution. This situation was known beforehand as the PRC review discussed it in its meeting of March 2010.

138. The other issue found was the change in governments in Chile (March 2010) and Peru (July 2011) that led new government officials taking decisions and learning how to manage state affairs.

Rating for Nature of the External Context: Moderately Favourable (MF)

D. Effectiveness

D.1. Delivery of outputs

139. The project was designed to last 18 months (from August 2010 through February 2012). However, due to issues for allocating project funds at national level in Chile and Peru, and institutional changes in environmental authorities in both countries, all activities were seriously delayed.

140. Other sources of delays were those related with the activities of the Analytical Component 3. The signature of the MOU with the MTM Research Center School of Science and Technology, Örebro University took several months of negotiations (from August 2013 through April 2014) and submission of the final report for the analytical component by UNEP-DTIE¹⁶ took almost a year. Revision and approvals of regional consultants' reports by UNEP-DTIE and national coordinators were also an issue in this project¹⁷.

141. As consequence of above, four extensions were needed in order to achieve the project desired outcomes. The last extension was until September 2018, this is, the project duration was about 8.5 years of implementation. Table 8 shows details on planned versus actual delivery of outputs.

142. Therefore, most of the activities were delayed and outputs could not be obtained according their either original planned schedules. The following table shows the approximate dates of delivery of outputs against the planned.

Table 8: programmed versus actual delivery of outputs.

| Output Id | Programmed | Actual delivery |
|---|--------------------------|--------------------------|
| 1.1: Technical standard procedures and regulations developed for EMS of PCB within the mining sector for PCB holders and suppliers of mining companies. | December 2010 - May 2011 | November 2011 - May 2014 |
| 1.2 Technical guidelines developed for the mining sector to: a) develop or update PCB inventories; b) | February 2011 | June 2013 - January 2014 |

¹⁶ PIR FY2015, page 8.

¹⁷ PIR FY 2015, pages 23 and 28.

| | | |
|---|-----------------------------|------------------------------|
| prioritize PCB actions; c) create PCB management plans. | | |
| 2.1: Assessment of the PCB situation within the mining sector shared. | November 2010 - August 2011 | March 2011 - December 2013 |
| 2.5 Detailed PCB inventories within the mining sector available and registered in the PCB management tool. | February - April 2011 | November 2011 - August 2013 |
| 2.3 Partnerships between mining companies, the government and mining equipment suppliers developed. | February-May 2011 | January 2014 |
| 2.5: PCB management plans developed in two mining companies | September-December 2011 | August 2013 - July 2014 |
| 3: Lab personnel trained to high standards | July 2011 | March 2013 |
| 3.1: Identification of equipment and other items that contain PCB | July 2011 | March 2013 |
| 3.2: Standardization of procedures for the analysis of soil, oils, contaminated materials, equipment and other applications | July 2011 | February 2014 |
| 4.1 Evaluation of PCB management practices within the mining sector; "4.2 Awareness of the countries on PCB raised" and "4.3 Identification of BAT/BEP regarding PCB life cycle management is made available" | May 2011 - March 2012 | November 2011 - October 2014 |

143. The project achieved most of its outputs and delivered additional ones like the pilot project on dechlorination of PCB oils (Peru). The pilot was very useful to demonstrate good practices and application of technology at site level. A total of 50 tons of oils were decontaminated. The analytical component was increased by developing of new guidelines and procedures for analysing PCB contents in several matrices, even for contaminated soils.

D.1.1. "1.1: Technical standard procedures and regulations developed for EMS of PCB within the mining sector for PCB holders and suppliers of mining companies"

144. Activities to develop this product should have finished in November 2011 but they ended in May 2014.

145. Expected activities to achieve this output included: i) an assessment of current PCB management practices in the mining sector in Chile and Peru, ii) updating of technical guidelines for PCB management and; iii) the development of regulatory elements that would be implemented during the project timeframe.

146. The project elaborated a report named "Regional assessment on management of polychlorinated biphenyls (PCB) in the mining sector of Chile and Peru". The assessment also identified barriers and opportunities for sound environmental PCB management and assessed the existing regulatory gaps in each country and reported that some companies were authorized to transport, store and treat PCB containing wastes in Chile and Peru. Training provided to participating companies was also described in this report.

147. However, this assessment does not provide a detailed description on how PCB equipment is handled, stored and disposed-off by the companies of this sector, but it describes environmental corporate policies of large mining companies implemented in both countries and the institutional framework with responsibilities in this sector.

148. Regarding the development of regulatory proposals for the mining sector, only Peru developed one called "Regulation of environmentally sound management of PCB in Peru" which was published as Minister Resolution No. 683-2018 from MINSa and is still under public consultation and the Decree No 014-2019-EM from the Energy and Mining Ministry

was approved in July 2019, by which elaboration of PCB management plans are compulsory for the electricity sector. No such documents were elaborated in Chile, mainly since Chile focused its efforts in developing an analytical framework to determine PCB in several matrices.

149. The project elaborated detailed technical guidelines named “Procedures for Rational PCB Management in the Mining Sector” in January 2014. These guidelines included six procedures: i) elaboration and update of PCB inventories; ii) handling and transport of PCB equipment; iii) use, handling and disposal of material containing PCB; iv) Inspection and Control of Equipment and Facilities containing PCB; v) procurement of material and equipment PCB free and; vi) procurement of maintenance service to avoid cross-contamination.

150. The project updated the “Decision Making Tool (DMT)” with the assistance of the Basel Convention Secretariat. This document was the result of visits to some mines in Chile and Peru, training of their personnel and exchange of experiences and needs for PCB sound management. The DMT was validated with the mines in Coyhaique and Antofagasta (Chile), and Cerro de Pasco, Junín, Huaraz, Lima, Arequipa, Cajamarca y Huancavelica in Perú.

151. This DMT was updated and adapted for use in the mining sector and included PCB identification, inventory, storage, transport, treatment, disposal, transboundary movements, a database example for PCB registering, case studies and a questionnaire for self-evaluation of the new knowledge gained during the training sessions. This tool is complementary to technical guidelines described in paragraph 116.

152. This activity counted with the assistance of government experts on PCB management from Uruguay (DINAMA) and from the Basel Convention Regional Centre for the Central America Sub-region including Mexico in El Salvador (BCRC-CAM), who supported in the elaboration and review of the DMT.

D.1.2. “2.1: Assessment of the PCB situation within the mining sector shared”

153. This is the same assessment report described in paragraph 113: “Regional assessment on management of polychlorinated biphenyls (PCB) in the mining sector of Chile and Peru”. This document was discussed with mines participant of the project, the PSC and in workshops organized by BCRC and the national coordinators. This report was published in the BCRC website (<http://www.inti.gob.ar/pcb/>) and is currently available in <http://www.gecop.cl/marco-regulatorio/>; <https://docplayer.es/25334822-Minero-de-chile-y-peru.html> and <https://studylib.es/doc/8681753/gestión-de-pcb-en-el-sector-minero-de-chile-y-perú>.

D.1.3. “2.5: PCB management plans developed in two mining companies”

154. The project elaborated in May 2013 the report “Guidelines for the Development of a PCB Management Plan in the Mining Sector”. This report is a guide describing the different stages involved in the elaboration of a PCB management plan and included information on dichlorination technologies that would be applied in both countries.

155. Based on the guidelines described above, two PCB management plans were elaborated for the Operational Units “Atacocha” and “Uchucchacua” from “Compañía Minera Milpo” and “Compañía Minera Buenaventura” respectively, both from Peru.

156. The project executed an activity not included in the project document. Three mining companies in Peru (Compañía Minera Milpo S.A.A., Compañía Minera Buenaventura S.A.A and Compañía Minera Poderosa S.A.) agreed to implement a pilot project for de-chlorination of 13 transformers that eliminated 50 tons of PCB contaminated oil. Dechlorination was performed and co-financed by KIOSHI-Peru, an Argentinian company specialized in this

technique with offices in Chile and Peru. Participant companies and the project also co-financed this activity.

157. Dechlorination took place at mine locations and proceed from September through December 2014 and had a cost of US\$ 269,010. Based on this experience, a report “PCB Management Plan’s Development Process and Selection of Associated Technology in the Mining Sector in Chile and Peru” was published in early 2015.

158. A study called “socio-economic and environmental assessment from existing PCB containing oil transformers replacement by non-PCB and energy efficient transformers” was underway in December 2018, thus the draft and final reports were not available for review during the terminal evaluation.

159. Chile did not develop any management plans, since most of the large mining companies had already developed this type of plans and exported almost all of their PCB contaminated stock before the project was launched.

D.1.4. “2.3 Partnerships between mining companies, the government and mining equipment suppliers developed”

160. The project had the ability to engage 15 mining companies - plus a railroad company that provided transport services to some local mines in Chile -, to participate in the project activities. In Peru, 12 mining companies¹⁸ participated from which three participated in the pilot project for dechlorination of PCB oils. In Chile, two mining companies (SQM, Compañía Minera El Toqui) participated as well as the Chile State Railroad Company.

161. All of these companies participated in training sessions on identification of PCB containing equipment, storage and elaboration of PCB management plans and use of kits for identifying PCB equipment in the field.

162. The project performed 21 training workshops with 344 trainees in both countries (technicians and professional staff).

163. However, personnel from companies providing servicing of PCB equipment did not participate in the training sessions and thus, risks for cross-contamination from servicing activities was not addressed by the project.

D.1.5. “1.2 Technical guidelines developed for the mining sector to: a) develop or update PCB inventories; b) prioritize PCB actions; c) create PCB management plans”

164. These are the same guidelines developed under D.1.1

D.1.6. “2.5 Detailed PCB inventories within the mining sector available and registered in the PCB management tool”

165. Peru elaborated PCB inventories for seven mining companies covering 21 production units. 674 samples from equipment plus 29 from soils were analysed by DIGESA using Gas Chromatography (GC) coupled with an electron capture device.

166. The analysis resulted in identification of 14 equipment with PCB contents higher than 50 ppm and contaminated soils in Atacocha and Toquepala¹⁹.

¹⁸ 1) Compañía Minera Buenaventura S.A.A, 2) Compañía Minera Coimolache S.A, 3) Compañía Minera Colquirrumi S.A, 4) Minera La Zanja S.R.L, 5) CEDIMIN SAC, 6) Compañía Minera Milpo S.A.A, 7) Compañía Minera Poderosa S.A., 8) Minera Aurífera Retama S.A., 9) Compañía Minera Santa Luisa S.A., 10) Southern Perú SCC, 11) UNACEM (Cemento Andino S.A.),12) Volcan, Compañía Minera S.A.A.

¹⁹ “Inventario y Eliminación de Existencias y Residuos con PCB”; Proyecto GF/PER/10/001; “MANEJO Y DISPOSICIÓN AMBIENTALMENTE RACIONAL DE BIFENILOS POLICLORADOS (PCB)”, page 17, Enero 2017.

167. Chile implemented inventories for María Elena production unit from SQM, which showed 21 out of 37 samples with PCB content higher than 50 ppm. In the same way, 150 out of 191 equipment samples from Chile's State Railroad Company resulted with PCB levels higher than 50 ppm, but no PCB was found in 30 samples taken from soils. In the case of Minera El Toqui, 7 samples from equipment and 5 from soils were taken and just one transformer resulted with PCB level of 97 ppm, and all samples from soils resulted negative for PCB.

168. Therefore, the project was successful in the elaboration of PCB inventories for the mining sector, especially in Peru where partnerships with companies were more numerous than in Chile, since most companies stated that PCB was eliminated before the project began.

169. Regarding registration of PCB equipment into a database, the project elaborated a document named "Design of the PCB Application", which is a guideline describing the basic technical requirements for the database and web software needed for the elaboration of the PCB inventory. There is no evidence that these guidelines are being used by the mining sector to elaborate their inventories.

D.1.7. "1. Regulatory elements and procedures on PCBs management in the mining sector are upgraded"

170. Peru elaborated a draft regulation "Regulation of environmentally sound management of PCB in Peru" which was published as Minister Resolution No. 683-2018 from MINSA and is going through a public consultation. No such document was elaborated in Chile, mainly since this country focused its effort in developing an analytical framework to determine PCB in several matrices. On the other hand, although is not directly a project outcome, Chile included the revision of PCB regulations in its "National Policy on Chemical Security: Action Plan 2017-2022"²⁰

171. As stated before, the project updated the DMT and elaborated a series of technical guidelines for sound PCB management that were applied in some mining companies in Peru. However, these guidelines have not been approved as technical standards in any of the participant countries, and thus, their application is voluntary in both countries.

D.1.8. "4.2 Awareness of the countries on PCB raised"

172. The project document approach to address this issue has several components. Firstly, awareness activities amongst mining companies and people working directly with equipment contaminated with PCB in order to identify the dangers of PCB use and promote its elimination by these users are to be developed by the project. An awareness campaign for exposed communities and general public opinion to minimize misunderstanding and miscommunication that would generate opposition to project activities by these stakeholders²¹ is also included. The other component is based on training for specific personnel (laboratories, technicians and professionals involved in PCB management, analysis and sampling) and elaboration of several technical guidelines for sound PCB management and disposal, and implementation of several workshops and meetings with mining associations in order to get support from these stakeholders.

173. BCRC created a website (<http://inti.gob.ar/pcb/>) and uploaded all the documents produced by the project to facilitate their dissemination across the internet.

²⁰ See page 22, "Política Nacional de Seguridad Química: Plan de Acción 2017-2022; Oficina de Residuos y Riesgo Ambiental del Ministerio del Medio Ambiente, Chile. Approved by the Council of Ministers in Sept 11, 2017, Accord No. 30/2017.

²¹ See section 3.5: "Risk analysis and measures for risk management"; page 46 from Project document.

174. The project did not elaborate an awareness raising report as such, since training sessions, workshops, meetings and technical guidelines were taken as awareness activities. These activities and material elaborated have been extensively described in this report.

175. The regional workshops for project inception and closure were also considered as awareness activities. In this sense, participation of one PCB expert from DINAMA (Uruguay) in workshops held in Chile and the participation of another expert from BCRC-CAM, provided support and awareness about the risks and sound management of PCB. One expert from the BCRC's regional PCB project participated in a workshop in Bogotá to present the experience of the elaboration and implementation of the DMT.

176. BCRC also made an agreement with the Colombia's Ministry of Environment and Sustainable Development (MADS) in order to exchange experiences and provide technical and policy support to the Colombia's efforts for sound management of PCB contaminated equipment and wastes (2012-2013).

177. The report on good practices and lessons learnt from the project implementation represents to the regional and national coordinators the final project awareness document.

178. However, the scope for this output was reduced during the implementation of the project. NGOs like TERRAM (Chile) and Labor (Peru) who participated in the inception workshop elaborated a proposal to work on project awareness activities focused on local communities, which was not implemented in any of the participant countries²². Besides this, these organizations did not participate in the elaboration of any of the documents and guidelines produced by the project.

179. As conclusion, awareness activities were confined to highly technical documents whose main audiences were skilled technical personnel and policy makers directly involved in PCB management issues. Although this focus is important, it is incomplete from the point of view of the awareness and broader participation stated in the project document²³.

D.1.8. "Additional output: Lessons Learnt identified and shared among LAC countries"

180. It is not clear if the project experience has been disseminated to other LAC countries, since there is no evidence of activities to achieve this broader sharing of lessons learnt with other countries beyond Chile and Peru, and the website containing the documents produced by the project.

181. On the other hand, according the interviews made during this evaluation, sharing of experiences between Chilean and Peruvian companies was minimum, since the project was executed independently by each country, and the sharing of experience was between the national coordinators who participated in the Steering Committee meetings.

182. Dissemination to mining companies in other countries has low probability since the Latin-American mining association was invited to participate in the project activities but it never responded to this invitation.

D.1.9. "3. Lab personnel trained to high standards"

183. This output corresponds to the project's analytical component whose main aim was to strengthen national capacities for determining PCB contents in equipment and different matrices to develop reliable inventories for contaminated equipment, soils, water and air.

²² See Annex III: "Conclusions Component Civil Society" from the "Inception Workshop Report", October 11-15, 2010, Lima, Peru.

²³ See prodoc APPENDIX 6: KEY DELIVERABLES AND BENCHMARKS, activity 4.3, page 80

184. The project assessed the capacity of laboratories from Chile and Peru to perform reliable PCB analysis for equipment and other matrices²⁴, and elaborated technical guidelines for field sampling using the L2000 DX analyser²⁵ and soils²⁶.

185. The most important activities contributing to this output were the training of 11 professional staff of laboratories from Chile (2 from CENMA, 1 from EULA), Argentina (6 from INTI) and Peru (2 from DIGESA) performed from March 18 through 22, 2013 at INTI's premises in Buenos Aires, Argentina. The entity responsible for this training was the Spanish Council for Scientific Research (CSCI), and the Institute of Environmental Assessment and Water Research (IDAEA), Barcelona. This training was assisted by UN Environment Economy Division and BCRC.

186. An interlaboratory assessment made by the MTM Research Centre School of Science and Technology, Örebro University from Sweden in August 2013 resulted in the participation of 7 laboratories from Argentina (2), Chile (3) and Peru (2). The exercise indicated that results for the PCB standard solution was good, but the analysis for the transformer oil sample was less impressive, thus regular interlaboratory exercises would be needed to monitor and improve the overall level of performance for POP analysis. Participating laboratories were encouraged to train their own technicians by repeatedly analysing certified reference materials²⁷.

187. A training workshop for Chilean laboratories was organized by EULA Center from August 19 through 23, 2013 in the city of Concepción, Chile. Seven skilled personnel from CENMA, HIDRNOR, ALS Patagonia and ISP participated in hands-on and theoretical sessions on determination of PCB in transformers' oils and soils (sample extraction and preparation, GC-MS analysis). The methodology used was that recommended by CSCI. Therefore, the project provided technical standards and analytical skills to laboratory personnel in both countries, and they are able to perform complex PCB analysis in oils and soils.

188. These activities resulted in the analysis of 909 transformers oil samples from Peru (674 with Clor-N-Oil) and Chile (235 with L2000DX). Similarly, 64 soil samples from Peru (29) and Chile (35) were analysed by local analytical laboratories. The target for the number of analyses was exceeded, since the project document did not include analysis of soil samples. It is worth noting that the project provided sample analysers (L2000DX) and reagents to carry out all chemical analysis for determining PCB contents in the samples provided by the mining companies.

189. Therefore, the activities performed by the project achieved the desired result of making reliable local PCB analysis in transformers' oils and soils.

190. A guideline called "Manual for sampling and chemical analysis of sites with potential presence of PCB and other metals of interest in the mining sector in Chile" was initiated, but it could not be completed.

²⁴ "Laboratories Survey on Sampling and PCB analysis in Chile and Peru, June 2013.

²⁵ PCB Analysis and Sampling Guide for L 2000 DX Analyzer, March 2013.

²⁶ "Manual for sampling and chemical analysis of sites with potential presence of PCB and other metals of interest in the mining sector in Chile", 2013.

²⁷ "Interlaboratory Assessment on PCB in Standard Solution and Transformer Oil; Addendum to Amend Report "Biennial Global Interlaboratory Assessment on Persistent Organic Pollutants – Second Round 012/2013"; Örebro University Man-Technology-Environment Research Center (MTM) and UNEP Chemicals Branch, December 2014.

D.1.10. “4.3 Identification of BAT/BEP regarding PCB life cycle management is made available”

191. The project elaborated a document summarizing lessons learnt and identification of good PCB management practices in Chile and Peru²⁸. This report is focused on the description of project activities and its organization and includes identification of best practices and lessons learnt from the implementation of the project, especially regarding participation of partners and situations when there is a change in authorities in the participant countries. This report is a summary of the activities performed by the project, and the best practices shown are the results obtained from these activities. In turn, lessons learnt presented are a mix of results obtained, activities and lessons learnt. Therefore, this document needs improvements in order to clearly separate these lessons, good practices, their context and applicability.

192. Regarding BAT/BEP identified in the mining sector, the project elaborated three documents: i) “Preparation of PCB Management Plan and associated technology selection in the mining sector in Chile and Peru (2014)”; ii) “Guide for Elaboration of a PCB Management Plan in the Mining Sector (2013)” and iii) “Decision Making Tool: PCB Management in the Mining Industry (2011)”. All these documents were discussed with the mines participating in the project, the PSC, BCRC and presented in different workshops made in Chile and Peru. These reports were published in the project’s website.

Rating for Delivery of outputs: Moderately Satisfactory (MS)

D.2 Achievement of direct outcomes

193. This section assesses the extent to which the delivery of outputs has produced short and medium-term changes in the project executing institutions and partners. These effects may include changes in behaviour from the use of project deliverables by direct project beneficiaries and/or other indirect stakeholders and constitute an intermediate state towards more permanent changes or impacts.

194. The evaluation will also assess the project performance in attaining its declared intended outcomes and it will show clear evidence of the contribution of this project to these outcomes.

D.2.1. “1: Upgraded PCBs management procedures applied in the mining sector”

195. Several technical guidelines on PCB management, storage transport, disposal and destruction of PCB contaminated equipment and oils were elaborated by the project. At the same time, training on identification of PCB at field level using portable analysers and elaboration of PCB management plans was provided to 344 employees from different companies in Chile (2 mines + the state railroad company) and Peru (7 companies involving 21 production units). Elaboration of a “Decision Making Tool (DMT)” and training in its use was also provide to the trainees.

196. Approximately 15 companies implemented their PCB inventories using the technology and procedures provided by the project, but only two management plans were elaborated, both form Peru.

197. The documentation reviewed indicated that significant changes in the PCB management practices of mines were noted once the DMT was validated²⁹. However, as the assessment on management practices for the mining sector was very general, it is

²⁸ “Reporte Lecciones Aprendidas y Buenas Prácticas de gestión de PCB en la industria minera de Chile y Perú”; June 2, 2014

²⁹ “DIAGNÓSTICO REGIONAL GESTIÓN DE PCB EN EL SECTOR MINERO DE CHILE Y PERÚ”, May 2013, page 77.

difficult to establish a baseline indicating the strengths and weaknesses that would be compared once these practices were upgraded. The fact is that there is no document explaining the baseline for each of the companies trained by the project.

198. Interviews with project partners in Peru indicated that two mining companies are still implementing the technical guidelines and management plans provided by the project. These interviews also revealed that there is no information about the current practices implemented by the other 10 companies that participated in the de-chlorination activity in Peru.

199. On the other hand, it was reported that de-chlorination activities have dropped considerably after the project ended its activities.

200. In Chile, the general statement of the country's mining sector is that companies have already incorporated good practices for PCB management and the PCB stocks were already eliminated prior to the start of the project, thus explaining the minimum interest of this sector to participate in the project activities related with PCB management plans.

201. At the time of this evaluation, there is no information about the situation of the management practices of the two participant companies from Chile. Minera El Toqui is in bankruptcy and stopped operations³⁰ and therefore, it would be reasonable to state that the project did not have significant effects on its operation. Regarding SQM and EFE, the government approved a project for elimination of PCB in SQM's María Elena facility and in EFE's sub-station facility in Santiago³¹, thus it seems reasonable to state that these companies are applying PCB sound management practices and are in the process of eliminating their PCB stocks, as most of Chile's large mining companies.

202. As a conclusion, it can be said that the procedures regarding PCB management were upgraded by the project, but the application of the guidelines and procedures by the mining sector has been limited in both countries. The information collected during the evaluation indicated that there is certainty of only 2 out of 7 companies trained by the project still applying the procedures.

203. It is expected that once the specific regulation for PCB management in Peru enters into force, this situation will change, since up to date, mining companies do not have the obligation to report on their operations in Peru.

D.2.2. "3. Countries have capacity for proper PCB sampling and analysis of PCBs"

204. The project transferred technology, procedures and know-how to technical staff from the most relevant analytical laboratories in Argentina (INTI), Chile (CENMA, HIDRONOR and EULA) and Peru (DIGESA). Experts from Spain, Sweden and UN Environment Economy Division provided training at INTI's analytical laboratories in Argentina and presented relevant technics to make analytical determination of PCB in transformer oils, soils, air and water. This effort was complemented with a specific training for Chilean laboratories carried-out by EULA in Concepción.

205. The project also provided analytical kits for PCB sampling and analysis in the field, which were used by trained technical personnel from several mines in Chile and Peru.

206. Interviews revealed that all laboratories that participated in the trainings had capacity for determining PCB contents in different matrices. This is proved by the high number of

³⁰ <https://www.latercera.com/la-tercera-pm/noticia/minera-australiana-pide-la-queiebra-filial-chile-toqui-suma-deudas-39-000-millones/499255/>

³¹ See Environmental Assessment Service (SEA): "Actividad de Recuperación de Aceite Dieléctrico en Transformadores", Resolución Exenta N° 0795/2013 Santiago, 2 de Septiembre de 2013

samples analysed in both countries. DIGESA in Peru, and CENMA and EULA are examples of this improved analytical capacity.

207. However, the interlaboratory exercise showed that determination of PCB from standard solution samples were adequate but results for PCB analysis from the transformer oil sample were not satisfactory, thus further training is needed in order to reach high quality for this type of analysis.

208. Therefore, it can be concluded that analytical capacities were improved in both countries. Analysis of PCBs can be made for transformer oils, soils, air and water with acceptable results, but more actions are needed to comply with high analytical standards, especially in the analysis of transformer oils. It is worth noting that this effect was more intense in Chile than in Peru, since the number of participant laboratories and trainees were higher in Chile and considering that EULA performed an additional training workshop specific for Chilean laboratories.

D.2.3. “4. Mining companies adopting good practices identified in the project”

209. This result was partially achieved, since interviews revealed that just two companies in Peru continued with the implementation of PCB management plans developed by the project. On the other hand, Minera El Toqui in Chile stopped its operations and SQM continues applying its general environmental management system for PCB. No information about the situation of EFE is available.

210. The interviews with some mining companies in Peru also showed that these companies considered that the problem of PCB was over with the de-chlorination activity. Cross-contamination from external servicing companies is still an unexplored issue for these companies and apparently no actions or procedures have been adopted to minimize this risk.

D.2.4. “2. PCB disposed-off and maintained following ESM criteria”

211. The project included development of two management plans including elimination of PCB. No target in the amount of PCB eliminated or disposed is included in the project document.

212. The project was very successful implementing de-chlorination treatment in 13 contaminated transformers oils from three mines in Peru. 50 tons of oils were treated according accepted technology and procedures for sampling, storage and transport of these oils.

213. In the case of Chile, no information on either de-chlorination or exports of contaminated equipment identified in Minera El Toqui is available. As mentioned earlier in this report, the environmental authority approved a project for elimination of PCB in SQM and EFE in 2013. According to SQM's financial statements for 2015, expenditures for elimination of PCB were made in 2014³², thus it can be reasonably concluded that this company eliminated its PCB stocks. Regarding elimination of PCB in EFE, the PCB inventory updated in 2017 reported that the railroad sector accounts for 55% of PCB oils³³. EFE opened a bidding process in 2018 for replacing electric transformers in the Lo Espejo's sub-station, where there are indications that PCB contaminated transformers still exist in EFE³⁴, so it is possible that this company did not eliminate its PCB stocks.

³² http://s1.q4cdn.com/793210788/files/doc_financials/2015/ar/Memoria-Anual-2015_Final_esp.pdf: Sociedad Química y Minera de Chile S.A., Memoria Anual 2015, page 289.

³³ See: Inventario Nacional de Bifenilos Policlorados (PCBs), Proyecto GEF/UNEP, July 2017

³⁴ See 2da ronda de respuestas a “CONSULTAS Y RESPUESTAS LICITACIÓN PÚBLICA “REEMPLAZO DE TRANSFORMADORES DE 110/66 KV EN SUBESTACIÓN ELÉCTRICA LO ESPEJO”;

214. As a conclusion, it can be affirmed that the project achieved this outcome in Peru, and partially in Chile.

D.2.5. “1.2 A legal framework for PCB management within the mining sector (created or updated)”

215. This outcome was achieved in Peru, where the regulatory proposal for management is under discussion since July 2018 and its approval is expected to occur in 2019.

216. Chile already had some regulations for hazardous wastes that apply to PCB, so no new regulatory proposal was developed.

217. Therefore, this outcome was achieved, since Peru did not have any specific regulation for PCB before the project started.

D.2.6. “1: Regional coordination in the mining sector strengthened”

218. As discussed in Section III, this concept is not clearly defined in the project document. However, this outcome can be assessed from three aspects: i) coordination between each national government with its respective mining sector; ii) coordination between participant government institutions to achieve project results and; iii) coordination between the mining sectors from Chile and Peru.

219. The first key issue to consider here is that the project was executed as two independent ‘sub-projects’ in both participant countries. This was the result of the different status of regulations regarding PCB in Chile and Peru.

220. Chile had already regulated PCB through hazardous waste decree and the mining sector had eliminated several tons of contaminated transformers by exporting these wastes for treatment and sound disposal at specialty plants in Europe, prior the project started. Thus, the main interest of the country was to strengthen its analytical capacity for PCB determination in transformer oils, soils, air and water. Therefore, main project partners in this case were a university and some private sector laboratories.

221. Peru did not have any regulation on PCB, thus its interest was focused on developing these regulations, implementing management plans and decontamination of PCB equipment. This resulted in main partners in Peru being the mining sector companies and ministries involved in the elaboration of regulations concerning PCB. Regarding laboratories as partners, DIGESA (state), CORLAB, SGS and Envirolab (private sector) participated in the training sessions.

222. The project steering committee met only three times between 2010-2015 and these were the only chances to the national coordinators to discuss the regional issues concerning the mining sector. However, PSC meeting discussions were focused on implementation issues affecting individual countries. E-mail communication was the most frequent channel for coordination³⁵. Interviews carried out during this evaluation confirmed that coordination between both countries at the level of national executing agencies was very limited, and exchange of experiences did not take place.

223. Therefore, it can be concluded that “regional coordination” understood as “coordination between both government agencies” was limited.

224. Regarding coordination between government and the mining sector at national level, the project was very successful in Peru, where 12 mining companies participated in the project activities (inventories, training, elaboration of management plans and de-chlorination

<http://www.efe.cl/licitaciones/licitacion-publica-reemplazo-de-transformadores-de-11066-kv-en-subestacion-electrica-lo-espejo/detalle>

³⁵ “Reporte Lecciones Aprendidas y Buenas Prácticas de gestión de PCB en la industria minera de Chile y Perú”, June 2014, page 30.

activities). Success in Chile was less impressive and only two out of ten mining companies contacted, and the state railroad company participated in the project. Most of the mining sector companies in Chile showed no interest in the project. However, the project was very successful in engaging laboratories from universities (CENMA, EULA) and private sector (HIDRONOR, Als Patagonia) and the state's Institute for Public Health (ISP).

225. Interviews also confirmed this situation and the evaluation can conclude that coordination between government and mining sector in Peru was very successful in, but of limited scope in Chile, due to the feeling that project activities were already addressed in the past. Overall, it can be concluded that the project partially achieved this type of coordination.

226. Regarding "coordination between mining sector from both countries", interviews revealed that cooperation and exchange of experiences did not happen during the project implementation. In addition, a Latin-American mining association was invited to participate but no response was obtained.

227. Therefore, it can be concluded that regional coordination was not achieved during the execution of project activities. As the overall assessment for the outcome "regional coordination" has three dimensions, this outcome partially achieved, with stronger results in Peru regarding cooperation between government and the mining sector, but marginal/limited effect for the other two dimensions (government-government, mining sector-mining sector).

Rating for Achievement of direct outcomes: Moderately Satisfactory (MS)

D.3. Likelihood of impact

D.3.1. IS 1: "mining companies share good practices identified in the project with their peers in the LAC Region"

228. This intermediate state depends on the implementation of outcomes 1,2,3 and 4. Main assumptions affecting these outcomes are the willingness of mining sector companies from both countries to disclose their PCB stocks and management practices in order to assess their current situation and then implement their inventories and management plans.

229. These assumptions held in Peru since companies perceived benefits from the project in the sense of organizing their PCB management and elimination of stock, thus 12 companies permitted access to their facilities and collaborated in the identification of equipment with PCB and elaboration of the inventories, but just two companies implemented management plans elaborated by the project.

230. The willingness of mining companies in Chile to disclose their management practices and PCB equipment was marginal, since only two out of 14 companies contacted agreed to participate in the project.

231. Regarding the driver "mining companies participating in the project willing to share good practices identified with their peers in the LAC ", the revision of documents and interviews revealed that each company implemented their activities independently and no coordination or exchange between them occurred. Therefore, this assumption did not hold in any of the participant countries.

232. It is worth noting that during the project implementation, no cooperation, sharing of experiences or coordination among Chilean and Peruvian companies occurred at any stage of the project implementation, and there are no visible actions taken to remediate this situation.

233. As conclusion, the overall assessment is that attainment of IS-1 was marginal.

D.3.2. “IS-2: development of partnerships between mining companies, governments and mining equipment suppliers in LAC countries”

234. This intermediate state depends on outputs 2.1,1.1, 3, and 2.5, which are related with training and development of PCB management plans and strengthening of analytical capacity in both countries.

235. Main assumptions here are the willingness of companies to disclose their situation about PCB management and stocks and reach agreements with the elaboration of technical standards and regulations.

236. Other important assumption is that involved government institutions agree to collaborate in the elaboration of new regulations affecting PCB.

237. Finally, the main driver to attain this IS-2 is the willingness of participant mining companies to share their experience with other peers in the LAC countries.

238. Again, main assumptions held in Peru, where a significant portion of the mining companies cooperated with the project. Some interviews indicated that this sector in Peru agrees to regulate PCB issues. Situation in Chile was the contrary, since the issue of PCB was seen by this sector as already solved, thus minimum participation of companies was noted in Chile.

239. Thus, the attainment of IS-2 was partially achieved, and partnerships created were significant in Peru, and marginal in Chile due to the existence of regulations and technical management of PCB applied in this country.

240. However, the main driver for development of partnerships in the LAC countries was the ability/willingness of the participating companies to share their experience with peers from LAC region. As noted earlier, this willingness for sharing did not occur, not even among the companies participating in the project.

241. Therefore, this intermediate was marginally attained at South American level, with assumption holding in Peru but main drivers not being in place. No actions to remediate this situation was noted during this evaluation.

D.3.3. IS-3: “Standardized methods for determining PCB are shared among mining companies and laboratories in LAC countries”

242. The project implemented several training workshops for technical and professional staff from mining companies and analytical laboratories. University, private sector and government laboratories from Argentina, Chile and Peru participated in these activities, where they had the opportunity to discuss and to share their experiences in this field.

243. The main assumption here is that partners are willing to participate in the adoption of new analytical procedures to have reliable results in the determination of PCB contents in different matrices.

244. However, the exchange was limited to the participant countries plus Argentina, and no further sharing with other LA countries was carried-out, thus it can be stated that this intermediate state was partially achieved at regional level.

D.3.4. IS-4: “Countries coordinate collaboration between governments, the mining sector and affected populations to implement sound management systems for PCB”

245. Assumptions like the willingness of mining sector companies and relevant government institutions to establish technical standards and new regulations to control PCB equipment held. This is true for Peru where project elaborated a proposal in which main stakeholders participated in its discussion.

246. There was some exchange of experience among project participant countries and experts from Uruguay, the BCRC-CAM in El Salvador, and cooperation between the Ministry of Environment and Development from Colombia and BCRC to disseminate policies and the implementation of the PCB decision management tool. In the beginning of the project, BCRC organized a workshop in Panama (February 2011) where eleven LAC countries discussed the regional and national challenges imposed by PCB management and elimination, and the approaches needed to address this issue.

247. However, in Chile and Peru, NGOs or citizen organizations did not have proper space for participation in the activities developed by the project. The NGO TERRAM attended the Chile's national steering committee with limited influence and the NGO "Asociación Civil Labor" from Peru did not have any activity in this project.

248. Therefore, it can be concluded that this intermediate state was partially achieved in Chile or Peru, since collaboration with community organizations or NGO was missing during the implementation of this project, and collaboration with mining companies was of limited scope in Chile and more intense in Peru.

D.3.5. IS-5: governments of LAC countries implement coordination and participation mechanisms with the mining sector and communities to accord PCB sound management practices and regulations in the mining sector based on project's experience

249. The main driver is that government officials participating in the project will continue to support development of sound management practices after the project ends.

250. This was attained in Peru, where main mining and government sector coordinated to elaborate technical standards and a draft regulation. However, communities and other citizen organizations had marginal participation in the activities developed by the project. Therefore, the overall assessment for this is partially achieved with main assumptions holding and drivers in place.

251. However, none of these countries established a functional mechanism for participation of community organizations, and there was no participation of these in the discussion of national regulations that would affect them.

252. Activity with other LAC countries was noted during the implementation of this project. Exchanges were through regional workshops (Panama), exchange with experts from Uruguay, Colombia and BCRC-CAM, thus it can be reasonably stated that the project made an effort in promoting collaboration with other LAC countries.

253. As a conclusion, this intermediate state was partially achieved at LAC level.

Sub-section Rating for Likelihood of impact: Moderately Likely (ML)

D.3.6. Project contribution to global goals

254. Regarding to protect the human health, the project has strengthened the capacity of Chile and Peru to identify PCB existent in equipment, environment matrices and humans, and provided both countries with tools and procedures to address this issue in a wide range of fields. The project elaborated a series of technical guidelines to implement sound PCB management practices, including storage and disposal in order to avoid harmful effects on health to technical personnel handling this type of contaminated equipment and wastes. The project also eliminated 50 tons of PCB, so it made its contribution to the local and global environment by ensuring safe elimination of PCB from existing equipment.

255. Other contribution was the elaboration of new specific regulations and technical standards for PCB, including management of contaminated sites. These will prevent improper handling of this pollutant and it will avoid its spilling directly to soil and water's

courses. Therefore, pollution of water, soils and air will be further decreased, and risks of contamination of food, humans and animals will also be minimized and controlled when these new practices and regulations are fully operational in Chile and Peru.

Overall Rating for Effectiveness: Moderately Satisfactory (MS)

E. Financial Management

E.1. Completeness of financial information, including the actual project costs (total and per activity)

256. The analysis of the financial information was a difficult issue in this evaluation. Since UN Environment report templates do not track expenses by project components and sub-components as described in the GEF's project document, but it uses general budget lines like "consultants", "personnel", "training", etc., it became difficult to assess where resources are spent. For example, Section 7 of the project document shows the project budget by component and activity, but it does not mention planned expenses by year.

257. The quarterly reports submitted to UN Environment also show the expenses by budget lines and there is no way to track these by project component neither. These reports were issued in a timely basis and made available to the consultant.

258. Co-financing reports are also presented in terms of UN Environment budget lines that do not have relation with GEF projects tables which are elaborated with project components. Discrepancy between both formats is a barrier that make difficult to track expenditures and co-financing by project components, as it is usually done in most GEF financed projects.

259. The project document establishes that an independent audit should be performed once project activities have ended. PIR 2014-2015 reported that BCRC contracted an auditor, but the audit report was not available during the Terminal Evaluation, thus no conclusions about financial management practices can be drawn.

Sub-section Rating: Moderately Unsatisfactory (MS)

E.2. Communication Between Finance and Project Management Staff

260. Regarding the communication between UN Environment financial staff and the project, it can be concluded it was smooth, but again, there are issues that should be addressed to conciliate GEF and UN Environment report formats.

261. Table 9 shows the different financial management components that were rated according UN Environment evaluation criteria.

Table 9: Financial Management Table

| Financial management components: | | Rating | Evidence/ Comments |
|---|--|--------|---|
| 1. Completeness of project financial information³⁶: | | | |
| Provision of key documents to the evaluator (based on the responses to A-G below) | | MU | Information provided was incomplete and difficult for analysis of project financing status by year, outcome, activity |
| A. | Co-financing and Project Cost's tables at design (by budget lines) | S | Co-financing tables from all project partners (Government, Mining companies, BCS, UN |

³⁶ See also document "Criterion Rating Description", Update 04.04.2018 for reference

| Financial management components: | | Rating | Evidence/ Comments |
|--|---|--------|--|
| | | | Environment) with UN Environment format received. Project cost tables were also made available to the evaluator. |
| B. | Revisions to the budget | MS | Two revisions available |
| C. | All relevant project legal agreements (e.g. SSFA, PCA, ICA) | S | MOUs, PCAs, DTIE agreement available. |
| D. | Proof of fund transfers | S | Available 3 cash advances |
| E. | Proof of co-financing (cash and in-kind) | MS | Co-financing reports from partners. |
| F. | A summary report on the project's expenditures during the life of the project (by budget lines, project components and/or annual level) | U | No summary provided by component, activity and year |
| G. | Copies of any completed audits and management responses (<i>where applicable</i>) | U | No final audit report available |
| H. | Any other financial information that was required for this project (list): Annual Expenses by outcome | U | Annual expenses were provided by budget lines, not by outcomes. |
| Any gaps in terms of financial information that could be indicative of shortcomings in the project's compliance ³⁷ with the UN Environment or donor rules | | No | None |
| Project Manager, Task Manager and Fund Management Officer responsiveness to financial requests during the evaluation process | | MS | Information required was partially provided. |
| 2. Communication between finance and project management staff | | | |
| Project Manager and/or Task Manager's level of awareness of the project's financial status. | | S | All involved knew about project financing situation. |
| Fund Management Officer's knowledge of project progress/status when disbursements are done. | | S | According to the documentation reviewed and interviews with BCRC, project status was well known by the FMO. |

³⁷ Compliance with financial systems is not assessed specifically in the evaluation. Nevertheless, if the evaluation identifies gaps in the financial data, or raises other concerns of a compliance nature, a recommendation should be given to cover the topic in an upcoming audit, or similar financial oversight exercise

| Financial management components: | Rating | Evidence/ Comments |
|--|-----------|---|
| Level of addressing and resolving financial management issues among Fund Management Officer and Project Manager/Task Manager. | S | A solution was found for disbursements in Chile and Peru. |
| Contact/communication between by Fund Management Officer, Project Manager/Task Manager during the preparation of financial and progress reports. | S | According interviews and documentation review, communication between BCRC and UN Environment officials was good and there was exchange during elaboration of PIRs and progress reports. |
| Overall rating | MS | <i>Information provided was incomplete, but communication between UN Environment financial staff, task manager and BCRC staff was good.</i> |

Overall Rating for Financial Management: Moderately Satisfactory (MS)

F. Efficiency

F.1. Implications of delays and no cost extensions

262. As explained earlier, the project was designed to last 18 months (August 2010- February 2012), but several delays resulted in activities being finalized in July 2015. However, as there still was an ongoing study on economic impacts of PCB treatment, the project was extended again to finish in September 2018. The above means that most project activities took approximately 59 months (almost 5 years), and the remaining ones took approximately 100 months (approx. 8.5 years).

263. The project had four extensions, most of them are changes in project schedule and inclusion of the pilot de-chlorination of PCB equipment carried out in Peru. These extensions can be summarized as follows:

- 1) In June 2012, project was extended until August 2013;
- 2) In February 2012 project was extended until August 2014;
- 3) In December 2017 project was extended until March 2018;
- 4) In early 2018, UN Environment and BCRC agreed an extension until September 2018.

264. Main reasons for these extensions were: i) the impossibility of national governments to appoint financial intermediates to receive and disburse their project funds. As financial aspects were not analysed during the elaboration of the project, BCRC and national coordinators had to identify proper financial intermediates and this consumed long time and resulted in significant delays in the implementation of the activities ii) changes in government in Chile (2010) and presidential elections in Peru (2011); iii) transition from CONAMA(Chile) and CONAM (Peru) to ministries of environment between 2008-2012; iv) changes of personnel responsible for environment management in participating mining companies in Peru; v) very slow response from UN Environment Economy Division and the MTM

Research Centre School of Science and Technology, Örebro University (Sweden) in the implementation and reporting of activities of component 3 (analytical component).

265. As explained before, the format used to report project expenses by UN Environment budget lines made it difficult to assess the impact of these project extensions on the overall project budget. Reallocations between project components cannot be clearly determined and thus, just a common-sense judgement would state that there should be an impact due to more expenses on project personnel. For the same reasons, project cost-effectiveness could not be assessed.

266. However, there was a clear impact on the project budget that resulted from rate exchanges from US dollars and Argentinian pesos, since local regulations forced to BCRC to change all cash advances into pesos at the right moment when the transaction was made. As there were two cash advances between 2010 and 2015, BCRC estimated a lost in transferred funds of approximately 8% -10%³⁸. Considering that the average annual inflation rate in Argentina for the period 2010-2015 was approximately 28%³⁹, delays in project activities should have resulted in significant loses of project resources.

267. Regarding the consequences on outputs quality or results, these delays did not affected the relevance or quality of the products developed, but it had an important impact on stakeholders' expectations on the project, and the slow pace of implementation needed more efforts from the national coordinators and BCRC to resume the planned activities and involvement of stakeholders .

F.2. Cost and time-saving measures put in place to maximize results

268. The project tried to minimize the impacts from devaluation of project resources by increasing co-financing from some mining companies in Peru and there were also some savings by hiring consultants from the region.

269. In addition, as mining sector in Chile had their own PCB management Plans, this activity was not implemented in Chile. As a result, from the US\$ 182,000 allocated to Chile, only approximately US\$ 66,000 were spent.

270. As Chile's funds were not completely used, BCRC used these funds to implement de-chlorination activity in Peru, and companies like Kioshi provided additional funds for this activity, thus there was no impacts from this activity in Peru, since PCB management plans were not implemented in Chile.

F.3. Use of/building on pre-existing institutions and complementarities

271. The organization of the project took the advantage of appointing known institutions with long expertise in chemical issues. The executing agency was BCRC which is a coordinating centre for the Basel convention in the South America region. The national executing agency in Chile and Peru were the Ministries of Environment, which are the focal points of several multilateral agreements and responsible for the implementation of national environmental systems in the concerned countries. The experience of all these institutions would have been enough for smooth project implementation at national level. However, these institutions are usually affected by government changes that prevent decision taking processes during the transition to a new government or environmental authority.

³⁸ See project final report, page 26.

³⁹ Adapted from: INFLACIÓN EN ARGENTINA: PERIODO 2007-2017; Bolsa de Comercio de Santa Fe, Marzo de 2018, page 3.

272. Finally, the project was complementary and provided inputs to the GEF/UNIDO project “Environmentally Sound Management and Disposal of PCBs” implemented in Peru.

F.4. The extent to which the management of the project minimized potential negative effects

273. Activities that could have some potential negative environmental effects are the development of the PCB inventories, especially for personnel in close contact with contaminated equipment. Other potential impacts would result from the training of the use of PCB analysers and sampling at field level, and de-chlorination of PCB equipment performed by KIOSHI’s local office in Peru.

274. These risks were minimized by the training provided by the project on the use of field sampling techniques at field level, the application of management plans in the mines that participated in the project, as well as KIOSHI has defined and applied stringent safety standard practices for decontamination activities at site level.

275. Training in analytical technics made in Argentina and Chile would also have some risks from exposure to chemicals during hands-on activities.

276. However, these risks were minimized by adopting safety procedures for sampling manipulation and storage. INTI, EULA, CSCI, IDAEA and the Örebro University have all high safety and environmental standards for their operations. On the other hand, the participant laboratories were of high level and some of them had international certifications.

Rating for Efficiency: Unsatisfactory (U)

G. Monitoring and Reporting

G.1. Monitoring design and budgeting

277. The project document included a M&E plan with a corresponding budget. Reporting requirements and templates were also provided in a project document Appendix 15, but this was not available for the evaluation and thus it was not possible to assess reporting requirement.

278. The plan presented the log-frame with its indicators (Appendix 4) and key deliverables and benchmarks (Appendix 6) as main tools for assessing project progress towards achieving its results. The M&E plan does not include disaggregated indicators by gender or marginalized groups, and the project did not address of these issues. The monitoring plan was to be reviewed during the project inception workshop to ensure that all stakeholders understand their roles and responsibilities. Some indicators were not “smart” (see section IV B)

279. The plan emphasized the importance of collecting baseline information during the first year of project implementation to address the gaps identified during the preparation stage, since only 10% of this information was available at that time.

280. M&E milestones, such as regular meetings of the PSC, execution of mid-term and final evaluations, use of the GEF Tracking Tools and a financial audit were also included.

281. The M&E had a budget of US\$ 106,000 from which US\$ 47,000 are GEF resources and the remaining US\$ 59,000 are from co-financing, which seems to be adequate considering the size of this project.

282. The general assessment for this M&E plan at design is that it complies with the minimum requirements in terms of content, schedule for key deliverables, reporting requirements, use of M&E tools and responsibility of actors in this process. However, no gender indicators for participation of civil organizations, women and other marginalized groups are present in the M&E plan.

283. Completeness and update for this plan was needed during project implementation.

Sub-section Rating: Moderately Satisfactory (MS)

G.2. Monitoring implementation and reporting

284. The implementation of the M&E system was based on the progress of activities and collection of the studies, consultancy reports, workshops and provision of expertise from international experts to track inventory data and their consistency. All technical reports generated by the project have been reviewed by UN Environment staff (technical guidelines and analytical procedures).

285. The monitoring and evaluation plan stated in the project document was followed by BCRC. However, it was noted that the PSC was composed by the same national coordinators that were implementing the project at local level (PSCs are usually composed by authorities of higher level than implementers). This PSC was conceived by the project management as a coordinating group, thus there was not a real PSC for this project.

286. According to the documentation reviewed supported by interviews, there was no Mid-Term Evaluation or Review as consigned in the project document. However, MTRs are not mandatory for GEF projects of this size. During the second PSC, BRC, national coordinators and UN Environment staff discussed the project progress and made changes in the workplan and budget, mainly to accommodate the pilot de-chlorination project in Peru. However, the M&E plan required that the PSC elaborated a management response after round of consultations with main project stakeholders were made, but this document was not developed during the project execution.

287. The M&E system implemented by BCRC relied on by-annual activity reports submitted by each national project partner (MINAM in Peru and Ministry of Environment in Chile). These reports did not use a standard template, thus information contents varied from report to report.

288. On the other hand, these national reports do not identify critical activities and thus, all seem to have the same importance for obtained the desired project objectives and outcomes. No risk analysis is provided in these national reports.

Project Implementation Reviews

289. Based on the information received, BCRC compiled the relevant information and submitted its bi-annual progress reports, along the annual PIRs. These reports use a table format describing the products and activities, along the planned deadlines for their completion. The progress for these is indicated by a percentage whose base for determination is not explained and the relative importance of these products and activities in the desired results are not stipulated, thus in theory all products/activities have the same weight for obtaining the desired project objectives. These progress reports also included a section for identification of risks and their management.

290. Perhaps, the most detailed reports were the annual PIRs that identified delays and their reasons. PIRs reported activities organized by project component, and then by individual project outputs.

291. The PIR made available to the evaluation (2011-2012, 2012-2013 2013-2014, 2014-2015) included a narrative on annual accumulative progresses and explained the situation of every outcome and output.

292. Despite of the significant delays, ratings for project performance (outcomes and outputs) in all PIRs revised are “S” or “HS”, and risks are mostly rated as “Low” or “Medium”, thus no remediation measures to minimize these risks are provided in these reports.

293. It seems that PIR format does not provide room for reporting major administrative shortcomings like the absence of financial intermediates to transfer project resources, despite that this was one of most significant factors for project delays. Another issues such as delays in the submission of the interlaboratory exercise report from one university, and revision by UN Environment Economy Division of some important reports for the analytical component are all reported but they are not considered for performance and risk ratings, thus project implementation seems good in the PIRs despite of the poor project performance in terms of timeliness presented during the whole period of implementation.

294. Although BCRC applied adaptive management in several situations, this feature cannot be properly detected from PIRs, since they do not present mitigation measures to tackle risks, poor performance or financial issues.

295. A reasonable explanation for the high PIRs' ratings would be that performance is always compared against revisions made -in this case three- for activities and budgets and thus, no comparison is made against what was defined in the original project document and/or the first workplan elaborated after the inception workshop. Another factor is related with the properness of the indicators used for monitoring project progress. As these are mainly based on activities or outputs (e.g. number of laboratories participating, number of management plans/inventories, delivery of reports, etc.), they are always attained, even in timeframes well beyond from which they were expected to occur.

296. Thus, high PIR's ratings are the result of combining tracking against continuous project revisions and the lack of proper indicators for outcomes.

297. Regarding the use of GEF tracking tools, no information was provided for the initial, mid-term and end-of-project situation, and there is no mention about the elaboration in any of the progress reports and PIRs, thus it is reasonably to conclude that the GEF TT were not completed.

298. Therefore, as an overall assessment for this section, it can be concluded that important M&E tools were not used, and the reporting system was mostly based on progress of activities and relevant issues were not properly addressed and rated in the PIRs, thus the project M&E system applied was modest at least.

Sub-section Rating: Moderately Unsatisfactory (MU)

Overall Rating for Monitoring and Reporting: Moderately Unsatisfactory (MU)

H. Sustainability

H.1. Socio-political Sustainability

299. Chile and Peru have stable political systems and social unrest is uncommon, thus there is no sign of political upheaval in any of these countries.

300. Project ownership was evident in Peru, where additional activities were jointly performed by the Ministry of Environment and mining companies. Ownership in Chile was also noted amongst actors from the chemical analytic sector represented by University institutions (EULA) and private laboratories from companies providing disposal of hazardous wastes.

301. Peru elaborated a regulatory proposal for PCB management at national level, and Chile had already regulations before the project start. The discussion of this proposal had surpassed 2-3 governments in Peru, and it is possible that the new regulations will take place in the short term.

302. Finally, exchange and dissemination with other LAC countries did not occur and no actions have been taken either. Therefore, appropriation of project results to promote good practices in LAC region is very limited and there are no signs that would change this situation.

303. As a conclusion, it can be stated that it is likely that most of project outcomes would be maintained at both countries, and a mechanism is in place to adapt to political and social changes in both countries, since PCB sources and regulatory measures has been identified and elaborated. However, sharing of this experience with other LAC countries is unlikely, since funding and coordination mechanisms to disseminate the results from the project are missing.

Sub-section Rating: Moderately Likely (ML)

H.2 Financial Sustainability

304. Once the new regulation takes place in Peru, financial resources will be secured since mining companies will have to report their PCB inventories and management system. In Chile there were already regulations for controlling PCB in all sectors. This will support all outcomes achieved by the project (inventories, improvement in technical capacity and disposal).

305. However, analytical activities do not actually have financial sustainability secured, since none of these countries account with regulations for management of contaminated sites which require considerable studies and resources to determine PCB contents in water, soil, air and living organisms. None of these countries have adopted official procedures for chemical analysis for these matrices and no actions have been taken to change this situation.

306. Regarding exchange of experience at LAC level, this will continue to depend on international financing, since this outcome does not imply any commitment from Chile and Peru.

Sub-section Rating: Moderately Likely (ML)

H.3. Institutional Sustainability

307. Chile and Peru have stable institutions and no considerable changes are expected. However, as high-level authorities from these institutions are very dependent on government decisions, presidential elections would slow-down the momentum gained during project execution but not long-term impacts from the project.

308. Project direct outcomes are mostly secured in both countries. Procedures and schedule for consultation process for elaboration of regulations are well defined in Chile and Peru. On the other hand, both countries have national environmental management systems that include inspection and rules for companies and investment projects from the mining, energy, transport and other activities that have high environmental impacts.

309. Both countries are now able to elaborate and implement PCB management plans and identify PCB in different matrices in order to develop new regulations and technical standards to control this pollutant, thus the project contributed to institutional sustainability through the activities mentioned above.

310. As an example, the elaboration of the new PCB regulation in Peru is most sensitive to political and institutional turbulence. This process has been slow but continuous up to the point that the draft was already published for general discussion in July 2018, but a new regulation was approved in July 2019 that makes obligatory the elaboration of PCB management plans for the electricity sector.

311. Therefore, it can be concluded that most direct project outcomes have moderate to high dependency/sensitivity to institutional support and there are reasonable mechanisms and capacities from national coordinators to sustain further developments of regulatory instruments.

Sub-section Rating: Likely (L)

Overall Rating for Sustainability: Moderately Likely (ML)

I. Factors Affecting Performance

Most factors affecting performance (preparation and readiness; quality of project management and supervision;) have been discussed under the main evaluation criteria. This section includes an assessment of the remaining factors which have not yet been addressed.

I.1 Quality of Project Management and Supervision

312. Chile and Peru settled national steering or coordination committees, but their attributions seem to have been limited regarding the decision-making process. These committees followed-up the project activities, but they did not have the capacity to make decisions or approvals for re-allocation of funds, new activities or technical reports.

Sub-section Rating: Moderately Satisfactory (MS)

I.2 Stakeholders Participation and Cooperation

313. Cooperation of mining companies was strong in Peru and weaker in Chile. On the other hand, commitment from partners like the University of Chile and the University of Concepción and private sector laboratories was strong in Chile.

However, inclusion of groups beyond technical staff from mines and laboratories was not achieved. Participation of NGOs was marginal in Peru and very limited in Chile and no gender issues were considered during the implementation of the project. The NGOs TERRAM and Labor Civil Association from Chile and Peru respectively participated in the inception workshop and presented a proposal to develop awareness activities in communities, state and private sectors but no response from national coordinators was noted. TERRAM participated in the Chile's national steering committee, but there are no details on how it participated in the decision-making processes.

314. National coordinating groups had also limited authority and they were more consultation and discussion groups with no direction capacity.

Sub-section Rating: Moderately Unsatisfactory (MU)

I.3 Responsiveness to Human Rights and Gender Equity

315. The project was gender and human rights blinded, no issues regarding these aspects were considered during implementation of activities, although many of them would benefit communities and other marginalized groups, mainly in the case of Peru.

Sub-section Rating: Unsatisfactory (U)

I.4. Country Ownership and Driven-ness

316. The project achieved high ownership and commitment from the Ministries of Environment and Health in Peru. The continuity of the national coordinator in this country maintained the interest of these key stakeholders in the promotion and discussion of new

regulations for PCB management in all sectors and it has been under public discussion since July 2018. As the mining sector is also interested in regulating PCB, probability of having a regulatory network in the short term in Peru is high.

317. In the case of Chile, as regulations for PCB already existed and a significant amount of PCB was exported before the project started, no new developments were detected. On the other hand, several coordinators have managed this project since 2014 had resulted in minor changes in PCB issues.

Sub-section Rating: Satisfactory (S)

1.5. Communication and Public Awareness

318. This aspect was partially developed during the implementation of the project, since participation of wider groups was not a priority in the participant countries, but some awareness activities were performed with other LAC government officials and BCRC-CAM.

Sub-section Rating: Moderately Satisfactory (MS)

Overall Rating for Factors Affecting Performance: Moderately Satisfactory (MS)

VI. Conclusions and Recommendations

A. Conclusions

Design

319. The project was innovative in the sense that addressing PCB issues in the mining sector is not common. The assessment made on this sector in Chile and Peru revealed that actions need to be taken in order to implement sound PCB management systems in both countries.

320. There were some activities that were very ambitious, such as the implementation of inventories at mining sites and elaboration and implementation of PCB management plans. The implementation schedule for the project was unrealistic considering the number of mining companies existent in both countries and the time needed to install the project in the different institutions involved, the establishment of partnerships with mining sector companies, and the required training, sampling and analysis required to elaborate the inventories.

321. During the design stage, efforts were made to identify partners amongst mining companies and government institutions in order to settle a governance structure for the project, but financial aspects were not considered, and this had a significant impact on project performance.

Management, reporting and M&E

322. The project experienced significant shortcomings during its implementation. The most important ones were the transfer of funds to participant countries, changes in government and environmental authorities, and in the implementation and reporting of the project' analytical component by UN Environment Economy Division and the MTM Research Center School of Science and Technology, Örebro University, and in the revision of technical documents generated by the project. These issues resulted in the project finishing most of its activities in 2015, after 48 months of execution. The project was extended until September 2018 to allow completion of the "Socio-economic and environmental assessment of the replacement of existing transformers containing PCB oils by more energy-efficient and PCB-

free transformers” and the final project financial audit, totaling 97 months of execution. The assessment report was finalized in April 2019.

323. BCRC and UN Environment showed good adaptive management capacity. In addition, changes in countries’ government authorities and priorities were well managed by adjusting the activities according to the requirements from national coordinators, thus updating and maintaining in this way, the relevance of this project in the participant countries. As a result of this good adaptive management, additional analytical procedures were elaborated, and decontamination of PCB equipment was performed.

324. M&E activities were implemented based on the project document’s tentative plan. However, although delays from financial issues were reported by BCRC, they were not seen as risks in the PIRs, so no remediation measures were present in these reports, although BCRC took several steps to solve this problem.

Financial management

325. BCRC submitted quarterly and annual reports to UN Environment. As financial report formats are designed in UN Environment budget lines and not in terms of project components, it was not possible to assess how the delays impacted project resources.

326. Project resources experienced loses of 8%-10% due to the obligation of BCRC to change all cash advances to Argentinian pesos and an average inflation of 28% during 2010-2015. Co-financing commitments were surpassed by 36%, reaching US\$ 2.134 compared with the initial level of US\$ 1.574.

327. Spent GEF resources attained 95% by May 2019 and there is approximately US\$ 38,100 remaining.

Achievements

328. The project contributed to a better understanding of the PCB situation in the mining sector of Chile and Peru. Elaboration of Inventories, introduction of best practices for PCB management, as well as improvements in field-taking sampling, and analytical techniques for PCB in soil, oils, water and air were also introduced and performed.

329. A total of 50 tons of PCB oils were eliminated in Peru using de-chlorination technology developed by a Latin-American company. A draft regulation for PCB management was elaborated in Peru, and as the coordinator continued promoting the control of PCB, the Ministry of Health published the draft for official discussion in July 2018.

330. However, coordination amongst mining companies from Chile and Peru could not be achieved due to the differences in companies’ practices found in both countries. In the same way, the project was independently implemented in each country, thus coordination between governments was also limited.

331. Awareness and dissemination activities were of marginal importance in this project, since the emphasis was put in the solution of technical issues and work with skilled personnel from mines, university and government institutions.

Overall Project Ratings

| Evaluation criteria | | Summary Assessment | Rating |
|----------------------------|----------------------------|---|----------------------------|
| A | Strategic Relevance | In line with UN Environment, GEF and regional priorities | Highly Satisfactory |
| A.1 | Alignment to MTS and POW | In line with MTS 2010-2013, Strategic Direction E: “Harmful substances and hazardous waste” and its expected accomplishments, and POW | Highly Satisfactory |

| Evaluation criteria | | Summary Assessment | Rating |
|----------------------------|---|---|--------------------------------|
| | | 2010-2011 and Sub- Programme “Harmful substances and hazardous waste” and their indicators. | |
| A.2 | Alignment to UNEP/GEF/Donor strategic priorities | line with GEF-4 for POPs’ Strategic Objective: “To reduce and eliminate production, use and releases of POPs”, and with the Strategic Programmes SP-1 and SP-3. | Highly Satisfactory |
| A.3 | Relevance to regional, sub-regional and national issues and needs | Relevant for Chile and Peru and other LAC countries with mining industry and needing compliance with Stockholm convention provisions. | Highly Satisfactory |
| A.4 | Complementarity with existing interventions | Complementary with national action plans, the implementation of Chile’s pollutants monitoring tracking system (PRTR) and UNIDO-executed POP project in Peru. | Satisfactory |
| B | Quality of Project Design | <i>Unrealistic timeframe for project execution, no assessment for financial capacities in participant countries, confusing language for some key concepts, indicators, roles for mining companies not specified, no smart indicators.</i> | Moderately Unsatisfactory |
| C | Nature of External Context | Strong earthquake in Chile redefined some country priorities. Institutional and political changes in Chile and Peru affected project performance. | Moderately Favourable |
| D | Effectiveness | Most of outputs achieved with additional activities implemented, but most of direct outcomes partially achieved. Most intermediate states were marginally or partially achieved. | Moderately Satisfactory |
| D.1 | Delivery of outputs | Mostly achieved and additional ones delivered, but significant delays were noted. | Moderately Satisfactory |
| D.2 | Achievement of direct outcomes | Partially achieved, participant countries have now better understanding on PCB issues in the mining sector and upgrades in technical procedures, analytical analysis and elaboration of regulations are available. Exchange with other LAC countries was noted through workshops, visits and cooperation with other LAC government officials and BCRC-CAM. | Moderately Satisfactory |
| D.3 | Likelihood of impact | Most of intermediate states were marginally or partially achieved. Sharing among mining companies, government and society organizations and government were of very limited scope. Sharing at regional and LAC countries level was noted by organizing a regional workshop in Panama, participation of experts from the government of Uruguay and from BCRC-CAM; and exchange between BCRC and the Ministry of Environment from Colombia. | Moderately Likely |
| E | Financial Management | <i>Financial report formats based on budget lines do not provide information for an in-depth assessment on project finances. Incomplete information provided.</i> | Moderately Satisfactory |

| Evaluation criteria | | Summary Assessment | Rating |
|----------------------------|--|---|----------------------------------|
| E.1 | Completeness of project financial information | Financial reports based on budget lines do not allow for expense analysis as per outcomes and outputs. | Moderately Unsatisfactory |
| E.2 | Communication between finance and project management staff | Good communication | Satisfactory |
| F | Efficiency | <i>Poor performance with 4 project extensions, with some pending activities.</i> | Unsatisfactory |
| G | Monitoring and Reporting | <i>Modest M&E system based on activities. No use of GEF TT and no smart indicators in place.</i> | Moderately Unsatisfactory |
| G.1 | Monitoring design and budgeting | M&E plan with assigned budget. | Moderately Satisfactory |
| G.2 | Monitoring of Project Implementation | Execution based on project activities rather than outcomes. | Moderately Unsatisfactory |
| G.3 | Project Reporting | Compliance with requirements, but focused on activities, no use of GEF TT. | Moderately Unsatisfactory |
| H | Sustainability | <i>Governments have willingness to support direct project outcomes, but financing is partially secured by new regulations. Institutions have been strengthened but dissemination and exchange of project results with other LAC countries are absent and no mechanism to sustain project results at this level is in place.</i> | Moderately Likely |
| H.1 | Socio-political sustainability | Key outcomes had moderate to low dependence from this factor and governments sustained their willingness to support project direct outcomes. | Moderately Likely |
| H.2 | Financial sustainability | PCB management seems to have partially secured funding resulting from new regulations. | Moderately Likely |
| H.3 | Institutional sustainability | Direct outcomes have moderate to high dependency to institutional support with reasonable mechanisms to support them. | Likely |
| I | Factors Affecting Performance | <i>Governance arrangements in place with no financial intermediates identified during project elaboration. Limited participation of a broader group of stakeholders, with no dissemination activities or sharing experience with wider groups. Sharing of experience with other LAC countries was noted.</i> | Moderately Satisfactory |
| I.1 | Preparation readiness and | Project arrangements to support governance and co-financing in place, but limited authority given to national coordination committees. | Moderately Satisfactory |
| I.2 | Quality of project management and supervision | Good adaptive management noted, but risks and mitigation not clearly assessed and identified. | Moderately Satisfactory |
| I.3 | Stakeholder participation and cooperation | Project focused on technical skilled stakeholders, with marginal participation of broader actors such as community organizations, NGOs and other marginalized groups. | Moderately Unsatisfactory |
| I.4 | Responsiveness to human rights and gender equity | Although project activities would benefit women and respect human rights, no specific approaches to these issues was noted during project elaboration and implementation. | Unsatisfactory |

| <i>Evaluation criteria</i> | | <i>Summary Assessment</i> | <i>Rating</i> |
|-----------------------------------|------------------------------------|--|---------------------------------------|
| <i>1.5</i> | Country ownership and driven-ness | Good in both countries, according their national interests and level of development of PCB issues in both countries. | Satisfactory |
| <i>1.6</i> | Communication and public awareness | Limited awareness, dissemination and sharing of project experience with community groups or citizen organizations. Awareness activities with other LAC's governments were performed. | Moderately Satisfactory |
| | <i>Overall Rating</i> | Project achieved most outputs and outcomes and performed additional activities, but poor efficiency and significant shortcomings and delays were noted. | <i>Moderately Satisfactory</i> |

B. Lessons Learned

332. One of the main lessons learnt from the project is related with the importance of making a comprehensive analysis for institutional capacities of national financial intermediates to manage project funds. This lesson is applicable to all new projects under elaboration.

333. Lesson 1. Task managers are usually too focused on the identification of relevant partners and beneficiaries that would be involved in the activities of different projects, leaving aside important financial arrangements and local regulations that would have serious impacts on project performance. The project experienced major delays in its implementation as national financial intermediaries for supporting project activities were not properly identified during the preparation stage, resulting in a severe shortcoming for project performance during the first two years of implementation. Besides that, the project lost approximately 8% to 10% of cash advances since analysis of regulations requesting the immediate change to Argentinian pesos of funds transferred to a country with 28% annual inflation rate was not carried-out. This is clearly a deficit in planning and negotiation of institutional arrangements carried-out during the elaboration of the project. Therefore, project managers should take special attention to anticipate this type of situations and advance as much as possible in the definition of financial mechanisms to implement new projects, otherwise problems will arise as soon as a project starts activities.

334. The second lesson is also related with the elaboration phase: establishment of very ambitious targets for the size of the project.

335. Lesson 2. Ambitious targets like the elaboration of inventories, management plans and strengthening of analytical capacities, where obtaining cooperation from large mining companies requires significant efforts and management. The above plus the time required to implement these inventories and management plans left again the project behind the schedule. In this sense, task managers try to achieve ambitious targets in unrealistic schedules and resources that result in tight MOU timeframes that will further need extensions and amendments (three in this case), cause frustration amongst project partners and high operational costs. Therefore, during the elaboration stage task managers should assess in a better way the real scope of these small/mid-size projects' objectives and outcomes according the resources available, capacities and willingness of each partner.

336. The third lesson learnt has to do with the assessment of the situation of PCB practices in the target sector that needs to be addressed, in order to become the project relevant for that sector and the country involved.

337. Lesson 3. The mining sector in Chile had already eliminated a considerable amount of PCB (approximately 800 tons in 2008) and applied sound PCB management practices in their operations, the project document does not include much information about these practices and potential needs for its mining sector. PCB in transformers was reported as not a priority in Chile, but PCB in other uses did, but the project did not address this issue in Chile. This situation resulted in a lack of relevance and interest for the Chile's mining sector, but it was still relevant for the development of new analytical technics and update of current national regulations.

C. Recommendations

| | |
|---------------------------|--|
| Context 1: | The project document established that a project's financial audit should be carried out once the project ended. Although BCRC contracted a local auditor, no report was available for review, and an overall project audit seems not to be done. The final project report elaborated in November 2015 indicated that this audit was still pending. |
| Recommendation 1: | Perform a final project audit according the requirement of the project document. |
| Responsible: | BCRC-UN Environment Task Manager |
| Time-frame: | Immediately 2019 |
| Indicator for compliance: | Final project audit report available. |

| | |
|---------------------------|---|
| Context 2: | The project final report was elaborated in November 2015, where some activities were still ongoing, and project expenditures were also underway. Thus, this current report seems outdated since some important activities, like the socio-economic assessment and the manual for sampling contaminated soils are not included. On the other hand, this document reported the activities and outputs achieved, but there is no an assessment on outcomes being attained. |
| Recommendation 2: | Elaborate an updated final report on project achievements, including financial aspects and audit results. |
| Responsible: | BCRC-UN Environment Task Manager |
| Time-frame: | By end of 2019. |
| Indicator for compliance: | Updated final report available focused on project results and impacts in the mining sector. |
| | |

Annex I. Schedule of the evaluation

| Milestone | Tentative Dates |
|---|-----------------------------------|
| Desk Review | Early July 2018 |
| Inception Report | August 2018 |
| Telephone interviews, surveys etc. | September 2018-March 2019 (Chile) |
| Evaluation Mission – Santiago, Buenos Aires and Lima | November 26- December 7,2018 |
| Draft report to Evaluation Manager (and Peer Reviewer) | March 18, 2019 |
| Draft Report shared with UN Environment Project Manager and team | April 2019 |
| PowerPoint/presentation on preliminary findings and recommendations | May 13, 2019 |
| Draft Report shared with wider group of stakeholders | Late May 2019 |
| Final Report | June 2019 |
| Final Report shared with all respondents | July 2019 |

Mission Agenda

| Country | Date | Interview | Position | Location |
|----------------|-------------|---------------------|---|-------------------|
| Argentina | 28-11-2018 | Leila Devia | Director BCRC | BCRC Buenos Aires |
| Argentina | 29-11-2018 | Alberto Santos | Project Regional Coordinator | BCRC Buenos Aires |
| Argentina | 29-11-2018 | Alejandro Eiroa | Project Regional Consultant | BCRC Buenos Aires |
| Argentina | 29-11-2018 | Ricardo Muncal | Kioshi's General Manager | BCRC Buenos Aires |
| Peru | 03-12-2018 | Cesar Murillo | Representative of the National Association of Mining, Fuel and Energy | Lima |
| Peru | 04-12-2018 | Leoly Zamora | Representative of the National Association of Mining, Fuel and Energy | Lima |
| Peru | 04-12-2018 | Minera Buenaventura | Business Representative | Lima |
| Peru | 04-12-2018 | Mario Mendoza | Project Regional Consultant | Lima |
| Peru | 04-12-2018 | Erica Huanca | Representative of Nexa Resources company (ex Milpo) | Lima |
| Peru | 05-12-2018 | Vilma Morales | National Project Coordinator | Lima |
| Peru | 06-12-2018 | Omar Bravo | CENSOPAS' official | Lima |
| Chile | 19-12-2018 | Cristian Brito | Responsible of Environmental Risk, Ministry of Env. | Santiago |
| Chile | 20-12-2018 | Isel Cortez | Manager ISP | Santiago |
| Chile | 15-03-2019 | Dr. Ricardo Barra | Director EULA | Concepción |
| Chile | 15-3-2019 | Gonzalo Mendoza | National Consultant | Concepción |

Annex II. Evaluation questions matrix

| Id | Evaluation criteria/sub-criteria | Key guide questions | Key Indicators | Data/information sources and collection procedures (*) |
|-------------------------------------|---|---|--|--|
| A. Strategic Relevance | | | | |
| A.1 | Alignment to MTS and POW | i) verify if project is in line with UN Environment MTS 2014-2017; ii) with POW 2014-2015; iii) work program of UNEP's Harmful substances and hazardous wastes subprogram; iv) general UNEP's goals for environmental governance, gender policies and green markets. | i) successful relation of project outcomes with UNEP's targets; ii) project targets and outcomes are part of relevant units within UNEP; iii) project outputs and achievements reported as UN Environment contribution to global BD targets. | i) MTS 2014-2017; ii) POW 2014-2015; iii) work programs of relevant hazardous wastes units; iv) prodoc; v) UN Environment publications; vi) interviews with TM, BCRC, national coordinators and Ministries involved. |
| A.2 | Alignment to UN Environment /Donor/GEF strategic priorities | i) check if project is in line with GEF-5 PCB strategic area | i) project objective in line with GEF-5 SP for PCB? ii) project objectives in line with GEF priorities and objectives. | i) GEF strategic programming; ii) prodoc; iii) interviews with TM, BCRC, national coordinators and project partners. |
| A.3 | Relevance to regional, sub-regional and national environmental priorities | i) Check if project is in line with Stockholm commitments for pilot countries, ii) if project had contributed to elaboration of new national regulations and institutional strengthening activities to tackle PCB issues in all countries; ii) verify if activities are in line with national wastes management plans; iii) verify if local and national authorities have developed plans to support project outcomes (new regulations, surveillance; cooperation agreements, etc.) | i) successful link between project targets and national priorities and development plans; ii) PCB is included in environmental authorities annual planning | i) government plans; ii) NIPs; iii) regulations on PCB and wastes; iii) prodoc; iv) interviews with TM, BCRC, national coordinators and project partners, and Ministries involved. |
| A.4 | Complementarity with existing interventions | i) check if project is not redundant with other PCB initiatives in progress at regional, local and national levels; ii) check if project had coordination with other PCB initiatives. | i) number of relevant PCB and waste management initiatives fully coordinated to avoid redundancy. | i) project documents, ii) prodoc, iii) interviews with TM, BCRC, national coordinators and project partners, and Ministries involved. |
| B. Quality of Project Design | | | | |
| | Baseline analysis determination for PCB in the mining sector and socio-economic situation | i) check if surveys and studies were made during project preparation; ii) check process for determining project logic and goals with key stakeholders (communities, companies, local/national authorities); iii) check if project data is based on earlier/complementary activities such elaboration of inventories at national and regional levels; iv) check if project indicators are SMART | i) baselines and inventories determined according UNEP's standards and methodologies. | i) prodoc; ii) PCB inventories, iii) reports from studies and consultancies; iv) interviews with TM, BCRC, national coordinators and project partners, and Ministries involved. |

| Id | Evaluation criteria/sub-criteria | Key guide questions | Key Indicators | Data/information sources and collection procedures (*) |
|--------------------------------------|---|---|--|--|
| | Project approach | i) assess project approach to check its relevance, efficiency and its strategy to deliver outputs, outcomes and desired benefits for environment, communities, mining companies, analytical labs and ministries of environment and health. | i) number of key stakeholders consulted; ii) number of documents on national policies about PCB and wastes consulted. | i) prodoc; ii) regulations; iii) interviews with TM, BCRC, national coordinators and project partners, and Ministries involved. |
| | Stakeholders' participation | i) check if workshops and consultations to local beneficiaries were made; ii) check if there was involvement of local/ national authorities; iii) if there were specific activities for women and minority groups in pilot sites/countries | i) number of key stakeholders consulted; ii) criteria adopted for choosing beneficiary companies and labs; iii) criteria used to approach local communities and citizen organizations. | i) prodoc; ii) PCB management plans; iii) interviews with TM, BCRC, national coordinators and project partners, and Ministries involved. |
| C. Nature of External Context | | | | |
| | Determination of political and socio-economic situation during elaboration of the project | i) check if there was an analysis of type of government and political trends at site/national level that could benefit/prevent project achievements; ii) if institutional strengthening capacities appropriate to improve analytical and technical skills to elaborate sound regulations and PCB management practices in all pilot countries; iii) local/national governance situation in gold mining locations/countries/health sector | i) number of stakeholders consulted; ii) analysis of government and congress election schedules. | i) prodoc; ii) context reviews; iii) interviews with TM, BCRC, national coordinators and project partners, and Ministries involved. |
| D. Effectiveness | | | | |
| D.1 | Achievement of outputs | i) current progress of desired outputs; ii) check quality and relevance of products achieved; iii) assess if project products were achieved and their relevance and usefulness to mining companies and environmental authorities. | i) number of products; ii) number of stakeholders making use of the products. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) interviews with TM, BCRC, national coordinators and project partners, and Ministries involved. |
| D.2 | Achievement of direct outcomes | i) current progress to desired outcomes; ii) check quality and relevance of outcomes; iii) check if outcomes can be related with health and PCB management improvement at country level; iv) assess if PCB regulations and management approaches are in place and enforced. | i) Number of PCB management approaches; ii) number of regulations elaborated and enforced; iii) number of prioritized sectors. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) interviews with TM, BCRC, national coordinators and project partners, and Ministries involved. |

| Id | Evaluation criteria/sub-criteria | Key guide questions | Key Indicators | Data/information sources and collection procedures (*) |
|--------------------------------|--|--|---|---|
| D.3 | Likelihood of impact | i) check direct relation of outputs/outcomes achieved with improved PCB management and compliance with Stockholm provisions; ii) check if there are alliances with local/national authorities and other local/national/regional stakeholders to ensure replication of outcomes; iii) check if there is cooperation with local/national agencies in charge of enforcement of PCB regulations; iv) check if there are institutional strengthening activities for women, local organizations and communities; v) if there are other complementary or similar activities carried out in the mining and health sectors, assess project contribution to improvement of PCB management, chemical analysis and regulations; vi) key drivers and assumptions. | i) Number of LAC countries implementing PCB management systems using the project experience; ii) amount of PCB containing equipment and wastes managed properly in pilot countries. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) interviews; v) policy papers; vi) new regulations; vi) interviews with FMO, Task Manager and BCRC. |
| E. Financial Management | | | | |
| E.1 | Completeness of project financial information | i) check annual work programs and budgets; ii) check if external audits were made; iii) check procedures for sharing and coordinating programming between environmental authorities, mining companies and their associations and UNEP; iv) revise procedures for biddings and check if these are in line with UN Environment requirements; v) check if there was reallocation of project funds; vi) check budgets and expenses for personnel costs versus project activities; vii) revise actual expenditures versus planned. | i) number of audit reports with no critical issues; ii) actual expenditures versus planned in line with project outputs and desired results. | i) audit reports; ii) annual expenditures; iii) budget planning; iv) Interviews with TM, BCRC, national coordinators. |
| E.2 | Communication between finance and project management staff | i) check if there is a standard procedure for planning and budgeting; ii) check if there are regular meetings/communications among UN Environment staff, regional coordination (BCRC) staff and national coordinators; iii) ask for BCRC and national coordinators' internal procedures for defining budgets and activities. | i) no misunderstandings on project expenditures and products between UN Environment and BCRC. | i) audit reports; ii) annual expenditures; iii) budget planning; iv) Interviews with TM, FMO, BCRC and national coordinators. |
| F. Efficiency | | | | |
| | | i) check if project was implemented efficiently, in-line with UNEP's standards and national norms; iii) check if planned activities/budgets are in line with their actual pace of execution; iv) if there were delays, ask for reasons and actions taken for tackling them; v) ask if management staff considered different modalities regarding time and resource savings when elaborating annual/biannual work programs and budgets; vi) assess the project's planning cycle for BCRC and national coordinators for consistency. | i) products and results obtained according UN Environment practices; ii) number of reallocation of funds and project extensions do not impacted project objectives and outcomes. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) PSC meeting minutes; vi) interviews with TM, BCRC, national coordinators, project partners and Ministries involved. |

| Id | Evaluation criteria/sub-criteria | Key guide questions | Key Indicators | Data/information sources and collection procedures (*) |
|---|--------------------------------------|--|--|---|
| G. Monitoring and Reporting | | | | |
| G.1 | Monitoring design and budgeting | i) check if there is a M&E system in place at different project levels (UNEP; BCRC global coordination staff; national coordinators); ii) check consistency and relevance of project initial indicators; iii) check if capacity analysis for each company beneficiary was performed before allocating funds and activities; iv) verify if M&E activities are scheduled in AWP and budgets; vi) assess if UN Environment and BCRC made a revision of project document and introduce changes where necessary; vii) assess if changes made to prodoc, logic framework and indicators are explained and documented. | i) number of project's work programs and budgets. | i) AWP; ii) annual budgets; PSC meeting minutes; iii) PIR; iv) progress reports; v) interviews with TM, BCRC and national coordinators. |
| G.2 | Monitoring of project implementation | i) check if baseline analysis and indicators for each inventory was defined; ii) check if there are regular records for M&E of activities, outcomes and indicators from BCRC and national coordinators; iii) check if project steering committee (PSC) provides strategic guidance, M&E and take corrective actions if necessary; iv) check if decisions taken by the PSC are followed-up for adoption; v) check if there is a reporting system to assess progress on the implementation of PSC decisions; vi) Assess adaptive management for: UNEP, BCRC staff coordinating overall project's activities and national implementers (check if there is active monitoring for changes on external/internal site conditions and approaches to tackle them. | i) number of field visits; ii) number of baselines made; iii) number of changes introduced to original activities and products. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) PSC meeting minutes; vi) interviews with TM, BCRC, national coordinators, project partners and Ministries involved. |
| G.3 | Project reporting | i) check if the M&E system has standard formats and guidelines for reporting progress in each country; ii) check if reporting is complying prodoc's reporting requirements and schedule; iii) check if reports have sections for distilling lessons learnt; iv) assess if reports contain adaptive management and approaches to tackle internal/external adverse/positive situations. | i) number of reports in compliance with UNEP's requirements. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) interviews with TM, BCRC and national coordinators |
| H. Sustainability (the overall rating for Sustainability will be the lowest rating among the three sub-categories) | | | | |
| H.1 | Socio-political sustainability | i) assess if there are policies that have positive/negative impacts on project results; ii) assess if local/national authorities adopted activities to sustain project results; ii) assess if national authorities take project experience as reference for future elaboration of policies and regulations; iv) assess if national authorities and | i) increasing number of PCB inventories in the mining sector; ii) number of mining companies in compliance with new technical standards and regulations. | i) prodoc; ii) context reviews; iii) interviews with government, communities affected and mining sector |

| Id | Evaluation criteria/sub-criteria | Key guide questions | Key Indicators | Data/information sources and collection procedures (*) |
|---|---|---|--|--|
| | | protected areas' managers adopted CA models as own policy for PA management. | | |
| H.2 | Financial sustainability | i) assess if beneficiary companies have been provided with proper strengthening capacities for financial management and development of technical skills; ii) assess if mining companies have allocated funds and personnel for PCB management activities; iv) assess if new investments for replacing PCB equipment and wastes are in progress or in the pipeline as a result of project activities; v) verify if waste management and disposal companies have increase their incomes from PCB contracts. | i) number of budgets of mining companies including PCB waste activities. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) PSC meeting minutes; vi) Interviews with TM, BCRC, national coordinators and project partners. |
| H.3 | Institutional sustainability | i) verify if government agencies have plans including PCB issues; ii) verify if mining companies have plans to continue phase-out of PCB and their wastes. | i) number of staffs in ministries and health dealing with PCB and wastes; ii) | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) PSC meeting minutes |
| I. Factors Affecting Performance | | | | |
| I.1 | Preparation and readiness | i) assess if UNEP, BCRC and national coordinators made a revision of project document and introduce changes where necessary; vii) asses if changes made to prodoc, logic framework and indicators are explained and documented; ii) asses if capacity analysis for labs, mining companies was made; iii) assess if needs for strengthening capacities for national coordinators and project partners were assessed and plans to tackle these weakness were prepared and implemented. | i) number of adaptive measures taken; ii) number of changes made to the original prodoc. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) PSC meeting minutes; vi) Interviews with TM, BCRC, national coordinators and project partners. |
| I.2 | Quality of project management and supervision | i) asses if UNEP, BCRC and national coordinators provided quality and timely technical and managerial support to different project stakeholders (mining companies, analytical labs, local/national authorities, PCB maintenance services providers); assess if UN Environment and BCRC updated project's risks and mitigation measures. | i) number of products and outcomes reached. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) PSC meeting minutes; vi) Interviews with TM, BCRC, national coordinators and project partners. |

| Id | Evaluation criteria/sub-criteria | Key guide questions | Key Indicators | Data/information sources and collection procedures (*) |
|-----------|--|--|---|---|
| 1.3 | Stakeholder participation and cooperation | i) asses if there is a plan for regular and formal consultations to mining companies, maintenance services providers and involved authorities; ii) assess if cooperation opportunities with communities, private sector, national and local authorities have been identified by UNEP, BCRC and national coordinators (according the scope of influence of each of these actors); iii) assess if project teams had exchange of experiences with other organizations intervening in the project sites. | i) number of project activities executed and coordinated among different actors involved. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) PSC meeting minutes; vi) Interviews with TM, BCRC, national coordinators and project partners. |
| 1.4 | Responsiveness to human rights and gender equity | i) assess if regional/national executing agencies have been trained in UN's Human Rights approach and how to incorporate this issue into the project; ii) verify if specific activities involving women were planned and implemented; iii) verify if indigenous people rights are considered at mine sites where experiences are designed and implemented. | i) number of specific products/activities/outcomes designed to benefit women and human rights at company and government level; ii) number of measures taken to minimize potential negative effect | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) PSC meeting minutes; vi) Interviews with TM, BCRC, national coordinators, project partners and communities if possible. |
| 1.5 | Country ownership and drivennes | i) check ownership of project results for local/national authorities in terms of support that these actors can provide in terms of maintain outcomes' momentum and scale-up; ii) check for new government plans and regulations; iii) check if there is an increased interest of companies and health sector to support regional efforts to improve PCB management practices; iv) check if PCB issues are among of mining companies and hospitals' corporate policies; iv) check if private sector and hospitals consider PCB management as part of its business's sustainability. | i) number of policies and regulations enforced by government authorities; ii) number of PCB management approaches and policies elaborated by mining companies and health sector; ii) funds allocated by government, mining companies and health sector to deal with PCB issues. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) PSC meeting minutes; vi) vi) interviews with TM, BCRC, national coordinators and project partners, and Ministries involved. |
| 1.6 | Communication and public awareness | i) check if there is a public awareness plan to effectively introduce project experience of cooperation as a model for PCB sound management practices and setup of a regulatory network; ii) check if this plan has targeted audiences, messages and objectives (for government, opinion leaders, private sector, education, general public, financing sectors, etc.) | i) number of private companies and hospitals aware and working on PCB issues; ii) number of government/regional agencies working on PCB issues. | i) progress reports; ii) PIR; iii) national reports; iv) consultants' reports; v) PSC meeting minutes; vi) interviews with TM, BCRC, national coordinators and project partners and Ministries involved. |

(*): documentation reviewed for all criteria will be complemented with interviews to key stakeholders.

Annex III. List of documents consulted

| No. | Document | No. | Document |
|-----|--|-----|--|
| 1 | PCB_SA_TOR TE_11052018.docx | 162 | MOU BCRC_CHILE_signed both parties.pdf |
| 2 | workplan spanish_REV1_trabajado_jorge.docx | 163 | Notificación firma de Enmienda Chile.pdf |
| 3 | 2011-02-11 Informe Semestral Carta 01 + informe.pdf | 164 | Acuerdo_UNEP_DTIE_BCRC.pdf |
| 4 | Acta Designación Consultores Extensión Proyecto PCB (Lorenzo Videla y Mario Zerraga).pdf | 165 | Annex-7DonorAgreementSp.doc |
| 5 | Annex 12_Cofinance report PCB Mining Project Chile-Peru - BCRC Argentina 2010-2015.xls | 166 | budget_lines.xls |
| 6 | Annex 11_Quarterly_expenditure_statement_PCB Mining Sector South America August - December 2010.xls | 167 | Convenio BCRC - PNUMA DTIE.doc |
| 7 | Annex 11_Quarterly_expenditure_statement_PCB Mining Sector South America January - March 2011.xls | 168 | Convenio BCRC - PNUMA DTIE_HF1.doc |
| 8 | Annex 11_Quarterly_Expenditure_Statement_PCB Mining SectorSouth America April-September 2011.xlsx | 169 | Prórroga ACT PNUMA DTIE-CRBAS Junio 2012.doc |
| 9 | Annex 11_Quarterly_Expenditure_Statement_PCB_Mining_SectorSouth_America_October_2011-March_2012_14-12-12.xls | 170 | copieradministrator@unog.ch_20130425_144209.pdf |
| 10 | Annex 11_Quarterly_Expenditure_Statement_PCB_Mining_SectorSouth_America__April-September_2012(1).xlsx | 171 | SSFA Chemicals with CSIC_GFL 4B37 and 4B97_2012-11-09.doc |
| 11 | BCRC_PIR_2011-2012_final.doc | 172 | ToRs consultancy_Mario Mendoza_PCB analysis-reporting.doc |
| 12 | BCRC_PIR_2012-2013.doc | 173 | Prórroga Acuerdo PNUMA DTIE - CRBAS.doc |
| 13 | BCRC_PIR_2013-2014 Final.docx | 174 | Prórroga Acuerdo PNUMA DTIE - CRBAS draft.doc |
| 14 | BCRC_PIR_2014-2015_10.09.docx | 175 | Guia_analisis_PCB_L2000DX_Final draft.pdf |
| 15 | BCRC_PIR_2015-2016_30_06_2016_PCB_Mining_Porject.docx | 176 | Guia_analisis_PCB_L2000DX_HF_MM.docx |
| 16 | BPC Decimo Informe Julio 2015.pdf | 177 | Guia_Deteccion_PCB_L2000_Draft.docx |
| 17 | BPC Primer Informe Chile Agosto 2010-Febrero 2011.pdf | 178 | EN 12766-1 for PCB with ECD_AENOR es.PDF |
| 18 | BPC Segundo Informe Chile Marzo 2011-Octubre 2011.pdf | 179 | EN 12766-2 for PCB with ECD_AENOR es.PDF |
| 19 | BPCs Tercer Informe Chile Octubre 2011-Marzo 2012.pdf | 180 | Development harmonized regulatory scheme on PCB management in South America_BCRC-Argentina.pdf |
| 20 | Contrato Lorenzo Videla Extensión 2018.doc | 181 | PCB_LAC PIF_031208.doc |
| 21 | Contrato Mario Mendoza Extensión 2018.doc | 182 | PRC_Review_sheet_10.03.2010.doc |
| 22 | document_list_required_UNEP-Reg-PCB project_BCRC.xlsx | 183 | GFL 4A26_Rev No.1.pdf |
| 23 | Eighth_Report_Jul-Dec_2013_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America_2-2-13.pdf | 184 | Pink File_121208.pdf |
| 24 | Fifth_Report_April-September-2012_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America_2-11[1].pdf | 185 | Amendment 2 signed both Parties.pdf |
| 25 | First Report Agost 2010-December2010 Best Practices for PCB Managemente in the Mining Sector in South America.pdf | 186 | Budget rev 2.4.xls |

| No. | Document | No. | Document |
|------------|---|------------|--|
| 26 | Fourth_Report_Oct-2011-March-2012_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America.pdf | 187 | Extension request letter.pdf |
| 27 | Gastos Chile 2011-2013 Final.pdf | 188 | Updated Action Plan.pdf |
| 28 | Informe Actividades Perú Abril-Septiembre 2012.pdf | 189 | 171005_Draft Note BCRC Argentina Extension Project PCB Mining South America 2017.pdf |
| 29 | Informe Actividades Perú Enero Junio 2013.pdf | 190 | Appendix 1 New Legal Instrument_revised budget.pdf |
| 30 | Informe Actividades Perú Segundo Semestre 2010.pdf | 191 | Appendix 2 New Legal Instrument_revised costed workplan.pdf |
| 31 | Informe Final Proyecto.pdf | 192 | EXTENSION signed both Parties.pdf |
| 32 | Informe financiero enero-julio 2014.pdf | 193 | Annex 10_Final report.doc |
| 33 | Informe Perú Actividades Enero-October 2011 incluye Reporte Financiero Abril-October 2011.pdf | 194 | Annex 11_Quarterly expenditure statement.xls |
| 34 | IX INFORME DE PAIS-PERU final proyecto.pdf | 195 | Annex 12_Cofinance report.xls |
| 35 | Ninth_Report_Jan-Aug_2014_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America_26_08-2014.pdf | 196 | Annex 1_prodoc.doc |
| 36 | Primer Acta Steering Committee Lima Peru 2010.pdf | 197 | Annex 2 05-06-10 CEO Approval.pdf |
| 37 | Q4 Jan-Jun 2013 Financial Report.xlsx | 198 | Annex 3_definition of terms.doc |
| 38 | Q4_2012_financialReport.xlsx | 199 | Annex 4_Contact details.doc |
| 39 | REPORTE IX Financiero Jan-June 2014+2014-2015.xlsx | 200 | Annex 5_project_supervision_plan.doc |
| 40 | REPORTE IX Financiero Jan-June 2014.xlsx | 201 | Annex 6A_Non-expendable equipment.xls |
| 41 | Reporte Perú Octubre Diciembre 2012.pdf | 202 | Annex 6B_Equipment transfer letter.doc |
| 42 | reporte_lanz_mejores_prac_manejo_BPC_sector_minero_sudamerica_lima_peru_11_15_octubre_2010.pdf | 203 | Annex 7A. Third Party Form.docx |
| 43 | Second Report January 2011-March 2011 Best Practices for PCB Management in the Mining Sector in South America Jan-March.pdf | 204 | Annex 7B_Cash advance.xls |
| 44 | Segunda Acta Steering Committee Septiembre 2012.pdf | 205 | Annex 8_Half yearly progress report.doc |
| 45 | Segundo Cash Advance 120715_12_advice.pdf | 206 | Annex 9_PIR template.doc |
| 46 | Seventh_Report_Jan-Jun_2013_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America_2-2-13.pdf | 207 | Primer Acta Steering Committee Lima Peru 2010.pdf |
| 47 | Sixth_Report_Oct-Dec_2012_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America_2-2-13.pdf | 208 | Programa Steering Committee 15-08-2012.pdf |
| 48 | Tercer Cash Advance Agosto 2014 Corregido 46000.pdf | 209 | Segunda Acta Steering Committee Septiembre 2012.pdf |
| 49 | Tercera Acta Diciembre 2013.pdf | 210 | basel_contribution_tables.doc |
| 50 | Third_Report_April_2011-Sept_2011_Best_Practices_for_PCB_Management_in_the_Mining_Sector_in_South_America.pdf | 211 | Nota FMAM Pedido Transferencia Fondos Plan Piloto FMAM - FONAM Diciembre 2013.pdf |
| 51 | Eighth_Report_JulDec_2013_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America_2-2-13.pdf | 212 | Q1-2 2013 Financial Report.pdf |

| No. | Document | No. | Document |
|------------|---|------------|--|
| 52 | Fifth_Report_April-September-2012_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America_2-11[1].pdf | 213 | Q1-2 2013 Financial Report_1.pdf |
| 53 | First_Report_Agost_2010_December2010_Best_Practices_for_PCB_Management_in_the_Mining_Sector_in_South_America.pdf | 214 | Q1-2011_financial_report.pdf |
| 54 | Fourth_Report_Oct-2011-March-2012_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America.pdf | 215 | Q2-Q3 2012 financial_1.xls |
| 55 | GuiaElaboracionPlanGestion_SectorMinero.pdf | 216 | Q2-Q3_2011 financial report.xlsx |
| 56 | GUIAS_PCB_I.pdf | 217 | Q2-Q3_2012 financial.xls |
| 57 | Guia_analisis_PCB_L2000DX_VFinal.pdf | 218 | Q4-2011-Q1-2012 financial.xls |
| 58 | Guia_Basilea_PCBs.doc | 219 | Q4-2012_financial.xlsx |
| 59 | HerramientaTomaDecisiones_IndustriaMinera.pdf | 220 | Summary advances and expenditures.xlsx |
| 60 | InformeFinalProyecto180116_AC_MM.pdf | 221 | 2nd Cash Advance_Chile.pdf |
| 61 | InformeinterlaboratorioPCBmineria_2014.pdf | 222 | 3rd cash advance request.pdf |
| 62 | Inf_Encuesta_laboratorios_PCB_Peru_Chile_VFinal.pdf | 223 | 3rd Cash advance.pdf |
| 63 | InterlaboratoryAssessmentPCBTransformerOil_2014.pdf | 224 | Cash Adv No 2_24-06-2011 Fondos Disponibles MMA Chile.pdf |
| 64 | MOU_MMA_Chile_CRBAS.pdf | 225 | Cash Statement 2013.pdf |
| 65 | Ninth_Report_Jan-Aug_2014.pdf | 226 | cash-Advance.pdf |
| 66 | PCBs-DiagnosticoAGO2014.pdf | 227 | Nota FMAM Pedido Transferencia Fondos Plan Piloto FMAM - FONAM Diciembre 2013.pdf |
| 67 | PCBtranscap_s.pdf | 228 | Nota Requiriendo CRBAS tramitar contrato CENMA Diciembre 2012.doc |
| 68 | Primer-Acta_Steering_Committee_Lima_Peru_2010.pdf | 229 | Nota Requiriendo CRBAS tramitar contrato EULA Diciembre 2012.doc |
| 69 | procedimientos_1_6_integrado_version_enero_2014_V22_03_14.pdf | 230 | PNUD-Carta N° 122308, Sr. Antonio Molpaceres, Representa =iso-8859-1Qnte_Residente,_PNUD.pdf |
| 70 | Proceso_elaboracion_PlanGestionPCB_stecnologias asociadasMarzo2014.pdf | 231 | Remittance advice 2nd cash advance to UNDP Chile.pdf |
| 71 | PRODOC_Espanol.doc | 232 | Request for Payment to UNEP to Chile.pdf |
| 72 | Project_Document_PRODOC.pdf | 233 | Nota Jorge.pdf |
| 73 | ReporteLeccionesAprendidasMejores_Practicas_Junio2014.pdf | 234 | Financial report 2013-I_PNUMA PCB Mining.pdf |
| 74 | reporte_lanz_mejores_prac_manejo_BPC_sector_minero_sudamerica_lima_peru_11_15_octubre_2010.pdf | 235 | 170119_Noveno Reporte Financiero Proyecto PCB Minería Chile y Perú Jan_2014-Feb_2015.pdf |
| 75 | Second_Report_January_2011_March_2011_Best_Practices_for_PCB_Management_in_the_Mining_Sector_in_South_America_Jan_March.pdf | 236 | GEF ID 3814 PCB Peru and Chile expenditure report Q2 Q3 2011.pdf |
| 76 | Segunda_Acta_Steering_Committee_Septiembre_2012.pdf | 237 | GEF ID 3814 PCB Peru and Chile expenditure report H1 2013.pdf |
| 77 | Seventh_Report_Jan-Jun_2013_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America_2-2-13.pdf | 238 | GEF ID 3814 PCB Peru and Chile expenditure report H2 2010.pdf |
| 78 | Sixth_Report_Oct-Dec_2012_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America_2-2-13.pdf | 239 | GEF ID 3814 PCB Peru and Chile expenditure report H2 2013.pdf |

| No. | Document | No. | Document |
|------------|---|------------|---|
| 79 | Tercera_Acta_Diciembre_2013.pdf | 240 | GEF ID 3814 PCB Peru and Chile expenditure report Q1 2011.pdf |
| 80 | The National Tariff 2011_guyana.pdf | 241 | GEF ID 3814 PCB Peru and Chile expenditure report Q3 2010.pdf |
| 81 | Third_Report_April_2011-Sept_2011_Best_Practices_for_PCB_Management_in_the_Mining_Sector_in_South_America.pdf | 242 | GEF ID 3814 PCB Peru and Chile expenditure report Q3 2011.pdf |
| 82 | UNEP-GEF_InformetrainingPCB_2013.pdf | 243 | GEF ID 3814 PCB Peru and Chile expenditure report Q4 2010.pdf |
| 83 | Acuerdo_PNUMA_DTIE.pdf | 244 | GEF ID 3814 PCB Peru and Chile expenditure report Y 2012.pdf |
| 84 | Carta_Aceptacion_CENMA_Laboratorio_PCBs.pdf | 245 | Octavo Reporte Financiero Proyecto PCB Minería Chile y Perú Julio-Diciembre_2013.pdf |
| 85 | Coordinador_Nacional_Chile.pdf | 246 | Gastos Chile 2011-2013 Final.pdf |
| 86 | Coordinador_Nacional_Peru.pdf | 247 | Reporte Taller Lanzamiento Mejores Prácticas Manejo BPC =iso-8859-1QSector_Minero_Sudam=E9ri.pdf |
| 87 | Copia_Annex2_GEF_approval_letter.pdf | 248 | GEF ID 3814 PCB Peru and Chile progress report H2 2010.pdf |
| 88 | Designacion_Chile_Laboratorio_EULA.pdf | 249 | Inventory NEX equipment 2010.pdf |
| 89 | Designacion_de_Laboratorios_Peru.pdf | 250 | GEF ID 3814 PCB Peru and Chile progress report Q1 2011.pdf |
| 90 | Enmienda_MoU_Chile_CRBAS.pdf | 251 | GEF ID 3814 PCB Peru and Chile progress report Q2 and 3 2011.pdf |
| 91 | Manejo de PCB en el sector minero Sudamericano.zip | 252 | GEF ID 3814 PCB Peru and Chile progress report Q4-2011-Q1-2012.pdf |
| 92 | MoU_Basilea_CRBAS_Decision_Making_Tool.pdf | 253 | GEF ID 3814 PCB Peru and Chile progress report Q2 and 3 2012.pdf |
| 93 | MOU_MMA_Chile_CRBAS.pdf | 254 | GEF ID 3814 PCB Peru and Chile progress report Q4 2012.pdf |
| 94 | PCA_04_05_2010.pdf | 255 | GEF ID 3814 PCB Peru and Chile progress report H1 2013.pdf |
| 95 | PCB_MOU_CRBAS_Peru.doc | 256 | GEF ID 3814 PCB Peru and Chile progress report H2 2013.pdf |
| 96 | ProgramaEntrenamientoLaboratorios2013.pdf | 257 | Cash advance.xls |
| 97 | MOU BCRC_CHILE_signed both parties-1.pdf | 258 | H2 2013_technical_1.jpg |
| 98 | PAG Minutes_Annexes_260309.pdf | 259 | Q1-2 2013 Financial Report 23-9.xlsx |
| 99 | PCA_04.05.2010_signed with annexes.pdf | 260 | Q1-Q2 2013 comments.doc |
| 100 | 4B37_Pink File_100810.pdf | 261 | Q4 Jan-Jul 2013 Financial Report 23-8.xlsx |
| 101 | Annexes to Signed LI_100810.pdf | 262 | cash advance agosto 2014.xls |
| 102 | Cash statement.pdf | 263 | cash advance agosto 2014_1.xls |
| 103 | Project_Document_PRODUC (1).pdf | 264 | Copia de informe ocaña 30abril2014.xlsx |
| 104 | 4B37_Cash Adv No.2_181013.pdf | 265 | diferencia de cambio al 30-6-2014.xlsx |
| 105 | Cash Adv No.1_240810.pdf | 266 | Eighth_Report_Jul-Dec_2013_Best_Practices.docx |
| 106 | Cash adv No.3.pdf | 267 | Eighth_Report_Jul-Dec_2013_Best_Practices.pdf |
| 107 | Annex 12_Cofinance report PCB Mining Project Chile-Peru - BCRC Argentina 2010-2015 - 5-09-2016.xls | 268 | Eighth_Report_Jul-Dec_2013_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America_2-2-13 (2).docx |

| No. | Document | No. | Document |
|------------|---|------------|---|
| 108 | 4B37_Exp Adjustment_UNDP IOVs_261113.pdf | 269 | Eighth_Report_Jul-Dec_2013_Best_Practices_forPCB_Management_in_the_Mining_Sector_in_South_America_2-2-13.docx |
| 109 | 4B37_Exp rpt_April-September 2011.pdf | 270 | Octavo Reporte Financiero.xlsx |
| 110 | 4B37_Exp rpt_January-December 2012.pdf | 271 | REPORTE Financiero Jan-June 2014.xlsx |
| 111 | 4B37_Exp rpt_January-June 2013.pdf | 272 | Reporte Financiero Proyecto PCB Minería Chile y Perú J =iso-8859-1Julio-Diciembre=5F2013.x |
| 112 | 4B37_Exp rpt_January-March 2011.pdf | 273 | REPORTE VIII Julio-Diciembre_2013 final.xlsx |
| 113 | 4B37_Exp rpt_January-September 2012.pdf | 274 | REPORTES CONSOLIDADOS A JUNIO 2014.xlsx |
| 114 | 4B37_Exp rpt_July-Dec 2013.pdf | 275 | 4B37_Rev No.1_210712.pdf |
| 115 | 4B37_Exp rpt_October 11-March 2012.pdf | 276 | Budget Rev1.1.xls |
| 116 | 4B37_Exp rpt_October-December 2011.pdf | 277 | Budget Rev1.2.xls |
| 117 | 4B37_Exp rpt_October-December 2012.pdf | 278 | Budget Rev1.xls |
| 118 | Exp July - December 2013.pdf | 279 | Checklist_yellow file.doc |
| 119 | Exp rpt_April-September 2011.pdf | 280 | Extension request_BCRC_20.02.2012.pdf |
| 120 | Exp rpt_July-September 2010.pdf | 281 | GFL 4B37 Rev 1.pdf |
| 121 | Exp rpt_October-December 2010.pdf | 282 | GFL 4B37_Rev 1.pdf |
| 122 | Financial report 2013-I_PNUMA PCB Mining.pdf | 283 | Rev 1.2.doc |
| 123 | Jan 14 to Feb 15 expenditure report.pdf | 284 | rev 1.pdf |
| 124 | Jul-Dec 2013 technical + financial report.pdf | 285 | Rev1.doc |
| 125 | Q3 and Q4 2013 Expenditure.pdf | 286 | Routing slip.pdf |
| 126 | 4B37_Signed LI_100810.pdf | 287 | signed rev.pdf |
| 127 | List of contacts.xlsx | 288 | workplan spanish.docx |
| 128 | 4B37_NXE_As at 080611.pdf | 289 | Budget rev 2.4.xls |
| 129 | 3814-PIR 2013 PCB LAC.docx | 290 | Budget Rev2.1.xls |
| 130 | 3814_2014_4B37_PIR PCB S America.docx | 291 | Budget Rev2.2.xls |
| 131 | 3814_PIR_FY15_UNEP_PCB.docx | 292 | Budget Rev2.3.xls |
| 132 | 4B37_Progress rpt_Apr-Sep 2011.pdf | 293 | Budget Rev2.xls |
| 133 | 4B37_Progress rpt_Apr-Sep 2012.pdf | 294 | OFO approval (Brennan)of amended LI.pdf |
| 134 | 4B37_Progress rpt_Aug-Dec 2010.pdf | 295 | Project Action Sheet.doc |
| 135 | 4B37_Progress rpt_Jan-June 2013.pdf | 296 | Rev 2.doc |
| 136 | 4B37_Progress rpt_Jan-Mar 2011.pdf | 297 | Revisions_YELLOW FILES.xls |
| 137 | 4B37_Progress rpt_Oct 2011-Mar 2012.pdf | 298 | ROUTING SLIP.doc |
| 138 | 4B37_Progress rpt_Oct-Dec 2012.pdf | 299 | signed amend 2.pdf |
| 139 | Acuerdo_PNUMA DTIE.pdf | 300 | 2015_sectorial_ministerio-medio-ambiente cuenta Chile 2015.pdf |
| 140 | Contrato 15 Mario Mendoza PCB 2013 Cierre Mejores Prácticas.pdf | 301 | 2017_sectorial_ministerio-medio-ambiente cuenta MINAM Chile 2017.pdf |

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| 141 | InformeFinalProyecto180116_AC_MM.pdf | 302 | control_químicos_peru_2008.pdf |
| 142 | Jul-Dec 2013 technical + financial report.pdf | 303 | eurochile_2017.pdf |
| 143 | Progress rpt July - December 2013.pdf | 304 | Evaluation_of_the_UNEP_Subprogramme_on_Chemicals_and_Waste(1).pdf |
| 144 | Tercera Acta Diciembre 2013.pdf | 305 | Formative Evaluation of PoW 2010-2011.pdf |
| 145 | Informe Final Proyecto 180116(AC_MM).pdf | 306 | GEF4-Focal-Area_strategy.pdf |
| 146 | MINAM - PNUMA Certificado de Tratamiento Proyecto PCB Minería.pdf | 307 | guia_suelos_Minamb_chile_2013.pdf |
| 147 | OFICIO-00099-2017-MINAM-VMGA-Resolución Ministerial 490- =iso-8859-1Q2016_Reglamneto_de_PCB_P | 308 | Informe-Lautaro-1_inflación.pdf |
| 148 | MoU_FONAM_MINAM_BCRC.pdf | 309 | ministerio-medioambiente_manual.pdf |
| 149 | Primer Acta Steering Committee Lima Peru 2010.pdf | 310 | MTR_UNEP-MTS_2010-2013.pdf |
| 150 | Programa Steering Committee 15-08-2012.pdf | 311 | MTS_2010-2013_UNEP.pdf |
| 151 | Reporte Taller Lanzamiento Mejores Prácticas Manejo BPC =iso-8859-1QSector Minero Sudam=E9ri | 312 | NIP_peru_2006.pdf |
| 152 | Reporte Lecciones Aprendidas Mejores Practicas Borrador Rev CAPRA V4- Abril2014.docx | 313 | paper_lessons_learned_UNEP_2007.pdf |
| 153 | Contrato N° 11 CRBAS-CENMA y Anexo Actividades Proyecto =iso-8859-1QPCB Miner=EDa Chile.pdf | 314 | PCB_INVENTARIO_peru_2012.pdf |
| 154 | Contrato N° 13 CRBAS-EULA y Anexo Actividades Proyecto P =iso-8859-1QCB Miner=EDa Chile.pdf | 315 | PCB_INVENTARIO_peru_2012_2.pdf |
| 155 | MoU Basilea CRBAS Decision Making Tool.pdf | 316 | PIF_PCB.pdf |
| 156 | MoU_FONAM_MINAM_BCRC.pdf | 317 | POW_2010-2011_UNEP.pdf |
| 157 | PCA_04.05.2010_signed with annexes.pdf | 318 | PRESENTACION-8-CHILE_suelos_contaminados.pdf |
| 158 | PNUD-Memorando Solicitud de Contratación de Servicio.pdf | 319 | presentación asunción_capra.pdf |
| 159 | SSFA_GFL_4A40_signed_both_parties.pdf | 320 | presentación ley de residuos may2018_joost.pdf |
| 160 | Enmienda MoU Chile CRBAS Firmada.pdf | 321 | r1-Politica-Nacional-de-Seguridad-Quimica_2017-2022_chile.pdf |
| 161 | letter UNDP_15.06.2011.pdf | 322 | tesis_MSc_mendoza_peru_2013.pdf |

Annex IV. List of stakeholders interviewed

| No | Country | Name | Sector | Institution | Role |
|-----------|----------------|-----------------------------|-------------------------------|---|---|
| 1 | Argentina | Dra. Leila Devia | Environment | BCRC | Director Executing agency |
| 2 | Argentina | Alberto Santos | Environment | BCRC | Regional Coordinator |
| 3 | Argentina | Alejandro Eiroa | Regional Consultant | Regional Consultant | Coordinated PCB management plans in Chile & Peru |
| 4 | Argentina | Ricardo E. Muncal | Private sector company | KIOSHI | Vice-President. The company de-chlorinated 50 tons of PCB contaminated oils in Peru. |
| 5 | Argentina | Julián Moreno | Private sector company | KIOSHI | President. The company de-chlorinated 50 tons of PCB contaminated oils in Peru. |
| 6 | Chile | Cristián Brito Martínez | Environment | Ministry of environment | Coordinator of Environmental Risk |
| 7 | Chile | Gonzalo Mendoza | Consultant | Consultant | He elaborated studies on PCB management plans for the project |
| 8 | Chile | Dra. Isel Cortez | Environment | CENMA | Participated in the analytical component and as project consultant. She is currently the Chief of Environmental Health Department |
| 9 | Chile | Dr. Ricardo Ibarra | University of Concepción | EULA | Director. Participated in analytical training. |
| 10 | Peru | Vilma Morales | Environment | MINAM | Project Coordination in Peru |
| 11 | Peru | Mario César Mendoza Zerraga | Consultant | Regional Consultant | PCB Management plans and experience implementing them. |
| 12 | Peru | Mario Cesar Murillo | Private Mining | National Association of Mining, Fuel and Energy | Coordinated and disseminated project among private companies. |
| 13 | Peru | Leoly Zamora | Private Mining | National Association of Mining, Fuel and Energy | Coordinated and disseminated project among private companies. |
| 14 | Peru | Omar Bravo Tirado | Public Health | CENSOPAS | Participated in the analytical component 3 |
| 15 | Peru | Carlos E. Rodriguez | Private Mining | Minera Buenaventura | Environmental Manager. The company participated in the project. |
| 16 | Peru | Jessica | Private Mining | Minera Buenaventura | Participated in the Peru NSC. |
| 17 | Peru | Erica Huanca | Private Mining | Nexa Resources (ex Milpo) | Participated in some project activities in Peru |
| 18 | Switzerland | Giovanna Moire | Task Manager (since mid-2015) | UN Environment | Task Manager |

Preliminary findings from the Terminal Review of the project
“Best Practices for PCB management in the mining sector of South
America” (GEF Id:3814)

Jorge Leiva Valenzuela
International Consultant
July 18, 2019

Annex VI. Brief CV of the consultant

Jorge Leiva is a Chemical Engineer from the University of Santiago, Chile; MSc. in Chemical Engineering from Katholieke Unversiteit Leuven (KUL), Belgium and he has partial PhD studies in Bioengineering Sciences at KUL. With 23 years of professional experience in the field of environment, he has evaluated 38 projects funded by UNDP, GEF, UN Environment and IDB.

As Chile ozone officer and focal point for Montreal Protocol activities at the Chile National Commission for the Environment (CONAMA, 1994-2004, currently Ministry of Environment), he dealt with all aspects of project/programs' cycle, including identification, preparation, implementation, financing, monitoring, evaluation and reporting.

He also participated as expert in 3 IPCC special reports (2000, 2005, 5th assessment report) and he was the co-chair of the OEWG of the Parties to the MP (2003) and member of several technical and contact groups related with MP issues.

Since 2006, he performs evaluations (midterm and final) of several UNDP/GEF projects, including biodiversity conservation in terrestrial, mountain and marine ecosystems, protected areas (e.g., Financial Sustainability for the National System of Protected Areas (SNAP) in Ecuador), climate change (UNDP/GEF México's Green Plan); energy efficiency and biomass conversion.

Regarding issues related with chemical substances, he carried-out 5 evaluations of PCB projects in Uruguay, Costa Rica, Argentina, Mexico y Colombia (UNDP), verification of 4 ozone national action plans (UN Environment) and 2 mercury projects (UNDP, UN Environment).

He conducts these evaluations according the specific methodologies developed by each agency, such as IDB's "Environment and Safeguards Compliance Policy", which includes design and implementation phases.

He studied and lived in Belgium for almost 6 years, so he used to work in multicultural environments, and thus has a deep understanding of cultural and motivations of government officials and private sector partners in different countries.

TERMS OF REFERENCE
Terminal Evaluation of the UN Environment/Global Environment Facility
project
“Best Practices for PCB management in the mining sector of South America”

Section 1: PROJECT BACKGROUND AND OVERVIEW

Project General Information

Table 1. Project summary⁴⁰

| | | | |
|--------------------------------------|----------------|-------------------------------------|--|
| GEF Project ID: | 3814 | | |
| Implementing Agency: | UN Environment | Executing Agency: | Basel Convention Regional Centre for South American Region for Training and Technology Transfer (BCRC) in Buenos Aires, Argentina |
| Sub-programme: | | Expected Accomplishment(s): | a) The capacity and financing of States and other stakeholders to assess, manage and reduce risks to human health and the environment posed by chemicals and hazardous waste are increased. Indicators of achievement: (a) (i) The number of countries and stakeholders demonstrating progress in implementing sound management of chemicals and hazardous waste, including through the identification of their needs in infrastructure strengthening, is increased. |
| UN Environment approval date: | 16.10.2008 | Programme of Work Output(s): | 5. Small and medium-sized enterprises are reached through partnerships with business and industry associations to improve the sound management of harmful substances, chemicals in products and hazardous waste. Complementarity with the UNEP GEF programme: the sound management of PCBs in industry sectors (mining/South America) is promoted |
| GEF approval date: | 06.05.2010 | Project type: | Medium-Size Project |
| GEF Operational Programme #: | CHEM 01 | Focal Area(s): | Persistent Organic Pollutants |
| | | GEF Strategic Priority: | GEF IV Strategic Priority 1: strengthen capacities for NIP implementation; Priority 3: identify good practices in PCB management and identify and enhance local capacity for PCB management and destruction. |
| Expected start date: | August 2010 | Actual start date: | 01.08.2010 |

⁴⁰PIR 2015 unless other

| | | | |
|--|---|---|---|
| Planned completion date: | March 2011 ⁴¹ | Actual completion date: | September 2018 Validity of legal instrument: 31 st March 2019 |
| Planned project budget at approval: | 2,392,461.20 | Actual total expenditures reported as of FEB 2015: | 2,894,578.82 |
| GEF grant allocation: | 818,300 USD | GEF grant expenditures reported as of FEB 2015: | 760,151.82 |
| Project Preparation Grant - GEF financing: | 40,000 USD | Project Preparation Grant - co-financing: | 78,900 USD |
| Expected Medium-Size Project co-financing: | 1,574,161 USD | Secured Medium-Size Project co-financing: | 2,134,427 (May 2016) |
| First disbursement: | 26.08.2010 | Date of financial closure: | After Terminal Evaluation |
| No. of revisions: | 3 | Date of last revision: | 01 December 2017 |
| No. of Steering Committee meetings: | 3 | Date of last Steering Committee meeting: | 04 December 2013 |
| Mid-term Review/ Evaluation (planned date): | NA | Mid-term Review/ Evaluation (actual date): | NA |
| Terminal Evaluation (planned date): | Sep 2015 | Terminal Evaluation (actual date): | May 2018 |
| Coverage - Countries: | Chile and Peru | Coverage - Region(s): | Regional – Latin America and the Caribbean |
| Dates of previous project phases: | NIPs for POPs project. Chile (30/05/2006) and Peru (19/12/2007) | Status of future project phases: | Currently conducting a life cycle assessment with the project unspent balance to assess the economic efficiency of replacing PCB contaminated transformers by more efficient and non-contaminated ones. |

Project rationale

1. Polychlorinated biphenyls (PCBs) is one of the twelve original Persistent Organic Pollutants (POPs) covered by the Stockholm Convention^[1]. They possess properties including longevity, heat absorbance and form an oily liquid at room temperature that is useful for electrical utilities, such as transformers and other industrial applications.^[2] POPs such as PCB possess toxic properties, resist degradation, bioaccumulate and are transported through air, water and migratory species, across international boundaries and deposited far from their place of release, where they accumulate in terrestrial and aquatic ecosystems. Potentially, there exist in the region significant amounts of POPs including PCBs that could, if not properly managed, contaminate the terrestrial and aquatic ecosystems.

⁴¹As per Project Document, project has been extended three times

^[1] <http://chm.pops.int/Home/tabid/2121/Default.aspx>

^[2] Ibid.

2. The parties to the Stockholm Convention can no longer produce PCBs and are obliged to stop using this chemical. However, existing equipment that contains or is contaminated with PCBs may continue to be used until 2025 pursuant to local regulation. It has been acknowledged that in order to cease the PCB contaminated equipment use by 2025, parties, especially those that are developing countries or countries with economies in transition, will need support i) To complete national inventories of all PCBs and related contaminated equipment; ii) To improve the capacity and increase the knowledge of PCB equipment owners on proper maintenance of equipment to avoid further contamination; and iii) To establish proper storage of discontinued equipment and to ensure disposal of all the PCB oils and contaminated equipment in an environmentally sound manner.^[3]

3. Chile and Peru ratified the Stockholm Convention in 2005 and are acting to reduce or eliminate emissions that come from stockpiles and wastes from chemical products listed in Annex A or B of the Convention, and to manage stockpiles as appropriate, in a safe, efficient and environmental sound manner. Both countries have indicated PCB management as one of the National Priorities under the National Implementation Plan (NIP) process. The preliminary inventory of PCB in both countries focused mainly on the electrical sectors leaving progress in the mining sector -a key player in the development of both countries- a bit delayed with isolated improvements. In collaboration with the mining industry, the Governments of Peru and Chile elaborated with GEF funds and UN Environment support this medium-sized project the development of pilot projects, to pilot test the management plans developed and fully funded by large and medium-sized mining companies.

Project objectives and components

4. The goal of the project was to protect human health and the environment from persistent organic pollutants – the main objective of the Stockholm Convention. Its overall objective was stated as *‘to establish a regional coordinated approach to obtain best environmental practices for sound management of PCB within the mining sector of South America and subsequently improve PCB sound environmental management, through the awareness of potentially unknown PCB sources and the development of tools to identify them’*. Measured against a set of 4 indicators: i) Number of mining companies and regulatory entities participating in developing the regulatory elements and procedures for PCB management in the mining sector; ii) Number of mining companies participating in the partnership programme for ESM of PCB; iii) Number of laboratories trained and able to perform PCB analysis and iv) Number of mining companies and PCB regulatory entities participating in identifying good practices.

5. The project was structured along four components captured in four outcome statements as presented in table 2 below.

Table 2. Project Results and indicators as per the project document

| Results | Indicators |
|--|--|
| Outcome 1: Development of regulations and technical standard for management of PCB in the Region | 1. Development of technical standard procedures and regulations for ESM of PCB within the mining sector for PCB holders and suppliers of mining companies 2. Number of technical guidelines updated and available |
| Outcome 2: Development of partnerships with mining industries and mining industry associations for profitable and environmental management sound of PCB | 1. Number of partnerships developed between the government, mining companies and equipment 2. Number of PCB management plans (MP) developed 3. Number of PCB management plans implemented |

^[3] Ibid.

| | |
|--|--|
| <p>Outcome 3: PCB analytical assessment (including PCB skills, sampling, investigation and analysis by the laboratories) within the mining sector</p> | <p>1. Number of equipment and samples analysed, and mine staff trained 2. Number of laboratories participating in the standardize procedures activity</p> |
| <p>Outcome 4: Identification of good practices and reproducible elements for EMS of PCB for the mining sector.</p> | <p>1. Number of mining companies participating in evaluating PCB management practices\ 2. Number of mining companies participating in the identification of good practices 3. Number of mining companies participating in the development of BAT/BEP</p> |

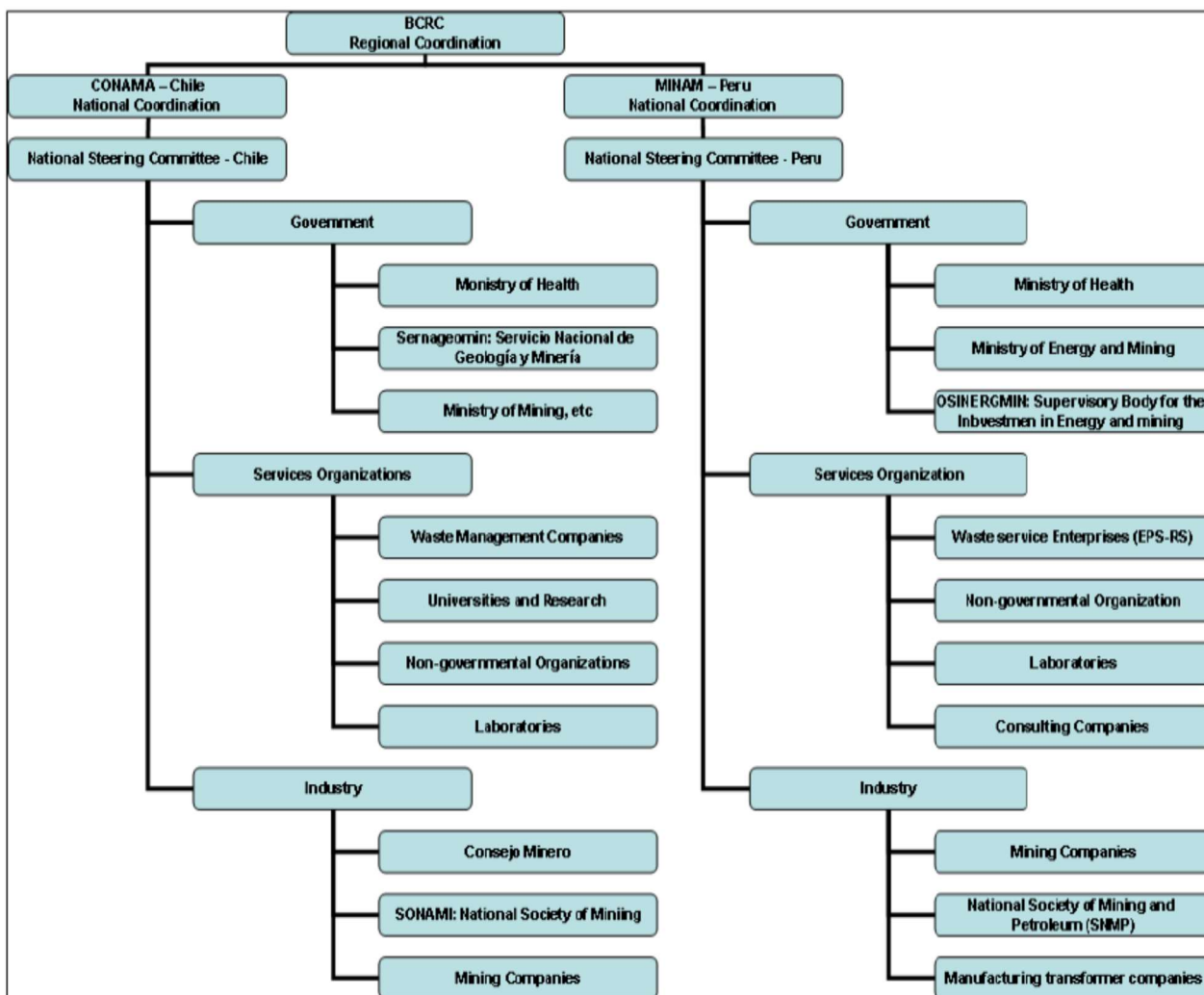
Executing Arrangements

6. The project was implemented by UN Environment's GEF Unit, Chemicals and Health Branch, within the Economy Division (Geneva) in closer coordination with the UN Environment Regional Office for Latin America (Panama City). The Basel Convention Regional Centre for South American Region for Training and Technology Transfer (BCRC), Buenos Aires, served as Executing Agency. A Steering Committee, composed by representatives of the relevant line ministries from Chile and Peru e.g. the previous Comisión Nacional para el Medio Ambiente de Chile (CONAMA), today Ministerio de Medio Ambiente, (MMA) and Ministerio del Ambiente del Peru (MINAM), donors and representatives from the Implementing and Executing Agency provided strategic guidance for the delivery of project outputs.

7. The Executing Agency established an office for the project and appointed a Regional Coordinator (RC) reporting to the Project Steering Committee (PSC), UN Environment and the local and provincial executing organisms.

8. In each participating country, a National Steering Committee (NSC) composed by representatives of line ministries, mining industry and its associations, hazardous wastes management companies and relevant NGOs coordinated the delivery of project outputs. Each NSC contributed to supervise the Regional Coordinator. Figure 1 below provides an overview of the planed organizational structure.

Figure 1: Organizational Chart at regional level



Source: Project Document (Appendix 10)

Project Cost and Financing

9. The project was a medium size GEF project with total expected cost of 2,392,461.20. GEF funding for the project was 818,300 USD. Table 3 below summarizes the over project cost and funding sources at design.

Table 3. Project costs at design

| | | USD |
|-----------------------------------|--|------------|
| Cost to the GEF Trust Fund | | 818,300 |
| Co-financing in cash | | |
| | Government of Finland through Basel secretariat | 100,000 |
| | Minera Volcan | 593,161.20 |
| Co-financing In -kind | | |
| | Comision Nacional para el Medio Ambiente de Chile (CONAMA) | 150,000 |
| | Ministerio del Ambiente del Peru (MINAM) | 150,000 |

| | | |
|--|--|---------------------|
| | Consejo Minero, Chile | 150,000 |
| | OSINERGMIN | 100,000 |
| | Basel Regional Center for South America (BCRC) | 250,000 |
| | Basel Secretariat | 16,000 |
| | UNEP DTIE (Chemicals Branch) | 25,000 |
| | Minera Sta-Luisa, Peru | 40,000 |
| | Sub-total in-kind co-financing | 881,000 |
| | TOTAL | 2,392,461.20 |

Implementation Issues

10. The project was planned to deliver results in 18 months. Delays due changes in areas of governments and ministries, plus in administrative processes and authorizations i.e. to obtain licenses and permits from the relevant authorities to conduct inventories, management plan and pilot test PCB treatment in several mining sites are reported as reasons leading to extend the project duration to 48 months.

11. The vacuum created with the departure of the project Task Manager and the Financial Management Officer in 2014 also resulted in delays in the project closure.

12. The Project Implementation Review (PIR) 2015 describes in detail the issues related to the project delays. The Risk Factor table identifies following areas as medium or substantial risks: 1) workflow issues due to partner agreements and changes in staff, 2) political factors and context, 3) participation of the key industry in project activities, and 4) challenges to find national consultants with the required expertise.

13. When closing the project cycle, the Implementation Agency in closer consultation with the Executing Agency, decided in early 2018 to use the \$ 50,000 still available from the GEF trust to conduct a socio-economic study, considered strategic to sustain project results. In doing so, the project was extended until September 2018.

Section 2. OBJECTIVE AND SCOPE OF THE EVALUATION

Key Evaluation principles

14. Evaluation findings and judgements should 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.

15. **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 should 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 consultants need 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.

16. **Baselines and counterfactuals.** In attempting to attribute any outcomes and impacts to the project intervention, the evaluators should consider the difference between *what has happened with, and what would have happened without, the project*. This implies that there should be consideration of the baseline conditions, trends and counterfactuals in relation to the intended project outcomes and impacts. It also means that there should be plausible evidence to attribute such outcomes and impacts to the actions of the project. Sometimes, adequate information on baseline conditions, trends

or counterfactuals is lacking. In such cases this should be clearly highlighted by the evaluators, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgements about project performance.

17. **Communicating evaluation results.** A key aim of the evaluation is to encourage reflection and learning by UN Environment staff and key project stakeholders. The consultant 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 Evaluation Manager will plan with the consultant(s) 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.

Objective of the Evaluation

18. In line with the UN Environment Evaluation Policy⁴² and the UN Environment Programme Manual⁴³, the Terminal Evaluation (TE) 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 UN Environment and BCRC. Therefore, the evaluation will identify lessons of operational relevance for future project formulation and implementation.

Key Strategic Questions

19. 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 UN Environment and to which the project is believed to be able to make a substantive contribution:

- (a) Under institutional sustainability, to what extent and how did the project contribute to a better understanding of the PCB life cycle in the mining sector and to inform regulatory and analytical innovations in PCB life cycle management in Chile and Peru?
- (b) To what extent and how did medium and large mining companies contribute to the development and implementation of pilot projects for the sound management of PCB in the mining sector in Chile and Peru?
- (c) To what extent and how did the project promote replication of best environmental practices (BEP) in compliance with the Stockholm Convention on POPs in other Latin American countries and world regions?
- (d) Under efficiency, what was the cost of the several 'no cost extensions' against the GEF trust fund and, if there was a cost, how and by whom was it covered?

Evaluation Criteria

20. 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;

⁴² <http://www.unep.org/eou/StandardsPolicyandPractices/UNEPevaluationPolicy/tabid/3050/language/en-US/Default.aspx>

⁴³ http://www.unep.org/QAS/Documents/UNEP_Programme_Manual_May_2013.pdf. *This manual is under revision.*

(B) Quality of Project Design; (C) Nature of External Context; (D) Effectiveness, which comprises assessments of the delivery 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 consultants can propose other evaluation criteria as deemed appropriate.

Strategic Relevance

21. The evaluation will assess, in line with the OECD/DAC definition of relevance, '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 UN Environment's mandate and its alignment with UN Environment'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:

- i. *Alignment to the UN Environment Medium Term Strategy⁴⁴ (MTS) and Programme of Work (POW)*

22. 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.

- ii. *Alignment to UN Environment / Donor/GEF Strategic Priorities*

23. Donor, including GEF, strategic priorities will vary across interventions. UN Environment strategic priorities include the Bali Strategic Plan for Technology Support and Capacity Building⁴⁵ (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. GEF priorities are specified in published programming priorities and focal area strategies.

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

24. The evaluation will assess 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. Examples may include: national or sub-national development plans, poverty reduction strategies or Nationally Appropriate Mitigation Action (NAMA) plans or regional agreements etc.

- iv. *Complementarity with Existing Interventions*

25. An assessment will be made of how well the project, either at design stage or during the project mobilization, took account of ongoing and planned initiatives (under the same sub-programme, other UN Environment sub-programmes, or being implemented by other agencies) 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 UN Environment's comparative advantage has been particularly well applied should be highlighted.

Factors affecting this criterion may include:

- Stakeholders' participation and cooperation

⁴⁴UN Environment's Medium-Term Strategy (MTS) is a document that guides UN Environment's programme planning over a four-year period. It identifies UN Environment's thematic priorities, known as Sub-programmes (SP), and sets out the desired outcomes, known as Expected Accomplishments (EAs), of the Sub-programmes.

⁴⁵<http://www.unep.org/GC/GC23/documents/GC23-6-add-1.pdf>

- Responsiveness to human rights and gender equity
- Country ownership and driven-ness

Quality of Project Design

26. 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.unep.org/evaluation). 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

27. 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). 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

Delivery of Outputs

28. The evaluation will assess the project's success in producing the programmed outputs (*products, capital goods and services resulting from the intervention*) 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 delivery 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 delivery. 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 supervision⁴⁶

Achievement of Direct Outcomes

29. The achievement of direct outcomes (*short and medium-term effects of the intervention's outputs; a change of behaviour resulting from the use/application of outputs, which is not under the direct control of the intervention's direct actors*) is assessed as performance against the direct

⁴⁶ In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment 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 UN Environment.

outcomes as defined in the reconstructed⁴⁷ Theory of Change. These are the first-level outcomes expected to be achieved as an immediate result of project outputs. As in 1, above, a table can be used where substantive amendments to the formulation of direct outcomes is necessary. The evaluation should report evidence of attribution between UN Environment's intervention and the direct outcomes. In cases of normative work or where several actors are collaborating to achieve common outcomes, evidence of the nature and magnitude of UN Environment's 'substantive contribution' should be included and/or 'credible association' established between project efforts and the direct 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

Likelihood of Impact

30. Based on the articulation of longer-term effects in the reconstructed TOC (*i.e. from direct 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-term 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, web.unep.org/evaluation and is supported by an excel-based flow chart, 'Likelihood of Impact Assessment Decision Tree'. Essentially the approach follows a 'likelihood tree' from direct 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.

31. The evaluation will also consider the likelihood that the intervention may lead, or contribute to, unintended negative effects. 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.⁴⁸

32. The evaluation will consider the extent to which the project has played a catalytic role or has promoted scaling up and/or replication⁴⁹ as part of its Theory of Change and as factors that are likely to contribute to longer term impact.

33. Ultimately UN Environment 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 high-level changes represented by UN Environment's Expected Accomplishments, the Sustainable Development Goals⁵⁰ and/or the high-level results prioritised by the funding partner.

Factors affecting this criterion may include:

- Quality of Project Management and Supervision (including adaptive management)

⁴⁷UN Environment staff are currently required to submit 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 changes made to the project design. In the case of projects pre-dating 2013 the intervention logic is often represented in a logical framework and a TOC will need to be constructed in the inception stage of the evaluation.

⁴⁸ Further information on Environmental, Social and Economic Safeguards (ESES) can be found at <http://www.unep.org/about/eses>

⁴⁹*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.

⁵⁰ A list of relevant SDGs is available on the EO website www.unep.org/evaluation

- Stakeholders participation and cooperation
- Responsiveness to human rights and gender equity
- Country ownership and driven-ness
- Communication and public awareness

E. Financial Management

34. Financial management will be assessed under two themes: *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 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. The evaluation will verify the application of proper financial management standards and adherence to UN Environment'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.

Factors affecting this criterion may include:

- Preparation and readiness
- Quality of project management and supervision

F. Efficiency

35. In keeping with the Economic Cooperation and Development/Development Assistance Committee (OECD/DAC) definition of efficiency 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.

36. The evaluation will give special attention to efforts by the project teams to make use of/build upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities 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 UN Environment's environmental footprint.

37. 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
- Stakeholders participation and cooperation

G. Monitoring and Reporting

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

Monitoring Design and Budgeting

39. Each project should be supported by a sound monitoring plan that is designed to track progress against SMART⁵¹ indicators towards the delivery of the project outputs and achievement of direct outcomes, including at a level disaggregated by gender, vulnerability or marginalisation. 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.

Monitoring of Project Implementation

40. 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 should include monitoring the representation and participation of disaggregated groups in project activities. It will also consider how information generated by the monitoring system during project implementation 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.

Project Reporting

41. UN Environment has a centralised Project Information Management System (PIMS) in which project managers upload six-monthly status 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 UN Environment and donor reporting commitments have been fulfilled.

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

42. Sustainability is understood as the probability of direct 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 persistence of achieved direct outcomes (i.e. '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 over the life of the intervention. Where applicable an assessment of bio-physical factors that may affect the sustainability of direct outcomes may also be included.

Socio-political Sustainability

43. The evaluation will assess the extent to which social or political factors support the continuation and further development of project direct 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.

⁵¹ SMART refers to indicators that are specific, measurable, assignable, realistic and time-specific.

Financial Sustainability

44. Some direct 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 direct 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 direct outcomes of a project 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.

Institutional Sustainability

45. 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

Factors and Processes Affecting Project Performance

(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)

Preparation and Readiness

46. 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).*

Quality of Project Management and Supervision

47. In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment 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 UN Environment.

48. 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.); communication and collaboration with UN Environment colleagues; risk management; use of problem-solving; project adaptation and overall project execution. Evidence of adaptive management should be highlighted.

Stakeholder Participation and Cooperation

49. 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 UN Environment. 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.

Responsiveness to Human Rights and Gender Equity

50. 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 UN Environment's Policy and Strategy for Gender Equality and the Environment.

51. In particular the evaluation will consider to what extent project design, implementation and monitoring have taken into consideration: (i) possible gender inequalities in access to, and the control over, natural resources; (ii) specific vulnerabilities of women and children to environmental degradation or disasters; and (iii) the role of women in mitigating or adapting to environmental changes and engaging in environmental protection and rehabilitation.

Country Ownership and Driven-ness

52. 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, i.e. either a) moving forwards from outputs to direct outcomes or b) moving forward from direct 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. 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. This ownership should adequately represent the needs of interest of all gendered and marginalised groups.

Communication and Public Awareness

53. 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

54. 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) should 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.)

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

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

- Relevant background documentation, inter alia UNEP Medium-Term Strategy for 2010-2013; 2014-2017 and the respective Programmes of Work;
- Project design documents (including GEFSEC and Project Review Committee meeting minutes at approval); Annual Work Plans and Budgets or equivalent, revisions to the project (Project Document Supplement), 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 and Tracking Tool; Informe Final Proyecto Mejores Practicas para el Manejo de Bifenilos Policlorados en el Sector Minero de Sudamerica - Noviembre 2015.
- Project outputs: PCB national assessments; management plans and training material for laboratories
- Evaluations/reviews of similar projects.

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

- UN Environment Task Manager (TM); Ms Giovanna Moire
- Project management team; Mr Alberto Capra, regional project coordinator and Ms Leila Devia Director of the BCRC
- UN Environment Fund Management Officer (FMO); Ms Anuradha Shenoy
- Sub-Programme Coordinator; Ms Tessa Goverse
- Project partners, including MMA, Minera Volcan, Consejo Minero, CENMA in Chile; MINAM, Minera Santa Luisa and OSIMERGIN in Peru;
- Relevant resource persons.

(c) **Surveys** [to be defined during inception]

(d) **Field visits** to Lima, Peru and Ciudad de Buenos Aires, Argentina

(e) **Other data collection tools** [to be defined during inception]

Evaluation Deliverables and Review Procedures

56. 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.
- **Evaluation Bulletin:** a 2-page summary of key evaluation findings for wider dissemination through the EOU website.

57. **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 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 team 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 team for consideration in preparing the final report, along with guidance on areas of contradiction or issues requiring an institutional response.

58. 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.

59. The Evaluation Manager will prepare a **quality assessment** of the first and final drafts of the main evaluation report, which acts as a tool for providing structured feedback to the evaluation consultants. The quality of the 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.

60. 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.

The Evaluation Consultant

61. For this evaluation, the evaluation team will consist of a Consultant who will work under the overall responsibility of the Evaluation Office represented by an Evaluation Manager Mr Francisco Alarcon in consultation with the UN Environment Task Manager Mr Kevin Helps and Mrs Giovanna Moire, Fund Management Officer Ms Anuradha Shenoy and the Coordinator of the Chemicals and Waste Sub-programme Ms Tessa Goverse. The consultant will liaise with the Evaluation Manager on any procedural and methodological matters related to the evaluation. It is, however, the consultants' 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 UN Environment 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.

62. The consultant will be hired for 6 months spread over the period 15 May to 14 November 2018 and should have: an advanced university degree in environmental sciences, international development or other relevant political or social sciences area; a minimum of 7 years of technical / evaluation experience, including of evaluating large, regional or global programmes and using a Theory of Change approach; a broad understanding of the Stockholm Convention; expert knowledge in PCB cycle; proficiency in Spanish along with excellent writing skills in English; team leadership experience and, where possible, knowledge of the UN system, specifically of the work of UN Environment.

63. The consultant will be responsible, in close consultation with the Evaluation Office of UN Environment, for overall management of the evaluation and timely delivery of its outputs, described above in Section 11 Evaluation Deliverables, above. The consultant will ensure that all evaluation criteria and questions are adequately covered.

64. In close consultation with the Evaluation Manager, the Evaluation Consultant will be responsible for the overall management of the evaluation and timely delivery of its outputs, data collection and analysis and report-writing. 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);
- develop and present criteria for country and/or site selection for the evaluation mission;
- plan the evaluation schedule;
- 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, project partners and project stakeholders;
- (where appropriate and agreed) conduct an evaluation mission(s) to selected countries, visit the project locations, interview project partners and stakeholders, including a good representation of local communities. 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 Project/Task Manager informed of the evaluation progress and engage the Project/Task Manager in discussions on emerging findings throughout the evaluation process.

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
- prepare a 2-page summary of 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;
- communicate in a timely manner with the Evaluation Manager on any issues requiring its attention and intervention.

Schedule of the evaluation

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

Table 3. Tentative schedule for the evaluation

| Milestone | Tentative Dates |
|---|------------------------|
| Desk Review | Mid May 2018 |
| Inception Report | Jun 2018 |
| Telephone interviews, surveys etc | Late June 2018 |
| Evaluation Mission – Buenos Aires and Lima | July 2018 |
| PowerPoint/presentation on preliminary findings and recommendations | July 2018 |
| Draft report to Evaluation Manager (and Peer Reviewer) | Early August 2018 |
| Draft Report shared with UN Environment Project Manager and team | Mid-August 2018 |
| Draft Report shared with wider group of stakeholders | End August 2018 |
| Final Report | September 2018 |
| Final Report shared with all respondents | Mid-September 2018 |

Contractual Arrangements

66. The Evaluation Consultant will be selected and recruited by the Evaluation Office of UN Environment under an individual Special Service Agreement (SSA) on a “fees only” basis (see below). By signing the service contract with UN Environment/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.

67. 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:

68. Schedule of Payment for the Consultant:

| Deliverable | Percentage Payment |
|---|---------------------------|
| Approved Inception Report (<i>as per annex document 7</i>) | 30% |
| Approved Draft Main Evaluation Report (<i>as per annex document 13</i>) | 30% |
| Approved Final Main Evaluation Report | 40% |

69. Fees only contracts: Air tickets will be purchased by UN Environment 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.


70. In case the consultant is not able to provide the deliverables in accordance with these guidelines, and in line with the expected quality standards by the UN Environment 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 UN Environment’s quality standards.

71. If the consultant fail to submit a satisfactory final product to UN Environment 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 1: Tools, Templates and Guidance Notes for use in the Evaluation

The tools, templates and guidance notes listed in the table below, and available on the Evaluation Office website (www.unep.org/evaluation), are intended to help Evaluation Managers and Evaluation Consultants to produce evaluation products that are consistent with each other and which can be compiled into a biennial Evaluation Synthesis Report. The biennial summary is used to provide an overview of progress to UN Environment and the UN Environmental Assembly. This suite of documents is also intended to make the evaluation process as transparent as possible so that all those involved in the process can participate on an informed basis. It is recognised that the evaluation needs of projects and portfolio vary, and adjustments may be necessary so that the purpose of the evaluation process (broadly, accountability and lesson learning), can be met. Such adjustments should be decided between the Evaluation Manager and the Evaluation Consultant in order to produce evaluation reports that are both useful to project implementers and that produce credible findings.

ADVICE TO CONSULTANTS: *tools, templates and guidance notes are updated on a continuous basis. Kindly download documents from these links during the Inception Phase and use those versions throughout the evaluation.*

| Document | Name | URL link |
|----------|--|--|
| 1 | Evaluation Process Guidelines for Consultants | Link |
| 2 | Evaluation Consultants Team Roles (<i>Team Leader and Supporting Consultant</i>) | Link |
| 3 | Evaluation Criteria (<i>summary of descriptions, as in these terms of reference</i>) | Link |
| 4 | Evaluation Ratings Table | Link |
| 5 | Matrix Describing Ratings by Criteria | Link |
| 6 | Weighting of Ratings (excel) | Link |
| 7 | Project Identification Tables (GEF and non-GEF) | Link |
| 7 | Structure and Contents of the Inception Report | Link |
| 8 | Template for the Assessment of the Quality of Project Design | Link |
| 9 | Guidance on Stakeholder Analysis | Link |
| 10 | Use of Theory of Change in Project Evaluations | Link |
| 11 | Assessment of the Likelihood of Impact Decision Tree (Excel) | Link |
| 12 | Possible Evaluation Questions | Link |
| 13 | Structure and Contents of the Main Evaluation Report | Link |
| 14 | Cover Page, Prelims and Style Sheet for Main Evaluation Report | Link |
| 15 | Financial Tables | Link |
| 16 | Template for the Assessment of the Quality of the Evaluation Report | Link |
| 17 | Gender Methods Note for Consultants |  13. Gender Methods Note for C |

Annex VIII. Quality assessment of the final evaluation report

All UN Environment 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. Nevertheless, the quality assessment is used as a tool for providing structured feedback to evaluation consultants, especially at draft report stage. This guidance is provided to support consistency in assessment across different Evaluation Managers and to make the assessment process as transparent as possible.

| | UN Environment Evaluation Office Comments | Final Report Rating |
|--|--|---------------------|
| Substantive Report Quality Criteria | | |
| <p>Quality of the Executive Summary:</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> | Final report: The executive summary is well presented. | S |
| <p>I. Introduction</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> | Final report: The introduction includes all the required elements and is well presented. | S |
| <p>II. Evaluation Methods</p> <p>This section should include a description of how the <i>TOC at Evaluation</i>⁵² was designed (who was involved etc.) and applied to the context of the project?</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</p> | Final report: The evaluation methods have been well described. | S |

⁵² During the Inception Phase of the evaluation process a *TOC at Design* is created based on the information contained in the approved project documents (these may include either logical framework or a TOC or narrative descriptions). During the evaluation process this TOC is revised based on changes made during project intervention and becomes the *TOC at Evaluation*.

| | UN Environment Evaluation Office Comments | Final Report Rating |
|--|---|---------------------|
| <p>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>III. The Project</p> <p>This section should include:</p> <ul style="list-style-type: none"> • <i>Context</i>: 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). • <i>Objectives and components</i>: Summary of the project's results hierarchy as stated in the ProDoc (or as officially revised) • <i>Stakeholders</i>: Description of groups of targeted stakeholders organised according to relevant common characteristics • <i>Project implementation structure and partners</i>: A description of the implementation structure with diagram and a list of key project partners • <i>Changes in design during implementation</i>: Any key events that affected the project's scope or parameters should be described in brief in chronological order • <i>Project financing</i>: Completed tables of: (a) budget at design and expenditure by components (b) planned and actual sources of funding/co-financing | Final report: The project has been well described. | HS |
| <p>IV. Theory of Change</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>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 OECD/DAC 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. <i>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'.</i></p> | Final report: The ToC has been well presented. The drivers and assumptions affecting the different impact pathways could have been described more clearly in the narrative. | S |

| | UN Environment Evaluation Office Comments | Final Report Rating |
|--|--|---------------------|
| <p>V. Key Findings</p> <p>A. Strategic relevance:</p> <p>This section should include an assessment of the project's relevance in relation to UN Environment's mandate and its alignment with UN Environment's policies and strategies at the time of project approval. An assessment of the complementarity of the project 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"> v. Alignment to the UN Environment Medium Term Strategy (MTS) and Programme of Work (POW) vi. Alignment to UN Environment/ Donor/GEF Strategic Priorities vii. Relevance to Regional, Sub-regional and National Environmental Priorities viii. Complementarity with Existing Interventions | Final report: Relevance has been adequately discussed. | S |
| <p>B. Quality of Project Design</p> <p>To what extent are the strength and weaknesses of the project design effectively <u>summarized</u>?</p> | Final report: The strengths and weaknesses of the project design have been well summarized. | S |
| <p>C. Nature of the External Context</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), and how they affected performance, should be described.</p> | Final report: The assessment of the nature of the external context is well presented. | S |
| <p>D. Effectiveness</p> <p>(i) Outputs and Direct Outcomes: How well does the report present a well-reasoned, complete and evidence-based assessment of the a) delivery of outputs, and b) achievement of direct 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> | Final report: The report presents a good assessment of effectiveness. | S |
| <p>(ii) Likelihood of Impact: 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?</p> <p>How well are change processes explained and the roles of key actors, as well as drivers and assumptions, explicitly discussed?</p> <p>Any unintended negative effects of the project should be discussed under Effectiveness, especially negative effects on disadvantaged groups.</p> | Final report: Likelihood of impact has been well discussed. The discussion is grounded on ToC. | MS |

| | UN Environment Evaluation Office Comments | Final Report Rating |
|--|---|---------------------|
| <p>E. Financial Management</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"> • <i>completeness</i> of financial information, including the actual project costs (total and per activity) and actual co-financing used • <i>communication</i> between financial and project management staff | Final report: The section has been rated MS due to the limited financial information provided by the project. | MS |
| <p>F. Efficiency</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"> • Implications of delays and no cost extensions • Time-saving measures put in place to maximise results within the secured budget and agreed project timeframe • Discussion of making use of/building on pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects etc. • The extent to which the management of the project minimised UN Environment's environmental footprint. | Final report: Efficiency has been adequately discussed. The MS rating is due to lack of information (financial) that limited the depth of the assessment. | MS |
| <p>G. Monitoring and Reporting</p> <p>How well does the report assess:</p> <ul style="list-style-type: none"> • Monitoring design and budgeting (<i>including SMART indicators, resources for MTE/R etc.</i>) • Monitoring of project implementation (<i>including use of monitoring data for adaptive management</i>) • Project reporting (<i>e.g. PIMS and donor report</i>) | Final report: Monitoring and reporting have been well discussed. | S |
| <p>H. Sustainability</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 direct outcomes including:</p> <ul style="list-style-type: none"> • Socio-political Sustainability • Financial Sustainability • Institutional Sustainability | Final report: Sustainability has been adequately discussed. | MS |
| <p>I. Factors Affecting Performance</p> <p>These factors are <u>not</u> discussed in stand-alone sections but are integrated in criteria A-H as appropriate. 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"> • Preparation and readiness | Final report: Factors affecting performance have been well discussed. | S |

| | UN Environment Evaluation Office Comments | Final Report Rating |
|--|--|---------------------|
| <ul style="list-style-type: none"> • Quality of project management and supervision⁵³ • Stakeholder participation and co-operation • Responsiveness to human rights and gender equity • Country ownership and driven-ness • Communication and public awareness | | |
| <p>VI. Conclusions and Recommendations</p> <p>i. Quality of the conclusions: 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> | Final report: Conclusions have been adequately presented. | MS |
| <p>ii) Quality and utility of the lessons: 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 must have the potential for wider application and use and should briefly describe the context from which they are derived and those contexts in which they may be useful.</p> | Final report: Lessons have been adequately presented. | MS |
| <p>iii) Quality and utility of the recommendations: 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 UN Environment 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> | Final report: Recommendations have been well formulated. | S |
| <p>VII. Report Structure and Presentation Quality</p> | | |
| <p>i) Structure and completeness of the report: To what extent does the report follow the Evaluation Office guidelines? Are all requested Annexes included and complete?</p> | Final report: The report carefully follows EOU guidelines. | HS |

⁵³ In some cases 'project management and supervision' will refer to the supervision and guidance provided by UN Environment 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 UN Environment.

| | UN Environment Evaluation Office Comments | Final Report Rating |
|--|--|---------------------|
| ii) Quality of writing and formatting: 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? | Final report: The quality of writing and formatting is good. | S |
| OVERALL REPORT QUALITY RATING | | S |

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.

At the end of the evaluation, compliance of the evaluation process against the agreed standard procedures is assessed, based on the table below. *All questions with negative compliance must be explained further in the table below.*

| Evaluation Process Quality Criteria | Compliance | |
|---|------------|----|
| | Yes | No |
| Independence: | | |
| 1. Were the Terms of Reference drafted and finalised by the Evaluation Office? | x | |
| 2. Were possible conflicts of interest of proposed Evaluation Consultant(s) appraised and addressed in the final selection? | n/a | |
| 3. Was the final selection of the Evaluation Consultant(s) made by the Evaluation Office? | x | |
| 4. Was the evaluator contracted directly by the Evaluation Office? | x | |
| 5. Was the Evaluation Consultant given direct access to identified external stakeholders in order to adequately present and discuss the findings, as appropriate? | x | |
| 6. Did the Evaluation Consultant raise any concerns about being unable to work freely and without interference or undue pressure from project staff or the Evaluation Office? | | x |
| 7. If Yes to Q6: Were these concerns resolved to the mutual satisfaction of both the Evaluation Consultant and the Evaluation Manager? | | |
| Financial Management: | | |
| 8. Was the evaluation budget approved at project design available for the evaluation? | x | |
| 9. Was the final evaluation budget agreed and approved by the Evaluation Office? | x | |
| 10. Were the agreed evaluation funds readily available to support the payment of the evaluation contract throughout the payment process? | x | |
| Timeliness: | | |
| 11. If a Terminal Evaluation: Was the evaluation initiated within the period of six months before or after project operational completion? Or, if a Mid Term Evaluation: Was the evaluation initiated within a six-month period prior to the project's mid-point? | x | |
| 12. Were all deadlines set in the Terms of Reference respected, as far as unforeseen circumstances allowed? | | x |
| 13. Was the inception report delivered and reviewed/approved prior to commencing any travel? | x | |
| Project's engagement and support: | | |

| | | |
|---|---|---|
| 14. Did the project team, Sub-Programme Coordinator and identified project stakeholders provide comments on the evaluation Terms of Reference? | x | |
| 15. Did the project make available all required/requested documents? | x | |
| 16. Did the project make all financial information (and audit reports if applicable) available in a timely manner and to an acceptable level of completeness? | | x |
| 17. Was adequate support provided by the project to the evaluator(s) in planning and conducting evaluation missions? | x | |
| 18. Was close communication between the Evaluation Consultant, Evaluation Office and project team maintained throughout the evaluation? | x | |
| 19. Were evaluation findings, lessons and recommendations adequately discussed with the project team for ownership to be established? | x | |
| 20. Did the project team, Sub-Programme Coordinator and any identified project stakeholders provide comments on the draft evaluation report? | x | |
| Quality assurance: | | |
| 21. Were the evaluation Terms of Reference, including the key evaluation questions, peer-reviewed? | | |
| 22. Was the TOC in the inception report peer-reviewed? | x | |
| 23. Was the quality of the draft/cleared report checked by the Evaluation Manager and Peer Reviewer prior to dissemination to stakeholders for comments? | x | |
| 24. Did the Evaluation Office complete an assessment of the quality of both the draft and final reports? | x | |
| Transparency: | | |
| 25. Was the draft evaluation report sent directly by the Evaluation Consultant to the Evaluation Office? | x | |
| 26. Did the Evaluation Manager disseminate (or authorize dissemination) of the cleared draft report to the project team, Sub-Programme Coordinator and other key internal personnel (including the Reference Group where appropriate) to solicit formal comments? | x | |
| 27. Did the Evaluation Manager disseminate (or authorize dissemination) appropriate drafts of the report to identified external stakeholders, including key partners and funders, to solicit formal comments? | x | |
| 28. Were stakeholder comments to the draft evaluation report sent directly to the Evaluation Office | x | |
| 29. Did the Evaluation Consultant(s) respond to all factual corrections and comments? | x | |
| 30. Did the Evaluation Office share substantive comments and Evaluation Consultant responses with those who commented, as appropriate? | x | |

Provide comments / explanations / mitigating circumstances below for any non-compliant process issues.

| Process Criterion Number | Evaluation Office Comments |
|--------------------------|---|
| 12 | The evaluation process took longer than originally envisaged. |
| | |