

Mid-Term Review of the UNEP Project

Reducing global environmental risks through the
monitoring and development of alternative livelihood
for the primary mercury mining sector in Mexico



May 2025



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Front cover: Church in Bucareli

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Mid-Term Review of the UNEP/GEF project: “Reducing global environmental risks through the monitoring and development of alternative livelihood for the primary mercury mining sector in Mexico”

(GEF Project ID: 10086)

(Date 01/2025)

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This Mid Term Review was prepared for UNEP/GEF by Paul Cordy

The reviewer would like to express their gratitude to all persons met and who contributed to this review, as listed in Annex 1.

The review team would like to thank the project team in particular National Institute of Ecology and Climate Change (INECC) for their contribution and collaboration throughout the review process.

The review consultant(s) hopes that the findings, conclusions and recommendations will contribute to the successful finalisation of the current project, formulation of a next phase and to the continuous improvement of similar projects in other countries and regions.

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BRIEF EXTERNAL CONSULTANT(S) BIOGRAPHY

Paul Cordy

Over the past 15 years, Paul has worked to assess and reduce environmental impacts by artisanal miners with USAID, the GEF, UNDP, UNEP, UNIDO, Global Affairs Canada, and various NGOs in more than 30 countries. Paul has direct experience with all aspects of international development project management from proposal to planning, implementation, monitoring, and terminal evaluation. The latter includes cross programmatic evaluations of programs aimed at helping increase Minamata ratifications and implementation, addressing transnational contamination, and promotion of global chemicals recycling programs.

ABOUT THE REVIEW

Joint Review: No

Report Language(s): English.

Review Type: Mid-term Review

Brief Description: This report is a management-led Mid Term Review of a UNEP/GEF project implemented between 2020 and 2025. The project's overall development goal was to eliminate mercury mining in Mexico. The review 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 review 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 UNEP, the GEF and the relevant agencies of the project participating countries.

Key words¹: mercury, Minamata, mining, ASM, alternative livelihoods.

Primary data collection period: August -December 2024

Field mission dates: December 8-14, 2024 (San Joaquin and Camargo communities in Queretaro, Mexico)

¹ Please provide maximum five key words, which are not already in the project title.

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LIST OF ACRONYMS

EA	Executing Agency
EOU	Evaluation Office of UNEP
GE	Green Economy
GEB	Global Environmental Benefits
MC	Minamata Convention
MoU	Memorandum of Understanding
M&E	Monitoring and Evaluation
MTR	Mid Term Review
NGO	Non-Governmental Organisation
PIR	Project Implementation Reports
PoW	Programme of Work
PRC	Project Review Committee (internal UNEP committee that reviews and provides clearance to new projects)
ProDoc	Project Document (must be reviewed by PRC before any project can be undertaken, with the approval of the managing division director)
SC	Sustainable Consumption
SD	Sustainable Development
SDG	Sustainable Development Goals
ToC	Theory of Change
ToR	Terms of Reference
UNEP	United Nations Environment Programme

PROJECT IDENTIFICATION TABLE

Table 1. Project Summary

GEF Project ID/SMA ID ² :	10086/40294		
Implementing Agency (UNEP Division/Branch/Unit):	UNEP Industry and Economy Division (C&W focal areas)	Executing Agency:	National Institute of Ecology and Climate Change (INECC)
Sources of Funding (Co-finance):	Country ³ (ies):		Institution ⁴ Name/Type:
Relevant SDG(s):	3 and 12		
MTS (at approval):		UNEP approval date:	19 February 2021
POW Output(s) number/reference (applicable for projects approved pre-2022)	POW Output:	POW Expected Accomplishment(s) number/reference (applicable for projects approved pre-2022):	POW Expected Accomplishment:
Sub-programme:	Chemicals and pollution action	Programme Coordination Project:	
UNEP approval date:	19 February 2021	GEF approval date:	7 December 2020
GEF Operational Programme #:		GEF Strategic Priority:	
Project type:	Full Size Project	Focal Area(s):	Chemicals and Waste
Expected start date:		Actual start date:	25 June 2021
Planned completion date:	30 June 2026	Actual operational completion date:	
Planned total project budget at approval:	7,035,000 US\$	Actual total expenditures reported as of 31 December 2024:	429,221.41 US\$
GEF grant allocation:	7,035,000 US\$	GEF grant expenditures reported as of December 2024:	7,035,000 US\$
Expected Medium-Size Project/Full-Size Project co-financing:	In-kind: 51,068,844 US\$	Secured Medium-Size Project/Full-Size Project co-financing:	In-kind: 51,068,844 US\$
No. and dates of formal project revisions:	n/a	Date of last approved project revision:	n/a
No. of Steering Committee meetings:	4	Date of Last Steering Committee meeting:	20 August 2024
Mid-term Review/ Evaluation (planned date)	October 2024 ⁵	Mid-term Review/ Evaluation (actual date):	January 2025
Coverage - Country(ies):	Mexico	Coverage - Region(s):	
Dates of previous project phases:	n/a	Status of future project phases:	n/a

² SMA refers to the ID provided by the Integrated Planning, Management and Reporting Solution (IPMR) system, which was introduced by UNEP in July 2023.

³ Where applicable, list countries who have provided project funds and/or co-finance.

⁴ Indicate where funding institutions are any/all of the following: Foundation/NGO; Private Sector; UN Body; Multilateral Fund; Environment Fund.

⁵ Under four years of implementation, MTRs/MTEs are not governed by alternative Donor agreements

Project Background

1. The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury. The legally binding global instrument was agreed at the fifth session of the Intergovernmental Negotiating Committee in Geneva, Switzerland, 19 January 2013. The treaty was formally adopted and opened for signature at the Conference of Plenipotentiaries held from 9 to 11 October 2013 in Minamata and Kumamoto, Japan and it entered into force on 16 August 2017. Up to June 2018, 128 countries had signed the treaty and 94 had ratified it. Rwanda became a Party on 29 June 2017.
2. The Minamata Convention has a phased approach to reduce, and where possible, eliminate mercury use in key industrial sectors. Provisions of the Convention include phase out deadlines established for supply sources and trade, mercury added products, and manufacturing processes in which mercury or mercury compounds are used. Based on these targets, the Convention is designed to systematically reduce emissions and releases to land and water and phase out the use of mercury where alternatives exist.
3. The United Nations Environment Programme (UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and serves as an authoritative advocate for the global environment.
4. The overall objective of the UNEP's Economy Division is to encourage decision makers in government, local authorities and industry to develop and adopt policies, strategies and practices and technologies that promote sustainable patterns of consumption and production, make efficient use of natural resources, ensure safe management of chemicals and contribute to making trade and environment policies mutually supportive. It promotes the development, use and transfer of policies, technologies, economic instruments, managerial practices and other tools that assist in environmentally sound decision making and the building of corresponding activities.
5. The GEF Unit of the Chemicals and Health Branch is responsible for the development and management of all GEF projects implemented by UNEP in the Chemicals and Wastes focal area. To date, the team has a portfolio of 100 projects represented over \$200 mil of GEF investment supporting countries in their implementation of the Stockholm Convention, the Minamata Convention and SAICM.
6. UNEP is the Implementing Agency of the Global Environment Facility (GEF) Chemicals and Waste focal area project named *Reducing global environmental risks through the monitoring and development of alternative livelihood for the primary mercury mining sector in Mexico*.
7. The GEF project "Reducing global environmental risks through the monitoring and development of alternative livelihood for the primary mercury mining sector in Mexico" has been designed to prevent the risks to environment and human health from mercury through the control of primary mercury mining and enabled environmentally and socially sound alternative economic activities and livelihoods in the state of Queretaro. This document concerns the country project in Mexico which is implemented by UN Environment.
8. The selection of Mexico in this GEF country project is based on the country's demonstration of their commitment to the Minamata Convention on Mercury, including their past and current efforts to address primary mercury mining extraction and use in the supply chain. The project has two components: characterisation of primary mercury mining and reinforcement of control mechanisms; and introduction of alternative livelihood.
9. This full size project will contribute to magnify the global environmental benefits of the primary mercury mining situation in Mexico through sharing results achieved and knowledge gained with the global project for recording into the knowledge management platform.

10. The project started in Q3 2021, and having completed 2.5 years of implementation, is now required to have a mid-term review (MTR) of its implementation.
11. In line with the UN Environment Evaluation Policy and the UN Environment Programme Manual, the Mid-Term Review (MTR) is undertaken approximately halfway through project implementation to analyze whether the project is on-track, what problems or challenges the project is encountering, and what corrective actions are required.
12. The MTR will assess project performance to date (in terms of relevance, effectiveness and efficiency), and determine the likelihood of the project achieving its intended outcomes, including their sustainability.
13. Mercury is a naturally occurring silvery grey metal that is liquid at ambient temperature. It is found most commonly in mercury sulphide ore (cinnabar), which has a deep red lustre and which has been used in ornamentation for millennia. Mercury has a high expansion coefficient and amalgamates with several other metals, including gold and silver. These characteristics have led to several important applications, including use in thermometers, blood pressure measuring devices (sphygmomanometers), electric switches and, significantly, as an amalgamate in gold and silver mining operations.
14. Mercury is also highly toxic to humans. Mercury intoxication manifests in neurological and kidney impairments and autoimmune effects. Symptoms may intensify and/or become irreversible as exposure duration and concentration increase. Methylmercury intoxication is commonly known as Minamata disease, after a bay in Japan where methylmercury releases were the source of severe and irreversible effects on human health. Methylmercury, when circulated throughout the body, crosses the blood-brain barrier and accumulates in the central nervous system. Likewise it easily passes through the placenta, directly affecting fetuses in uterus.
15. Cinnabar is somewhat rare, occurring in shallow veins near volcanic areas around the world. In rudimentary mercury mining, cinnabar is crushed and heated. The mercury contained within quickly vaporizes and is captured by a fume hood. The free sulphur combines with oxygen to form sulphur dioxide, an irritant. The resulting quicksilver mercury can be immediately employable in industrial applications. However, because these systems are imperfect, fugitive emissions are common resulting in free mercury releases and significant environmental contamination. Historically, mercury has been mined primarily in Central Asia, China, Europe, and the Americas (primarily the United States and Mexico). Spain alone accounted for more than one third of the mercury ever produced. Most countries wound down primary mercury production in the late 20th century as demand from chlor-alkali plants decreased and prices declined. Formal mercury mining in Mexico, for instance, ceased in 1994. However increased demand from informal artisanal small-scale miners (ASGM) a decade and a half later incited several mines to maintain operations or begin anew.
16. On 16 August 2017 the Minamata Convention on Mercury came into force. The Convention, which was shepherded into existence by the United Nations Environment Programme (UNEP), currently has 128 Signatories and 120 Parties (countries where it has been ratified). The treaty covers a range of issues associated with mercury production and use, providing a list of acceptable uses and applicable phase out date or reduction target. Allowances include certain medical devices and industrial applications. With regard to primary mercury mining, Article 3 of the Convention states that Parties will enforce a ban on the formation of new primary mercury mines. It further states that those mines in operation would be permitted to continue for another 15 years from 16 August 2017. In this way, the Convention endeavours to influence both the supply and demand sides of the mercury trade. Reducing permitted applications in turn reduces demand and subsequently price, which in turn facilitates mine closures.

17. With the closure of many formal mercury mines, the demand for mercury in ASGM has perversely incentivised the creation of new informal sources. In Indonesia for example, one informal mercury mining area has been estimated to produce as much as 36 tons Hg/ year. The largest such informal mining area in the Americas is centred around the Sierra Gorda of Querétaro, Mexico, a vast ecological preserve where mercury was first exploited more than 700 years ago. Mercury production here is equivalent in size to 1/8–1/4 of all mercury emitted from ASGM globally, and up to half of the mercury emitted from ASGM in the Americas.

This Review

18. This evaluation aims to assess project performance (in terms of relevance, effectiveness and efficiency), and determine outcomes and impacts (actual and potential) arising from the United Nations Environment Programme (UNEP) project (Project ID: 10086) titled **“Reducing global environmental risks through the monitoring and development of alternative livelihood for the primary mercury mining sector in Mexico.”** The findings shall include analysis of the long term sustainability of the project outcomes and impacts, as well as a set of recommendations for similar projects in the future. This review is a requirement of the project as indicated in the project document. The final review report will be submitted to UNEP.

Key Findings

19. The strong implementation team has built durable relationships and respect within the mining communities, in spite of difficulties of access and restrictions on participation during covid and election blackouts. This project is of critical global importance, and it should be given a time extension with greater capacity in project management no change to the budget. The key drivers and assumptions that underpin this project have drastically changed during these extreme delays, and a sharp downward revision in expectations and indicator targets is necessary. Recommendations include increasing full time dedicated project staffing, minimizing components that have underperformed so far and are likely to yield few results (such as mercury field measurements and remediation activities), and giving more time in which to complete the project. Though progress lags behind expectation, a foundation has been laid upon which concrete accomplishments can be realized. All outputs have been initiated, though most activities are yet to begin. This project is based on a quite comprehensive Prodoc baseline, as well as good familiarity with mercury and mining issues among government and academic team members. This project’s outcomes are strongly coherent with top priorities from municipal to global levels. Cooperation with state level economic programs increase the impact of both. But the project nevertheless failed to integrate activities, mutually support or synergize among ongoing related projects such as the Minamata National Action Plan (NAP). Using the NAP field investigation techniques at mercury mines could have given a much clearer impression of the hierarchy of roles and incomes throughout the mercury value chain. This project should take lessons from the NAP process and apply the same mining and mercury field estimation protocols. I found no other connection or complementarity with other UNEP initiatives.
20. The theory of change represents a coherent and realistic change process from a cause-and-effect perspective, however the relative strengths and significance of the drivers and assumptions identified have drastically changed. In 2017 large numbers of people returning to the Sierra Gorda region after being deported from the USA, and many major mercury source countries banned exports. The over optimistic indicator targets are the product of a misunderstanding of and/or changes to the nature of mining communities, miners’ trust in government, and the widening income disparity between mining and any viable alternative livelihood. They need to be revised down according to new realities and the lessons learned so far.

21. Another aspect of the theory of change that needs reformulation is that part relating to monitoring and remediation. The assumption that one could effect and track changes in environmental mercury values within the life of the project is unrealistic given the physical extent and long history of contamination from the mercury mines in the region. Studies on immediate risks to community and human health are the only useful monitoring activities as they can identify body burdens among community members. The project in the following Project Steering Committee meeting should recommend reducing the budget for other monitoring and remediation goals (and all related activities and outputs) and put those funds in a revolving community investment pool where people can get help starting up their business. This project needs to expand what it is willing to undertake, and take in some of the lessons (and seek assistance from) the Planet GOLD program so that some kind of innovative micro-financing can be afforded to the miners of the Sierra Gorda region.
22. In practice, the project has been over reliant on workshops, interspersed with long periods of inaction. INECC procurement rules create long gaps in implementation, slowing the project down and causing miners and community members to lose interest and faith in the project. In future projects must look at any protocols, rules, and systems that would apply to the executing agency and analyze their potential effects and risks. Many miners in all areas have become disinterested in the project and convinced that it has no value to them. Also, they now know to fear the impending illegality and possible criminalization of their main means of income. This will limit the potential reach of the project during its life, however this effect could be reversed if the project manages to create successful cases of miners transitioning to dignified and sufficiently lucrative alternative livelihoods. Having dedicated personnel in the field, living in and ideally chosen from among the local populace in the immediate communities in which the project is working, could help nurture nascent initiatives and provide a much needed and more constant presence in the villages.
23. The quality of the reports are low, budget tracking is poorly executed and there is improper allocation of activities to specific budget lines and categories that makes it difficult to see if the work plan is being followed. As of the 2024 Q3 report the project has spent 5.7% of their budget, which is startlingly low. This suggests that there is a need for greater assistance and oversight from UNEP on the execution of the project. Furthermore, the project must provide a more detailed accounting of cofinancing, ideally according to the same budget line framework as that used for the GEF funds. This information was provided belatedly and although this clarified the cofinance situation it remains important to highlight this deficiency in project management before the mid term review.
24. Limited but strong enrolment of miners and other project participants, many of whom are likely to follow through with their intended alternative livelihoods and are well positioned to benefit from the new business facilitation on offer from the project and state incentive programs. The entire project execution/implementation team has developed a much more nuanced and realistic picture of the sector they aim to change, and of the barriers and risks present and future. There has been important progress on all aspects of the project, with some improvements in terms of project management and field personnel. Ultimately, the present and future outcomes realized by this project would not have occurred had this project not been implemented. The project increased participation in the SEDESU alternative livelihoods incentive program among miners as it provided more encouragement and assistance in accessing them, as well as greater awareness of the hazards of mercury for themselves, their families, and communities. These are real, important, and durable gains that are directly attributable to this project.
25. Keeping the outdated assumptions about the eagerness of miners to abandon mercury production created impossible mercury elimination targets. This project has not performed well

as measured against these targets. In reality, given the challenges experienced by this project, including Covid and the forced inactivity attributable to government procurement protocols and election season related restrictions, the project has actually progressed moderately satisfactorily towards completion of its goals. Most notably, the project is well positioned to fully comply with all expectations in regards to raising awareness throughout government and the affected members of civil society. It is reasonable to anticipate some degree of achievement of the key outcomes of the project, but the target reduction quantities need to be revised sharply downward in light of the difficulties faced by the project. The project is likely to result in a few miners choosing and succeeding in alternative livelihoods, and they will each employ up to 5 other people. If the project is able to restructure and focus all energy on component 2 there could be many miners transitioning. Government programs that will continue to replicate this long after the end of the project, thereby adding an element of sustainability beyond the life of the project. Hoped for mercury reductions are likely to be frustrated by a possible price shock-driven mercury rush and the expansion of organized crime in the sector.

Conclusions

26. The dedication, talent, and determination of the project team members is admirable and they have at times gone beyond their duty to connect with and maintain positive relationships in the communities. Highly capable executing and implementing teams have maintained program integrity, institutional capacity and community facing consistency in spite of some changes in leadership. Though the project has completed fewer than half of the activities set out in the work plan, this paradoxically represents a much greater proportion of the real 'work' of making change. When taking this into account, along with Covid, the forced inactivity attributable to government procurement protocols and election season related restrictions, the project has actually progressed moderately satisfactorily towards completion of its goals. Many on the project team agree that performance so far has been moderately unsatisfactory, and they all regret that despite everyone's best efforts it has fallen short of its potential. Nevertheless, this project is of pivotal global importance, as it addresses the largest mercury supplier for all of the Americas and it must continue and be supported with the highest degree of priority. This project should be given a no cost extension of at least one year and much more administrative support and leadership from UNEP. There also needs to be stronger project management and community engagement for which full time personnel should be hired to increase capacity and reach.

Lessons Learned

27. All of the following are discussed in greater detail in the body of this report, but some of the key lessons of this project are:
28. Lesson 1: Key inception information can be easily misunderstood
29. Lesson 2: Be careful when presenting relationships with government incentive programs to ensure proper attribution in the minds of the recipients. Also, it's hard for people to understand that you can spend 7 million dollars on a development project without being able to actually pay or gift things to beneficiaries directly. It is important to make that clearer at the outset to avoid raising unrealistic expectations.
30. Lesson 3: Top managers must demand stringent personal safety protocols for everyone in the field
31. Lesson 4: Those implementing chemicals hazards management projects such as this might not protect themselves from the chemical hazards they to which their employment exposes them, as shown in the midterm review field mission. They need to be protected by mandatory

organizational and health protocols that specify hazardous contexts and the requisite protection such as gas masks.

- 32. Lesson 5: Delays in implementation can invalidate otherwise sound plans
- 33. Lesson 6: Socioeconomic and geopolitical conditions may sometimes change so much in between conception and inception that the theory of change becomes outdated.
- 34. Lesson 7: Improve field socio-economic study methods
- 35. Lesson 8: This project should take lessons from the NAP process and apply the same mining and mercury field estimation protocols. Using the NAP field investigation techniques at mercury mines could provide a much clearer impression of the hierarchy of roles and incomes throughout the mercury value chain.

Recommendations

- 36. Recommendation 1: All project personnel should wear mercury rated gas masks whenever approaching known mercury sources such as furnaces, and should avoid them completely whenever possible
- 37. Recommendation 2: Assimilate all existing mercury data for the region into one very well written meta study with proper analysis, synthesis, summary, and actionable conclusions
- 38. Recommendation 3: Improve field socio-economic study methods based on NAP protocols
- 39. Recommendation 4: Refocus energies on local resident miners such as those in Camargo, and in places with more transient miners like Bucareli focus on the women instead.
- 40. Recommendation 5: Focus on alternative livelihoods at the expense other outcomes
- 41. Recommendation 6: Accelerate efforts to increase alternative livelihoods and reach the ambitious project indicator targets, such as enrolling more miners, increasing monetary incentives and support to miners, help create larger scale businesses that will gainfully employ miners beyond just family businesses.
- 42. Recommendation 7: Turn part of the unused budget into a revolving small loans fund to support new miner owned businesses
- 43. Recommendation 8: Reduce elements that don't advance alternative livelihoods or human health, particularly those activities related to monitoring and remediation plans
- 44. Recommendation 9: Improve expense accounting of grant funds, especially cofinancing
- 45. Recommendation 10: Increase support in project management and presence in the communities with new personnel
- 46. Recommendation 11: Improve reporting so as to make workshop, meeting, and expenditure reports clearer, more informative and complete
- 47. Recommendation 12: Reduce over reliance on workshops and underperformance on concrete activities
- 48. Recommendation 13: Coordinate and cooperate with successful programs of other agencies that operate in the region.

I. PROJECT OVERVIEW

49. The project's main objective is to prevent the risks to environment and human health from mercury through the control of primary mercury mining and enabled environmentally and socially sound alternative economic activities and livelihoods in Sierra Gorda Region in the state of Queretaro. The project consists of 2 main components:
50. Component 1: Characterization of primary mercury mining and reinforcement of control mechanisms. This component aims to improve the capacity of regulators to better characterize the primary mercury mining sector in Queretaro, including its releases and emissions. It also intends to cultivate a regulatory environment that will result in the generation of conditions that allow the permanent closure of the mercury mines in 2032 without affecting the situation of the miners and their families (who are expected to have already transitioned to an alternative way of life by that date), and the effective ending of new mercury mine development in accordance with the stated by the Minamata Convention.
51. Component 2: Introduction of alternative livelihood. This component will be informed by the results of assessment work carried on the feasibility of viable and sustainable alternatives in the Sierra Gorda region.
52. The project executing agency is the National Institute of Ecology and Climate Change (INECC). Also, other main partners involved for this project are the Global Mercury Partnership, General Direction of Integral Management of Materials and Risky Activities of the Secretariat of Environment and Natural Resources (DGGIMAR-SEMARNAT), SEMARNAT regional office in Querétaro (SEMARNAT-QRO) and the Secretariat of Sustainable Development of the state of Querétaro (SEDESU). Likewise, there is additional support from other federal, state and local agencies in areas of education, health, infrastructure, such as the following: the Autonomous University of Querétaro, the National Institute of Social Economy, the National Water Commission, the Agrarian Attorney's Office, the National Commission of Protected Natural Areas, the Health Secretariat of the State of Querétaro, the Querétaro Institute of Women, among others.

Project Design

53. The Sierra Gorda mines are the largest source of elemental mercury used in ASGM in the Americas. Minimizing the quantity of mercury entering the sector will directly result in reduced fugitive emissions downstream. The project aims to do this by both improving regulation and incentivizing alternative livelihoods. Activities under the first component are proposes to strengthen the capacity of local and national agencies to regulate and monitor the informal sector. Those under the second component are focused on identifying and promoting sustainable alternative livelihoods. Taken together these actions are intended to ultimately eliminate informal mercury production in the region. The Sierra Gorda itself is a vast ecological preserve having both nearctic and neotropical biogeographic realms. It contains more than 1,700 plant species and 600 vertebrates.
54. Essentially the project aims to change regulations around mercury mining and shift informal sector miners toward more sustainable industries. Ultimately, the practice must be banned eventually, but the trick is going to be creating some kind of phase out plan along with growth in alternative industries. Unfortunately, alternative livelihoods in rural Mexico are, as stated in the Prodoc, unlikely to yield the kind of profits or employment numbers that can satisfy and absorb most of the displaced mercury miners, especially as the value of their commodity has increased 4-fold since 2020. The alternative livelihoods aspect of the project seems to be the least developed component at this point, and it presents the greatest challenge to project success.

55. The project has also had to adapt to a major disruption during COVID, and this severely compresses the timelines in which the project must show progress to impact. The project has set ambitious goals for mercury reduction, yet (understandably given COVID) they have already missed key milestones for project outcomes. They will likely have to revise their reduction targets downward, allot more time in which to implement their strategies, and come up with new strategies.

Stakeholder Analysis

56. The majority of principal stakeholders will come from Mexican government agencies responsible for the development and enforcement of laws and regulations as well as those responsible for supporting the welfare of vulnerable communities. In addition the Government of the State of Queretaro, local NGOs, mining groups and municipal authorities will be engaged as key stakeholders. Finally Mexican academics and international experts will be engaged to support successful execution of the overall project.

57. Stakeholders will be engaged through formal semi-annual (Project Steering Committee members only), as well as through ongoing project activities such as training workshops and consultations (with miners and local authorities) periodically according to the workplan. During the semi-annual workshops, progress against indicators will be reviewed, necessary adjustments will be discussed and proposed, and next steps will be decided. All documentation generated as part of the project will be available on the project's server to which stakeholders will have access (only for PSC members). In addition, hard copies of project documentation will be made available for stakeholders without readily available access to a computer. Table 7 below provides the agencies presently envisaged as the principal stakeholder. Additional stakeholders will be engaged when required.

Principal Project Stakeholders

International		
UNEP	IA coordinated the development and design of the project and consulted with stakeholders.	UNEP Chemicals and Health Branch GEF unit, with the support of UNEP's Direction for Latin America and the Caribbean Region (ROLAC) and Mexico's Office, is the IA responsible for implementing the project components, in line with project budget and workplan. Will lead consultations with the national project partners, as well as coordinating and overseeing the Executing Agency. UNEP will have decision rights on the PSC and hold one vote.
Global Mercury Partnership	Consulted during project preparation phase on technology options and during the second half of 2024	The Global Mercury Partnership will provide targeted technical assistance and assist in identifying actions for mercury waste management and feasible remediation plans at identified contaminated sites in the region. The Partnership will also draw on the 'South-south' experience of its member to inform mine successful mine closure. Finally the Partnership will be a key partner in facilitating Knowledge Management.
National and State Government		
General Direction of Integral Management of Materials and Risky Activities (DGGIMAR) of the	As host of the Minamata Focal Point, DGGIMAR has been the main partner in the development of the project	As main counterpart, DGGIMAR will chair the Steering Committee meeting and ensure the project addresses the national priorities in the implementation

Secretariat of Environment and natural Resources (SEMARNAT)		of the Minamata Convention on mercury. With other agencies, DGGIMAR will also ensure environmental risks are adequately addressed by the project. DGGIMAR will have decision rights on the PSC and hold one vote.
Secretariat of Environment and natural Resources (SEMARNAT-QRO)	Member of the PSC. This agency has been consulted through the project implementation	Will act as the project contact of SEMARNAT in the state of Querétaro. With other partners, will ensure effective and timely execution of project activities. SEMARNAT- QRO will have decision rights on the PSC and hold one vote.
National Institute of Ecology and Climate Change (INECC)	EA jointly drafted ProDoc with stakeholders.	As Executing Agency, with the guidance of the PSC members (DGGIMAR, UNEP, SEMARNAT Qro, SEDESU), INECC will undertake project activities as per project document and workplan agreed at the Steering Committee meetings. INECC will be in charge of the reporting to UNEP (quarterly financial and progress report and annual Project Implementation Report).
Government of the State of Queretaro	Coordinated actions in each one of the municipalities, provided information and co-financing confirmation to develop ProDoc baseline. Consulted additionally for implementation of project activities in the region	The Secretariat of Environment and Natural Resources of the State of Queretaro will assist the project in the identification of the current status of the mines at a municipal and state levels. It will also assist on the sound waste management of the tailings generated during the mercury extraction process. Through the collaboration of the Secretariat of Sustainable Development of the State of Queretaro (SEDESU) and the subsecretariats of Economic Development and Environment. It will also support the alternative economic livelihood activities in the region. With other agencies, the State of Queretaro will ensure environmental risks are adequately addressed by the project.
Ministry of Health of the state of Queretaro(SS)	Provided information related to health risks and provided local co-financing confirmation	Will assess and make the necessary linkages between mercury exposure and risks to human health. Will propose actions to reduce mercury exposure and risks in the communities of the region. Will ensure health risks are adequately addressed by the project.
Ministry of Economy (SE)	Provided information regarding the mining concessions situation in the state of Queretaro and	Will support the enforcement of regulations related to mercury and the proper application to the mercury mining sector.

	provided co-financing confirmation	
Mexican Geological Survey (SGM)	Provided information on the feasibility of mineral	Will assist the mining communities in the identification of alternative mineral extraction in the region as a sustainable activity. Will provide assistance in the update of the mapped mines in the region.
Federal Attorney for Environmental Protection (PROFEPA)	Provided information on the mercury trade	Will support the enforcement of regulations related to control mercury trade in the global market and regulations involved in the mercury mining sector. Will co-lead on matters related to authorizations for active mercury mining sites in the region.
Institute of Women of Queretaro (IQM)	Provided information on gender perspective in the municipalities	Will support the enforcement of regulations related to gender perspectives and the proper application in the mining sector. Will assist co-lead on gender issues on the region
National Commission of Natural Protected Areas (CONANP)	Provided information on conservation and management of natural protected areas in the region where the project takes place	Will support the project members by identifying where does the alternative livelihoods can be developed without affecting the land use for the natural protected areas.
National Institute of Social Economy (INAES)	Provided information regarding public policies to promote and develop the social sector of the economy by enhancing their organizational, technical, and commercial capacities.	Will support the implementation of the potential alternative livelihoods that the project will expect to develop with the support of the communities and Executing Agency.

Regional actors		
Municipal Governments of San Joaquin, Peñamiller, Cadereyta de Montes, Pinal de Amoles	Provided information of the possible economic alternatives.	Will assist the federal and local governments to establish direct communication with the mining communities and assist the project in the implementation of the alternative economic livelihoods.
University of Queretaro (UAQ)	Project coordinator in site. Analysis of the socioeconomic profiles and gender perspective in the mining communities.	Will be performing tasks and collecting information for the assessment of the social risks and provide technical advice in order to address these issues. Will also assist in the workshops for raising awareness on the mercury environmental risks for the communities. Additionally, UAQ plays a fundamental role in the approach to the mining communities, without which it would not have been possible to have communication and create the necessary trust to involve them in the project.

University of San Luis Potosi	Analysis of the environmental and health risks associated to the primary mercury mining in the state of Queretaro.	Responsible for collecting information for the assessment of mercury human health exposure in the mining communities. It will also assist in the development of scientific and technical advice on mercury pollution for the government as well as the communities.
Mining communities of Sierra Gorda	Provided consultation and evaluation of the proposed alternative livelihoods.	Will attend workshops on alternative livelihoods for to assess of feasibility of proposed approaches. Will also facilitate communication within the municipal governments and communities.
Ecological Group of Sierra Gorda	Provided consultation to the project	NGO with broad experience assisting communities of the Sierra Gorda region. Will assist the project by sharing experience on feasible alternative livelihoods.

II. REVIEW METHODS

58. This UNEP review was conducted in accordance with the UNEP Evaluation Policy, GEF Guidelines for GEF Agencies in Conducting Evaluations, the GEF Monitoring and Evaluation Policy, among others. The review used different methods to gather, analyze, and deliver evidence-based qualitative and quantitative information based on diverse sources, including: desk studies and literature review, statistical analysis, individual interviews, and surveys. This approach not only enables the review to assess causality through quantitative means but also to provide reasons for why certain results were achieved or not and to triangulate information for higher reliability of findings.

59. The methodology includes:

60. A desk review of project documents, including, but not limited to:

- *The original project document, monitoring reports (such as progress and financial reports to UNEP and GEF annual Project Implementation Reports (PIRs)), output reports (case studies, action plans, sub-regional strategies, etc.), back-to-office mission report(s), end-of-contract report(s) and relevant correspondence.*
- *If applicable, notes from the meetings of committees involved in the project (e.g. approval and steering committees).*
- *Other project-related material produced by the project.*

61. The review used available models of (or reconstruct if necessary) theory of change for the different types of intervention (enabling, capacity, investment, demonstration). The validity of the theory of change will be examined through specific questions in interviews and possibly through a survey of stakeholders.

62. Counterfactual information: In those cases where baseline information for relevant indicators is not available, the review team will aim at establishing a proxy-baseline through recall and secondary information.

63. Interviews with project management and technical support including staff and management at UNEP HQ and in the field and – if necessary - staff associated with the project's financial administration and procurement.

64. Interviews with project partners and stakeholders, including, among others, government counterparts, project stakeholders.

65. Interviews and telephone interviews with intended users for the project outputs and other stakeholders involved in the project. The review team shall determine whether to seek additional information and opinions from representatives of any donor agency(ies) or other organizations.

66. 9. Other interviews, surveys or document reviews as deemed necessary by the review team and/or UNEP/GEF/Otheres, for triangulation purposes.

67. 10. The inception report will provide details on the methodology used and will include an evaluation matrix.

A. Review criteria and sample questions

68. The UNEP evaluation guidance provides a comprehensive set of questions that are to be addressed by the evaluator (detailed list given in the evaluation matrix below), and this review has considered all of these questions in order to best uncover all of the achievements and deficiencies in the execution of the project. The following simplified set of interview questions was derived from those given by UNEP, as not all of the comprehensive set of questions were relevant to ask of stakeholders in this case. Some impromptu follow up questions were also asked in interviews.

69. 1. Have the inputs from the donor, UNEP and Government/counterpart been provided as planned, and were they adequate to meet the requirements?

70. 2. How efficient was this project with respect to value for money spent, relative to other projects with which you are familiar?

71. 3. What has been your involvement with the UNEP project, and how would you rate your experience? How could your experience have been improved?

72. 4. How well has this project coordinated and worked with relevant partner institutions and stakeholders?

73. 5. What effects are intended or unintended, positive or negative?

74. 6. To what extent are information, lessons learned or specific results of the project being incorporated into broader stakeholder mandates and initiatives such as laws, policies, regulations and projects?

75. 7. To what extent have the outputs and results been institutionalized and ownership among participants and stakeholders ensured?

76. 8. Talk to me about implementing partners, who are they and how do you rate their performance?

77. 9. Given your experience with this process, what would you recommend to other countries engaging in GEF projects, such as what new things would you recommend be undertaken, or what changes to existing strategies would you suggest?

78. 10. Can you comment on the inclusivity of this project with respect to gender, background, culture, or otherwise?

79. 11. Are there any other comments or observations you would like to make?

III. THEORY OF CHANGE

Theory of Change at Review

a. Project Outputs and Outcomes

80. The project's main objective is to prevent the risks to environment and human health from mercury through the control of primary mercury mining and enabled environmentally and socially sound alternative economic activities and livelihoods in the state of Queretaro. The project consists of 2 main components:

81. Component 1: Characterisation of primary mercury mining and reinforcement of control mechanisms. This component aims to improve the capacity of regulators to better characterize the primary mercury mining sector in Queretaro, including its releases and emissions. It also intends to cultivate a regulatory environment that will result in the permanent closure of primary mercury mines and the effective ending of new mercury mine development in accordance with the stated by the Minamata Convention.

82. Outcome 1. The Government monitors primary mercury mining and adopts an adequate regulatory framework.

83. Output 1.1 Modifications to the existing legislative and regulatory frameworks on mercury production, management, use and trade, are developed with relevant government experts, representatives from NGOs and key stakeholders;

84. Output 1.2 Relevant agencies' capacity to identify and quantify mercury sources, including ongoing monitoring of mercury emissions and releases in the primary mining sector enhanced.

85. Component 2: Introduction of alternative livelihood. This component will be informed by the results of assessment work carried on the feasibility of viable and sustainable alternatives in the Sierra Gorda region.

86. Outcome 2. Miners in Queretaro adopt alternative income generation activities

87. Output 2.1 Alternative economic activities and livelihoods for miners and local communities identified

88. Output 2.2 Awareness of miners and local communities of the Minamata Convention obligations enhanced.

ToC Diagram



IV. REVIEW FINDINGS

A. Strategic Relevance

Alignment to UNEP's, Donors and Country (global, regional, sub-regional and national) Strategic Priorities

89. This project is of the highest relevance and global strategic importance, particularly concerning the Minamata treaty. It addresses the main supplier of mercury to all Artisanal and Small Scale Gold Mining (ASGM) throughout Latin America. The production and trade of mercury is highly vulnerable to involvement of organized crime and its price is surging as global supply is progressively restricted. As UNEP is a key Minamata Convention agency this project is integral to its core mission and those of the donor agencies, and of Mexico itself. Its complementarity with the Minamata MIA and NAP processes is obvious, as well as with the Basel and Stockholm conventions.

90. There is significant alignment with the UNEP Medium Term Strategy (MTS) and Programme of Work (POW), as well with the following SDGs:

1. Ending Poverty;
3. Good Health and wellbeing;
6. Clean water; and
8. Decent work and Economic Growth

91. The project integrates sub-national development plans for poverty reduction, specifically SEDESU new business funding program.

Complementarity/Coherence with Existing Interventions

92. There seems to have been insufficient connection or coordination with the NAP process, even though many of the same people are working on both. Most importantly there needs to be a NAP like study of the mining economy in the area, such as interviews and measurements of mercury production, that would allow estimation of the annual production of the area and how those profits are distributed throughout the value chain. For instance, The evaluator was struck by the fact that the project has not produced an estimate of how much each miner earned on average. The project personnel claimed that it was impossible to estimate because there are different roles within the mine that have different incomes. This is valid, but it only means that the project needs to map out the different roles and incomes within the different mine sites and find average incomes for each of them. This is critical information to know if you are going to suggest realistic alternatives and find people who are most likely to be open to change. This is the kind of information that one gets as part of the Minamata National Action Plan process, and it should be adapted and replicated in this project instead of doing environmental sampling.

93. Additionally, a previous project executed in the Sierra Gorda successfully encouraged the adoption of alternative livelihoods (GEF ID: 887). There is little indication that this project has referenced that earlier livelihoods project or leveraged any lessons learned from it. It was argued that none of the previous livelihoods projects in the region have produced pilot or models that could be showcased as examples for this new project, and UNEP seems to agree. The evaluator observed no ongoing or planned cross linking initiatives with other UNEP sub-programmes, or with any being implemented by other agencies. Nevertheless they are integrating the SEDESU policy for small new business grants that previously had a low enrolment on account of the benefits being small relative to miner incomes and the application process turning miners off.

Rating for Strategic Relevance:	Highly Satisfactory
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B. Quality & Revision of Project Design

94. This project was conceived in 2016 soon after Mexico ratified Minamata Convention. For various reasons, it took more than six years to get started in any significant way and the entire socio-economic landscape radically changed during that time. There was a global pause for Covid and steep inflation, including in gold and mercury prices. The legal mercury world changed also, with dozens of countries restricting trade and major source countries like Kazakhstan stopped exporting altogether. One can understand why the project was not completely revamped with new assumptions and an updated assessment of reality after the COVID shutdown. It would have eaten months or more of project time. Apparent over optimism and failures of planning in this case are an artifact of a plan for a very different reality than exists currently. In spite of all of these challenges, the dedication, talent, and determination of all involved is admirable and has at times gone beyond their duty to connect with and maintain positive relationships in the communities. Now reality has shifted even further from the original expectations and much has been learned in the process. It is time for a major reorientation and simplification of the project.

Strengths:

95. Highly capable and extremely dedicated executing and implementing teams (INECC and UAQ) that have maintained institutional capacity and community facing consistency in spite of some changes in leadership.

96. A strong Prodoc baseline and familiarity with mercury and mining issues among government and academic participants.

97. Creation of an action plan for mine closure, and specific mention of permanent closure of the mine shafts is a correct strategy. Ideally this would include bringing in the military to set explosives to collapse the mine tunnels. This will involve evictions and criminalization of miners, so it must be done delicately. It can only be done by the state on its own initiative and likely could only happen after the end of the project. Nevertheless, it is important and correct to have specified this outcome in the prodoc. Mine closure may not be a realistic outcome in the near future but it will be required at some point. It is worthwhile continuing this aspect of the project.

98. Strong coherence with state level alternative livelihoods program that increases the impact of both.

99. The week-long mercury toxicology training course for regional doctors was essential for the advancement of the human health monitoring and medical capacity building.

Weaknesses:

100. Highly over optimistic indicator targets due to a profound misunderstanding of the nature of mining communities, miners' trust in government, and the widening income disparity between mining and any viable alternative livelihood.

101. Over reliance on workshops with few actions being taken between events. Without steady presence in the communities it was difficult to move forward at a pace required to meet the project goals.

102. Although all outputs have been initiated, many or most activities are yet to begin.

103. INECC procurement rules create long gaps in implementation, slowing the project down and causing miners and community members to lose interest and faith in the project. In future, projects must look at any protocols, rules, and systems that would apply to the executing agency and analyze their potential effects and risks.

104. As per Component 1:

105. The activities proposed under this component will result in a more comprehensive and detailed picture of the contamination allowing for the assessment of changes over time. High priority sites will be identified and assessed, and remedial strategies will be proposed.

106. The idea of assessment of changes over time is unrealistic in most cases. It would be better to focus on mercury body burden, as that can drop when exposure is removed and with chelation drugs. Contaminated sites can be usefully explored and categorized, but the evaluator would limit the amount of environmental sampling to key sources that could directly impact human health (such as, in declining priority/value: Air emissions of artisanal retorts, well samples, creek samples in important watersheds, water storage for cattle raising/irrigation.) There is no sense going around ore waste dumps and old mine site retorts to sample how contaminated they are when there are sufficient information and case studies in the Prodoc and work done before and during the project. This knowledge can be used to deduce which places are contaminated by their use history without going to the trouble of measuring exact numbers. Excessive environmental monitoring is a good way to spend all the budget doing things that don't really produce impacts into the future, when you could have put more into actually helping miners make a sustainable transition away from mercury.

107. "Ultimately the activities undertaken as part of this component are intended to result in the closure of existing mines and a cessation of new mine development, which are envisaged to occur outside the time horizon of this project."

108. This acknowledges that closure of the mines will happen after the project is over, but the indicator targets call for significant mercury reductions during the project. The reality is that in such a poor region with such a high proportion of men trying to emigrate to the US and being deported, it is likely that any person that retires from mercury mining will be immediately replaced by another that is hungry to participate in the most lucrative industry in the area. Component #2: (alternative livelihoods) aims to address this, however this project alone cannot end rural poverty in the region. According to the theory of change of the project, component #1 (legislative and regulatory changes) will lead to the end of mining by making it illegal. However, the illicit drug trade has always been illegal and it continues unabated in Mexico. In fact, the NAP process showed that any sufficiently lucrative mining operation will be taken over by cartels and that these cartels have already set up some interlinkages between primary mercury production in the Sierra Gorda and the gold mining operations from which the NAP team were barred by organized crime. The project planning team had originally found there to be no criminal entities to be present in the region and assumed that this would remain the case indefinitely. This turned out to be grossly optimistic.

109. Component 2 is founded on the following premise:

110. The critical assumption is that viable and sustainable alternatives exist to primary mercury mining in the Sierra Gorda region

111. Yet the same Prodoc background and PPG phase findings seem to indicate the opposite. It indicates that there are no alternative livelihoods in the region that can match the incomes of the miners, and that poverty in the region is so pervasive that new miners would likely join if

others left the industry. Project planners admit that they were surprised by the reticence of miners to abandon their mineral livelihoods. As most of them have had no previous experience with artisanal mining (and only through the concurrent NAP process did they learn about ASGM), they cannot be faulted for failing to appraise the true receptivity of miners to relinquishing mining, especially as the socioeconomic environment changed so drastically. All of this is an artifact of the long lag time between conception, inception and reinitiation after COVID, and not of the performance of the people trying to make the best of the project opportunities and challenges.

112. Overall, where viable alternative livelihoods exist, and apart from the growing mismatch between mercury and alternative incomes, the plan for supporting miners in making the transition is sound. The prodoc properly listed all the main barriers but then still remained tragically over optimistic about chances of making things better.
113. Social acceptance of change in their economic activity
114. Lack of education/training of the members in the mining communities
115. Significant data gaps related to Hg in the communities and surrounding environment
116. Lack of alternative profitable economic activities in the Sierra Gorda area
117. Lack of information/dissemination concerning the health effects of mercury and the environment in the mining.

118. The project could have predicted that there would have been an election and possible change of government that would mean that the project could not operate freely for large periods of time. Future projects must include significant predictable events like this into the project plan, and there should be seasoned planners (people who have participated in all aspects of various different projects and can better foresee potential frustrations and realistic timelines.) This project is unique even among artisanal mining projects, and it would have benefited from better advice from inside UNEP where there is institutional knowledge enough to understand the particular potential challenges relating to artisanal mining. The project team had no way of knowing that the miners would be so mistrustful of development projects, but UNEP should have known. They should also have realized that the mercury elimination targets were far too optimistic, especially after so many delays. In effect, the in-country team were set up for failure by unrealistic targets and plans that had become outdated.

Rating for Quality & Revision of Design: Satisfactory

V. ASSESSMENT OF THE PROJECT RESULTS FRAMEWORK

A. Effectiveness

119. Effective implementation thus far:
120. Limited but strong enrolment of miners and other project participants, many of whom are likely to follow through with their intended alternative livelihoods and are well positioned to benefit from the new business facilitation on offer from the project and state benefit programs.
121. Strong implementation team has built durable relationships and respect within the mining communities, in spite of difficulties of access and restrictions on participation during covid and election blackouts.
122. Progress on all aspects of the project, with clear pathways to minimal completion of all components and activities called for in the original work plan.
123. In spite of low usage of allotted GEF funds, much greater cofinance contributions signal strong dedication and intrinsic drive among stakeholders.
124. The entire project execution/implementation team has developed a much more nuanced and realistic picture of the sector they aim to change, and of the barriers and risks present and future.
125. Ultimately, the present and future outcomes realized by this project would not have occurred had this project not been implemented. There was low uptake of the SEDESU alternative livelihoods incentive program among miners prior to this project because miners needed more encouragement and assistance in accessing them, as well as greater awareness of the hazards of mercury for themselves, their families, and communities. These are real, important, and durable gains that are directly attributable to this project.
126. Lagging effectiveness:
127. The majority of miners in all areas have become disinterested in the project and convinced that it has no value to them. Also, they now know to fear the impending illegality and possible criminalization of their main means of income. This will limit the potential reach of the project during its life, however this effect could be reversed if the project manages to create successful cases of miners transitioning to dignified and sufficiently lucrative alternative livelihoods.
128. In broad and generous terms, there appears to have been at most the following progress under each output of the work plan:
129. Activities 1.1.x (Modifications to the existing legislative and regulatory frameworks on mercury production, management, use and trade, are developed with relevant government experts, representatives from NGOs and key stakeholders;): 80% complete
130. Activities 1.2.x (Relevant agencies' capacity to identify and quantify mercury sources, including ongoing monitoring of mercury emissions and releases in the primary mining sector enhanced;): 20% complete
131. Activities 1.3.x (Site specific remediation mapping and planning are undertaken;): 5%
132. Activities 2.1.x (Alternative economic activities and livelihoods for miners and local communities identified): 40% complete
133. Activities 2.2.x (Awareness of miners and local communities of the Minamata Convention obligations enhanced;): 60% complete
134. It is obviously far below where the project should be by this point.

135. Everyone who is working on this project is working on many other projects at the same time. There has never been a single person who was entirely dedicated to the project. The result has been a leaderless project run by a committee that meets only sparingly. This is an enormous drag on efficiency and effectiveness. Though the project has increased steering committee meeting frequency, it needs a full time project manager to improve reporting, coordination, and quality of deliverables.

Theory of Change

136. The theory of change upon which this project is based is as follows: mercury miners are mostly people that have until very recently engaged in other economic activities, and that they need only a relatively small incentive to revert to their previous occupation. Also, legislation, monitoring and awareness raising will result in the durable cessation of significant portions of Sierra Gorda mercury production within the life of the project. The prodoc development team confirmed the existence of these livelihoods through surveys of the miners themselves, regional economic data, a literature review, and an assessment of previously conducted projects. At the time it seemed that primary mercury mining represented a new and potentially temporary industry for the majority of workers, most of whom were teenagers or younger when formal mercury mining ended in Mexico in 1994. Surveys of the miners over six years ago confirmed their preference for an alternative livelihood over the dirty and dangerous work of mining.
137. Knowing what we know now this seems like quaint over optimism. One must remember that this project was originally conceived in 2016 when Mexico first became signatory to Minamata and they had little awareness of the mercury mining in their backyard (partly because it had disappeared until recently). This was before the US banned all mercury exports (prior to this they were an important global source), and mercury prices soared. When the project had been conceived many of the miners were still working illegally in the US, and then in 2017 the USA deported massive numbers of immigrants. By the time this project was approved it was still true that many had returned to mercury mining only recently and they may have been more willing to change livelihoods, but all of a sudden there were a great many more people flooding back into the region in desperate need of work. Then delays from elections, procurement protocols, and the pandemic created a situation where the project only really began more than 6 years after it had been planned. The theory of change represents a coherent and realistic change process from a cause and effect perspective, however the relative strengths and significance of the drivers and assumptions identified have drastically changed. In particular, the project vastly over-estimated the willingness of miners to change to alternative economic activities and underestimated the differences in potential incomes relative to mining. Furthermore, many miners are accustomed to informality (they are already working without permits or environmental assessments, or under penalty of fine) and so there is unlikely to be a direct linkage between changes in the legislative framework and declines in the amount of mercury mined. The unexpected rise of organized crime in the area, with increasing direct involvement in mercury production, further erodes the potential effectiveness of legislative change. These misapprehensions of and changes to the magnitudes of driving effects and potential barriers need to be addressed but they don't necessarily invalidate the guiding theory of change. They do, however, reduce the potential impact this project can have.
138. The main aspect of the theory of change that demands reformulation is that part relating to monitoring and remediation. The assumption that one could effect and track changes in environmental mercury values within the life of the project is unrealistic given the physical extent and long history of contamination from the mercury mines in the region. In the vast majority of cases, any environmental mercury sampling (which is still a valid activity for identifying and characterizing risk areas) is unsuitable for 'monitoring' in the sense in which the project imagines it. The reality is that most environmental contamination cannot be changed within the life of the project and apart from detection it has no role in monitoring or assessment

of progress toward project goals. Therefore, I recommend cessation of as much as possible of the environmental sampling program. Human health monitoring is an important exception, but should mostly be used to identify body burdens, and thereafter repeated in the event that contaminated people take decontaminating chelation drugs or are removed from their main source of contamination (such as the removal of a mercury refining oven).

139. Over optimistic assumptions about the eagerness of miners to abandon mercury production created impossible mercury elimination targets. If measured against these targets, the project has been a failure. In reality, given the challenges experienced by this project, progress as measured holistically would be moderately satisfactory. The unrealistic expectations set in the indicator targets makes this project appear more dysfunctional than it has been, and therefore it is more a failure in design than in execution or dedication.
140. The evaluator would recommend greatly reducing or eliminating the budget for monitoring and remediation (and all related activities and outputs) and put those funds in a revolving community investment pool where people can get help starting up their business with low interest loans for things like fridges, barbecues, table, etc. The evaluator heard only reasonable, feasible, appropriate, and attainable plans from among the people who were engaging in alternative livelihoods with the help of this project. But there was until recently a missing piece of investment in key infrastructure. Everyone had a place to do business, as well as most of the things and skills they needed to get going or expand, and everyone needed just a little bit (in relative terms) of seed capital to get going. The project should look to the Planet GOLD program for ideas and case studies on implementing this, and the project already has direct linkages to institutions that could act as a long term fund manager such as SEDESU (by expending their existing program but under modified rules), or with Bienestar. It must be noted that during the elaboration of this report, INECC produced evidence that they were beginning to implement a program for using project funds to assist miners more directly with a granting or loan program under development.
141. Also, the project should try to team up with other agencies. There has been an impressive number of UNDP small grants program success cases (see <https://www.gefio.org/sites/default/files/documents/performance/mexico-performance-201908.pdf>) in Mexico, so why not reach out to other UN organizations to do something really original and transformative like creating something that will employ more people such as an egg farm in San Joaquin.

Rating for Theory of Change: Moderately Satisfactory

Availability of Outputs

Success

142. The greatest success of this project is the degree to which it has built relationships and trust within communities and with miners, which is the most fundamental and important aspect of creating change. In this respect, more progress has been made than can be seen in the quarterly reports and other documentation. Though the project has completed fewer than half of the activities set out in the work plan, this paradoxically represents a much greater proportion of the real 'work' of making change. When taking this into account, along with Covid, the forced inactivity attributable to government procurement protocols and election season related restrictions, the project has actually progressed moderately satisfactorily towards completion of its goals.
143. It is reasonable to anticipate some degree of achievement on key outcomes of the project: "mercury production reductions due to miners' transitioning to alternative livelihoods and increased monitoring and regulation with the aim of elimination of mercury production and

risks.” But the target reduction quantities need to be revised sharply downward in light of the difficulties faced by the project.

144. There are a minimal number of miners that are willing to participate in an alternative livelihood on their own initiative and wealth, along with the training and business development assistance promised by the project and SEDESU. The evaluator believes them to be dedicated to starting and/or expanding alternative sources of work and income, although all ten of the miners with whom the evaluator spoke were also forthright about their intent to continue mining as long as mercury prices remain high and buyers are willing to pay them for it.
145. In terms of awareness raising among government officials at all levels, as among miners, communities, health professionals and women, the project has reached a wide segment of its intended audience and greatly increased the broader understanding of mercury risks and safety among the people of the Sierra Gorda mining areas.

Shortcomings

146. The project lacks dedicated personnel in the field, living in and ideally chosen from among the local populace in the immediate communities in which the project is working. Having such personnel would provide a constant presence in the villages, someone who can continue to dialogue with the locals, who also brings to the project a certain locality and familiarity to the community and who will therefore be easily accepted by the community. Such a person would be a better voice for the project in the villages and also a voice for the community within the project. Ideally one or two of these people would work under someone who is paid full time to work as liaison between UAQ and INECC and those community workers, so that there would always be a constant feed of information back and forth with the communities and cushion the problem of blackout periods when the project can't work due to bureaucratic issues or pandemics.
147. The quality of the reports are very low, budget tracking / proper allocation of activities to specific budget lines and categories is poorly executed, and overall it seems that a great deal of work and knowledge is not being properly captured. It is important to clarify that all reports submitted to UNEP have been prepared according to the format requested, and that the comments and corrections requested have been addressed at all times. Therefore, the executing agency does not consider this to have been a failure on their part. Nevertheless, both could benefit from improving reporting quality. For example, it is challenging to understand what the project has achieved given only the key project reports. The reports have deficient narrative structure, they include discordant information that makes it harder to find important knowledge and gain comprehensive understanding. The reports should have better synthesis and analysis such as comparison with earlier data (as in the prodoc or other related projects). The conclusions don't effectively summarize the findings of the reports, link them to project goals or progress, nor propose a path forward given the new knowledge therein. Unfortunately, this is all fairly common in reports produced by this kind of project. Nevertheless, it does not bode well for the continuity of information and capacity beyond the project's close. The project must improve the manner in which these reports are produced. In particular, there should be an editor that works with the authors to monitor the quality of reports as they are being produced, and to make/demand changes that will create more readable, informative and useful project documents.

Rating for Availability of Outputs: Highly Unsatisfactory

Progress Towards Project Outcomes

Expected Outcome:

148. The Government monitors primary mercury mining and adopts an adequate regulatory framework.
149. Expected Outputs:
150. Output 1.1: Modifications to the existing Legislative and regulatory frameworks on mercury production.
151. The only available report relating to this output does not add any new information that is not included in the MIA, and it proposes no legislative or regulatory changes other than the elimination of mercury from the list of legally extractible minerals. It should be noted that creating one change to law in Mexico is a very significant achievement. After the midterm evaluation period, the project provided evidence of more proposals for changes to relevant legal instruments, including a modification to the penal code and establishing mercury exposure norms.
152. Output 1.2: Enhance capacity to identify and quantify mercury sources among relevant agencies and
153. Output 1.3: Site specific remediation mapping and planning
154. The only progress on these output has been the completion of Activity 1.2.1: Needs assessment of regional monitoring capacity. Up until this point there is little integration of previous environmental information, nor does it appear that the monitoring plans being contemplated are going to produce useful data collection that is likely to continue being collected or used after the life of the project. There has been so little movement on this aspect, and it holds so little promise of creating change (the government is unlikely to summon the budget and daring to engage in the kind of large-scale monitoring, remediation and mine closure that could make use of widespread environmental mercury data.)

Output 2.1: Alternative economic activities and livelihoods

155. Simply asking the miners to stop mining and do something that will make much less money is not realistic. Even the people that intend to start businesses with the help of the project have never committed to stopping mining. They want to add a new revenue stream and have an option if the mining dries up, but they intend to keep mining if the money continues to be good and they have admitted this openly.
156. Given what the evaluator has learned, the evaluator predicts that in the next two years the project will transition few miners away from primary mercury mining. At the very least, the project has absolutely little chance of eliminating mercury production in the quantities promised in the prodoc.
157. Output 2.2: Enhanced awareness of Minamata obligations among miners and communities.
158. In this respect, the project has made fair progress and is likely to mostly succeed in this output and in driving the desired outcome.

Rating for Progress Towards Project Outcomes: Moderately Unsatisfactory

Likelihood of Impact

159. Again, the project will inevitably fall far short of the outdated mercury reduction targets, however this is more of a fault in the initial appraisal of the problem than a fault in execution of the plan.
160. As far as the goals of creating alternative livelihoods, the evaluator anticipates that this project will achieve one or perhaps more examples in each community of a miner transitioning to an alternative livelihood and bringing up to five family members into the business as employees and partners. Relative to other projects this would be equivalent to achieving minimal 'pilot' stage success that is somewhat less than the project had originally promised. In other words, it would be an entirely normal outcome for a UN project.
161. In other aspects, the project may have greater successes, but these are in components of the project that are likely to have the least impact in terms of eliminating mercury. Most notably, the project is well positioned to fully comply with all expectations in regards to raising awareness throughout government and the affected members of civil society, and also with respect to mercury monitoring and remediation (if they ignore the evaluator's recommendations against environmental sampling and restoration). In terms of advancing the legal landscape of mercury mining regulation and elimination, the project has done much and achieved one very important advance.
162. The planned mapping, monitoring, and remediation planning for mercury contamination in the region is likely to be extremely costly, time consuming and yield little useful or practical output. It will have no effect in terms of driving miners to choose alternative livelihoods, or closing mines. The assumption that the government of Queretaro or Mexico would adopt an action plan made by this project and allocate government funds to remediation is woefully unrealistic. Not to mention that the donors are famously reluctant to fund remediation of contamination that is still actively occurring across the intervention area. Although it could be useful to develop a study of mine closure options, further mine closure capacity building would be a complete waste, as the mines are unlikely to be closed within the project lifespan and there is unlikely to be any provision of government funds for proper mine closure at any time in the near future.
163. So far, the only site inventory and emission estimates were those calculated during the PPG phase. The project has not usefully expanded on this, and the lack of inclusion of the PPG results in the new reports suggests that there is poor continuity of information through implementation. Inclusion of old data with new would give a sense of any possible variability, trends, and changes to spatial coverage and representativity of the data. If any further measurement or monitoring is to be contemplated, the project must first dig through all of the copious available sources of information from the biosphere reserve, Ministry of Economy, SEMARNAT, the PPG reports, UAQ and all other sources to gain a full picture of all existing relevant data. All these resources contain enough information to be able to identify and estimate contamination in new sites just by looking at satellite imagery and interviewing community members.
164. The only lasting impact this project can make is to transition miners to alternate economic activities. The project should be re-designed to reflect this by elevating this priority above all and redirecting most of the budget to it.

Rating for Likelihood of Impact: Moderately Satisfactory

Adaptive Management

165. COVID was the main challenge requiring adaptive management in this project, and like everyone at the time the project team did their best to continue the project via zoom where possible. Unfortunately, as mentioned earlier, there were major shifts in key drivers and

assumptions upon which the project planning was originally based. After COVID might have been a good time to reassess and redesign the project, but that would have required more stakeholder consultation and time so it was best to try to move forward and adapt as the project gained greater understanding of the new socioeconomic landscape.

166. Obviously, delivery on all aspects is already quite late due to the various disruptions and delays. This inevitably means that the project will need more time to achieve key outputs, but it is possible to do so in a way that produces durable outcomes that outlast the project.

167. Not having a constant presence in the villages will ensure that participation and interest in the project will continue to wane and progress will be limited. Having a dedicated field worker would help to avoid this issue. Many miners have commented that the people who run the project are too removed from the communities. They can't maintain presence and relationships in the numbers required to help move a large number of people forward. One must applaud the extraordinary efforts of UAQ staff, some of whom spent months working closely with miners at work and suffering mercury exposures high enough to induce acute immediate and chronic long term health problems. It would be far easier and safer to hire people within the communities to be the constant representatives and helpers of the project over the long term and thereby also build capacity among local people that can carry the project goals beyond the project timeline.

168. The evaluator recommends hiring two or more full time employees to take over project management and reporting, coordination, outreach, information curation, document writing and editing. One should be senior and capable enough to help any of the project leadership with tasks that the steering committee are too busy to do but need to coordinate. The other should be chosen from among the villages in the field area and be someone that is familiar with mining and known to locals. This person should keep day to day contact with the miners that are participating in the project.

169. These people should be hired under an expanded contract with UAQ and be selected by a joint INECC and UAQ hiring panel. INECC project manager roles should pass to the senior new hire under the direction of the present INECC project manager (perhaps the role should be renamed project director).

170. b) likelihood of any negative effects, including reputational risks and safeguard issues

171. The main negative effect of the project so far is the loss of confidence of the miners. This effect is a partly a product of a long history of neglect by and mistrust of governments, NGO's, and international institutions, but this project's protracted delays, repeated re-starts, and over reliance on workshops have done nothing to improve perceptions in the community. This is unlikely to get worse, but could be slightly mitigated if the project is successful in helping a handful of people start new businesses that could hold them over when mercury mining is no longer possible.

172. The greatest risk of negative impacts and reputational damage relates to criminalization of the miners and their absorption by the cartels.

173. c) factors undermining the endurance of project achievements

174. Lack of trust among miners means that none are willing to group together to create larger businesses, so the amount of project effort for each new business relative to the number of miners converted is painfully small. The few small family businesses that are likely to pan out, despite being a significant achievement unto themselves, are unlikely to entice more miners into developing their own alternatives. Rising mercury prices will exacerbate this effect.

175. Before Minamata, mercury would sell for 400 pesos per kilogram in Queretaro, and afterward it quickly went up to 1200, and now it is worth over 2000 pesos per kilogram. Continued restriction of global supply will keep raising the prices, ever reducing the ability of any alternative activity to compete. Combined with the amount of poverty in the Sierra Gorda region and even greater numbers of deported workers that will soon return to the area looking for work, it is unlikely that the pull of mercury mining will diminish any time in the near future. Anyone giving up mining will quickly be replaced with another willing to take the risk.

176. Worse, rising prices will attract organized crime. At present, the only mine to be taken over by a cartel is the most technically advanced and profitable one. However, one artisanal mercury miner was killed for his mercury near Camargo two weeks before the evaluator visited that mine. The cartel's interest in the mercury production is growing and will continue to do so ever more as prices rise. This means that any efforts at designing mine closure, monitoring, or remediation are likely to come to nothing as the security situation deteriorates. Really, the only component of project that which will endure is that relating to alternative livelihoods. Miners are less likely to become servants of cartels if they stop mining.

Rating for Adaptive Management: Moderately Satisfactory

Rating for Effectiveness: Moderately Unsatisfactory

B. Financial Management

Adherence to UNEP's/Donor Financial Policies and Procedures

177. As of the 2024 Q3 report the project has spent 5.7% of their budget. This is for a project that was conceived in 2016, gained approval in 2018 and was about to start working in 2019 but COVID shut it down for two years. Nevertheless, there has now been more than 2 years in which to have done work and spent the budget and there should have been greater drawdown than 5.7%

178. This represents a serious opportunity cost, as that money could have been doing useful work elsewhere in the development system. It is important that projects honour the opportunity they have been given by disbursing funds at a more even rate and to significant effect.

179. Looking at the list of workshops, there are clearly some workshops that could have been partly funded under other budget lines or at least allocated to a specific output. For instance, the Feb 2024 "Impartición un Taller de Toxicología Clínica Comunitaria dentro de las instalaciones de la UAQ con médicos de primer y segundo contacto del estado de Querétaro" Workshop could go under output 2.2 or 1.1, but there was drawdown of the budget for these activities. The project team has kept UNEP informed of specific activities like this, but there appears to be little oversight from UNEP on the execution of the project, because there is no pushback against the fact that the expense reports are mostly uninformative.

Rating for Adherence to UNEP's/Donor Financial Policies and Procedures: Highly Unsatisfactory

Completeness of Financial Information

180. Project staff claimed that 20% of the budget has been spent but that they had spent 60% of the cofinance budget. Given the latest expenditure report 60% of the \$484,000 for budget line 1203 "technical assistants" has been spent. The evaluator assumed at first that this is a cofinanced component because the evaluator thought that one of the project staff referred to it that way. But when the evaluator looked at the budget that whole line 1203 comes out of GEF funds and not cofinancing. Were it cofinancing, this might show the dedication of the staff and the time they are

putting into the project, but it could also be a sign that this component will run out of allocated funds and they will need to be diverted from elsewhere to compensate. The project should provide a detailed ongoing accounting of cofinancing, ideally according to the same budget line framework as that used for the GEF funds, otherwise it may appear to be zero. Cofinancing information was provided to the evaluator in response to comments made in the first draft of the mid term review. Although this clarified the situation somewhat, it is further evidence that ongoing tracking of cofinance versus GEF expenditures is lacking.

181. Rate of spend by category is not following the work plan. Only five out of 58 budget lines have had any drawdown of available funds. These are:

182. 1203 Technical Assistants

183. 1304 Travel for workshops

184. 1411 Development of information material

185. 1509 Consultation with local stakeholders

186. 1902 Audit

187. There is often no differentiation of spending in the different outputs. They sometimes simply take the total spent during that quarter and divide it among the outputs. This may be expedient for the reporter, but it gives the evaluator (and the project manager) no clear sense of relative spending on the different outputs of the project.

188. So what was the project team intending to do with the other 54 line items for which they have had no expenditures? Surely they were not waiting until the second half of the project to start. They must have planned to just keep spending without regard for which budget line they were working on and then ask for the funds to be reallocated. It seems like there was no plan being followed. For example, there were a total of 48 workshops. The evaluator had to ask them to make me a list of all of the workshops and they did so but there was no sense of which budget line they pertained to, how they all tied in together, nor how they advanced the project's goals.

Rating for Completeness of Financial Information: Highly Unsatisfactory

Rating for Financial Management: Highly Unsatisfactory

C. Efficiency

189. The project has been reasonably cost-effective in that it has spent relatively little but has undertaken a large number of workshops and completed various foundational reports. The cost per miner that starts an alternative livelihood or per kilogram of mercury reduced will be high because few miners have indicated a willingness to give up mining and if this is the case then only minor mercury reductions are likely. Apart from leveraging the SEDESU small business grant program, there have been scant efforts made to increase project efficiency by making use of or building upon pre-existing institutions, agreements and partnerships, data sources, synergies and complementarities with other initiatives, programmes and projects.

190. Timeliness of project outputs are lagging due to all of the aforementioned challenges, but things appear ready to accelerate. Although many activities have yet to be initiated and the majority of budget lines have not been drawn down at all, one can expect greater achievement in the second half of the project. Events are not being efficiently sequenced, and it is and will continue to

negatively affect delivery of outputs. At this point many budget lines and activities should be eliminated because they have not advanced sufficiently to expect completion of useful outputs in the remaining time. Attention should be refocused on core activities related to alternative livelihoods.

191. There is no way in which potential project extensions can be avoided through stronger project management. The only way forward is to extend the project life to enable processes that have been set in motion at great expense to continue to completion, and thereby achieve immediate outputs that will lead to the adoption of alternative livelihoods among the miners.

192. Many project proponents lament the long delays caused by a combination of long and laborious procurement and disbursement protocols with long blackouts for election periods. Additional challenges were presented by government rules around disbursement requiring that the money has arrived in your account before signing new contracts using those funds. This means that when planning in february you have to prove you have the whole year's budget for all activities in the project account first, even if you haven't spent your previous budget request funds. This means the project has to ask the UNEP for more money while still holding un-spent funds that are earmarked for coming activities, and this generates problems getting more funds in a timely manner.

Rating for Efficiency: Moderately Satisfactory

D. Monitoring and Reporting

Monitoring of Project Implementation

193. During the PPG phase, the project gathered relevant and good quality baseline data that is accurately and appropriately documented, far better than any data collected since. The indicators are specific, relevant and time-oriented but they are almost totally unachievable, and it is not clear how they can be verifiably and effectively measured.

194. So far the only site inventory and emission estimates were those calculated during the PPG phase. The project has not been able to expand on this more than it has in part because the miners' permits have now mostly expired and the live in a legal limbo that makes them less open to inventory surveys. Furthermore, they open new clandestine tunnels that would be difficult to ever know their true numbers and distribution.

195. There is no evidence that, for this moment, the project has a good understanding of what it takes to make a useful monitoring plan or what could be gained from it. It's seems that it has been included just because its something people assume you need to do as part of a project like this. There also appears to be no monitoring planning document that comprehensively accounts for the nature, limitations, utility, and sampling methodology considerations of all aspects of environmental mercury detection. Furthermore, there is nothing to be gained from showing that mercury contamination exists. We know it is contaminated everywhere you find mercury mining related activities. Knowing how much does not help remediate the site (unless all measurements conform to the standards and practices required by the state for a remediation project, which cannot be said of the measurements made in this project) or prevent new production.

196. The skeletal mercury monitoring plan proposed features frequencies of sampling and agencies responsible, but there is no map or guidance on where all samples are to be taken, how many, where the samples will be analyzed, what methods are used to sample and analyze, what conditions and qualities of personnel are required to execute it with what equipment, according to which procedures and what rationale and budget there is for each of the aforementioned things. All these things are more complex and conditionally dependant than the project documents suggest.

197. Given the embryonic state of the monitoring plan, and no evidence of any more detailed plan in progress, it would be best to minimize this aspect of the project and focus on more concrete activities that transition miners away from mercury extraction.

198. Other than scant, vague mercury measurement plans, there is no indication of any operational monitoring system that could facilitate the timely tracking of results and progress towards project milestones and targets. There has been no spending at all under the monitoring budget lines, and no indication that there is any plan to start or what they may do.

199. In general, UN and other development projects need to evaluate project performance only on indicators that are directly achievable during the project life (I call these execution indicators, such as number of miners engaging in alternative livelihoods) and not on ultimate outcomes over which they have no control (I call these impact indicators, such as mass of mercury eliminated). This way you are not setting unrealistic expectations for the execution agency, but you are holding them accountable for activities over which they have complete control.

Review of indicators

200. Indicator 4: Area of **landscapes under improved practices** (excluding protected areas) (Hectares): 2000

201. Most of the project sites are inside the protected area, and none of these mines are likely to close during or soon after the project is closed. On this indicator there is unlikely to be any degree of achievement because no mines will stop producing in the life of this project. This indicator made sense at the time the project was conceived, but the fundamental conditions in the region have changed so much as to make this indicator impossible to even begin to reach. There are also no plans for any alternative livelihoods that involve improved land use practices, so there is no way to reach any level of achievement of this indicator. Even if it were achievable, it's clear that this was not directly measurable unless mines closed or land use changes were implemented and monitored.

202. Indicator 9: Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (metric tons of toxic chemicals reduced): 140 tons of mercury

203. The measurement of this indicator value was dependent on mines closing when it could have been more useful if it were measured by estimating the expected mercury recovery of each miner that transitions to alternative work. Since no mines are likely to close, the current measurement method will yield zero reductions by the end of the project. The project should pivot to a per-miner mercury reduction so that it can post reductions, but it might be a bit disingenuous since its likely new miners will likely take their place.

204. Indicator 11: Number of direct beneficiaries disaggregated by gender as co- benefit of GEF investment: At least 100,000 (53,000 female; 47,000 male) people from the communities in the Sierra Gorda region

Rating for Monitoring of Project Implementation: Highly Unsatisfactory

Project Reporting

205. The project manager uploads six-monthly progress reports against agreed project milestones as required but they don't always give a cogent or complete picture of progress over that time and they don't always follow the TORs. Both UNEP and Donor reporting commitments have been fulfilled

and all meeting and field mission reports are being written and centrally stored. Formal reports have been appropriately authorised by both the author and the relevant supervisor.

206. In general, all project reports (whether progress reports or major deliverables) are poorly written, with no logical flow, little analysis or synthesis, and uninformative summary and conclusion sections with little indication of how the results support the project. They offer little insight into what has been learned or transmitted in workshops nor how the results will inform the broader project. In future the project must distill the important results of the stakeholder engagement so that it can be considered and incorporated into a more cogent executive summary that can more effectively guide the project's development.

207. The project was supposed to eliminate 50T of mercury by the mid-term review, and under this indicator category the project indicated in the latest PIR that within the municipalities in which the project is working they produce approximately 50T of mercury per year. The author believes it is disingenuous to write this when the progress toward the target is null. Zero mercury was eliminated by this project and since there was no evidence that any miner intended to stop mining mercury (in spite of the fact that some will start alternative businesses in parallel). This is why project like this need to be more realistic about indicator targets and stop holding project directly accountable for indicators of impact that are beyond their control.

Rating for Project Reporting: Highly Unsatisfactory

Rating for Monitoring and Reporting:	Moderately Unsatisfactory
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E. Exit Strategy & Sustainability

Exit Strategy

208. Outcome 1: The Government monitors primary mercury mining and adopts an adequate regulatory framework

209. The modifications to law belatedly provided to the evaluator should contribute to the cessation of mercury mining in the region if they are enacted in law.

210. The project has not made sufficient gains in this component to merit moving forward with monitoring and remediation elements. If it continues in these respects, it will not likely result in remediation or long-term monitoring of any kind because the government is unlikely to be able to fund these activities. Existing environmental and human health knowledge gained in previous government and university studies as well as the PPG team and the current project is sufficient evidence of the risks and distribution of mercury. If it can be all incorporated into a single well written meta study that could improve institutional memory beyond the project life.

211. Outcome 2: Miners in Querétaro adopt alternative income generation activities

212. It seems likely that this is outcome will come to pass as a result of this project, and that miners will create new businesses that can employ them and their families. This will raise incomes and opportunities into the future and benefit the wider community. The SEDESU business development grant fund preceded and will persist after the project and they serve as a reservoir of institutional capacity that will be maintained beyond the project life.

213. Everyone the evaluator spoke with seemed unreasonably confident that organized crime would not take any interest in the mercury miners other than the one mine in the middle of the

project area at Peñamiller. They explain that criminals have taken over that mine because it is the most developed, technologically advanced, and profitable mine in the area. Miners claim that the size (width) and metal concentrations in their ore veins are declining, and that their yields diminish steadily year after year. They cite this as reason enough to claim that criminals will never take interest in their activities, as they believe that artisanal and marginal production will not be sufficiently attractive to them. This is a dangerously short-sighted opinion, given that the USGS predicts that mercury prices could more than double by 2030. If this happens, those vanishing ore veins and artisanal producers are going to become much more attractive. The project is acutely aware that organized crime would take over more of mercury production if there is a spike in value.

Rating for Exit Strategy: Moderately Satisfactory

Rating for Sustainability: Moderately Satisfactory

F. Factors Affecting Performance and Cross-Cutting Issues

Project Inception

214. Inception was followed immediately by a two year pause for COVID, the project had to be restarted again and the entire context had drastically changed over that time. Engagement with stakeholder groups by the project team has been strong, broad, and effective, except for the fact that there arose an initial perception among miners that the project was going to provide them with funds directly rather than just assistance. It took a long time to reverse this perception and it cost significant social capital. Appropriate inception meetings were held and an inception report is available on file.

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Rating for Preparation and Readiness: Moderately Unsatisfactory

Quality of Project Management and Supervision

217. The GEF focal point has done a good job of coordinating communication and activity among the steering group members, making sure that they are meeting as required, and ensuring the timely transfer of funds from the donor and progress reports from the project team. Yet poor project management has meant that the project team has been unable to effectively plan for and mitigate many of the non-COVID related problems that have led to further delays and disruptions.

218. The project has not drawn any funds from the “project management” budget line. Some project management must have occurred, so one must assume that it is considered cofinancing,

although there was no accounting to prove it until after the first draft of this report was produced. In general, it seems that there is effectively no project manager and the project isn't following the plan in detail, only in spirit. This applies equally to the UNEP/Implementing Agency relationship as to the Implementing Partner/Executing Agency relationship. This is leading to uneven implementation and over execution of functions that the project team is used to doing, such as workshops and inscrutable reports.

Rating for Quality of Project Management and Supervision: MU

Stakeholders Participation and Cooperation

219. The majority of miners in all areas have become disinterested in the project and convinced that it has no value to them. Also, they now know to fear the impending illegality and possible criminalization of their main means of income. This will limit the potential reach of the project during its life, however this effect could be reversed if the project manages to create successful cases of miners transitioning to dignified and sufficiently lucrative alternative livelihoods.

220. Serial workshop participants describe high initial attendance and a rapid drop-off, with very low attendance at the latest workshops. Due to the remoteness and poor access of Bucareli, as well as the non-localness of the miners there, the project should abandon all active efforts to build relationships with miners in Bucareli that don't actively participate. Activities supporting women in Bucareli should be continued in order to balance the male oriented nature of any project aimed at mining.

221. Among the dozen or so people the evaluator spoke to who have signed up to participate directly in the project, none have expressed intentions to cooperate with other miners or non-family members in larger businesses. When they talk about how much employment their alternative livelihoods will produce, they name 5-7 family members they intend to involve in the business. There is such a deep mistrust among people in these towns and villages that they will not contemplate banding together to do something larger. SEDESU and UN projects aggressively promote cooperatives but there is little appetite for that level of cooperation locally.

222. Some intend to fund their own alternative businesses to which they can transition when they stop being a miner (the project only offers assistance in accessing the 40k pesos SEDESU assistance for individuals, or 2 million for those that band together with more than 10 people). The project has offered no assistance in terms of cash or loans for business startup costs like a freezer for a butcher or a barbeque for a food stand. That kind of concrete assistance is what everyone invariably asks for, and it is precisely that which the project operators must say they cannot give. So that further feeds the sense of futility and frustration among the people with whom the evaluator spoke in the mining communities.

Rating for Stakeholders Participation and Cooperation: Moderately Satisfactory

Responsiveness to Human Rights and Gender Equality

223. The project follows an adequate gender analysis made in the design stage, has implemented the identified actions to ensure that gender equality and human rights are adequately taken into account. In particular, they are working with women in Bucareli where women and children are the most disadvantaged and negatively impacted by the regional mercury rush. In Bucareli the evaluator visited and interviewed some miners and several women that are hoping to participate in the project's alternative livelihoods program. The main challenges are the poor road, made of dozens of unpaved switchbacks on a nightmare steep track that delves deep into the canyon. This barrier makes it hard to start alternative livelihoods, and miners seem reluctant to consider leaving mining. It is appropriate to focus on the women of Bucareli rather than on the migrant miners of the area.

The project also provides day care for any children of Bucareli women that attended the workshops so that they would be able to engage with the project.

224. In San Joaquin, women participate in mercury roasting. The project has gone to some efforts to find and educate these home-based roasters, and have found children that are suffering intellectual deficiencies as a result of lifelong exposure to mercury fumes. Previously, community members and the government were not aware of these occurrences and this new information has made everyone more aware of the acute risks of mercury and the need to eliminate its production.

Rating for Responsiveness to Human Rights and Gender Equality: Moderately Satisfactory

Environmental and Social Safeguards

225. Bucareli is a very poor place with difficult access and the only tourism is mostly 4x4 offroad vehicle driving which is completely unregulated and uncontrollable, and itself poses risks to the environmental sustainability of the community. Expansion of this kind of alternative livelihood, as suggested by the project, is unlikely to provide significant alternative employment without increasing risks to the fragile desert ecology.

226. The main environmental risk is the continuation of the use of inefficient, leaky mercury retorts, especially those operating near residences. These generate extremely harmful fumes, emit large quantities of mercury to the atmosphere unnecessarily, and they produce residual mercury laden tailings that represent a long-term contamination and health risk. This project is focused on finding and eliminating these sources, and educating people about the associated risks. This is appropriate as this is one of the risks that can be addressed, where as most mine site contamination issues perhaps cannot. The risk of the mines themselves and the mine gangue waste piles around them are realistically too dispersed to present a significant health risk, and the environmental risk has existed for decades already. It is unlikely that the government will be able to fund and execute any remediation of these more remote mine sites, but the home-based burning should be addressed as soon as possible. The activities of this project will not exacerbate any of these risks, and may be able to reduce the risks closest to human habitations.

227. There is no consideration given to health and safety protocols during field work, and no one wears any personal protective equipment when doing field work even though they are regularly exposed to extreme and harmful levels of mercury in air. One project leader has spent so much time working directly with miners, building their trust and breathing their mercury fumes, that they would sometimes become mercury intoxicated, and has since felt recurring neurological symptoms that are disrupting their life. All project staff and participants need to be better safeguarded when working in these communities. During the mid-term review field visit, the evaluator was taken to a mercury retort so that he could witness these furnaces first hand. The team approached the retorts within 10 metres and the evaluator was encouraged to inspect more closely. The group then was told that they had just finished roasting, and they passed the evaluator a fresh plastic bottle with about 450mL of mercury in it. The evaluator refused, and immediately left the area. Regardless, given that the mercury roasting had just finished, the group likely received an unacceptable amount of exposure. No project staff should ever be subjected to this hazard ever again. If it is necessary to approach such an area it should be done with a mercury filtering respirator and the entire team should change and clean their clothes immediately afterwards. It will seem strange that the project team are using such precautions but it is appropriate given the hazard and will serve to impress upon the miners and their families the degree of risks involved and the means necessary to mitigate them.

Rating for Environmental and Social Safeguards: Moderately Unsatisfactory

Country Ownership and Driven-ness

228. Municipal, state, and federal agencies display significant ownership over project outputs and outcomes and this increases the likelihood that project achievements will continue beyond the life of the project. Prime examples are the cooperation with the SEDESU alternative livelihoods program, proposed modifications to federal laws under the direction and impetus of SEMARNAT and INECC, as well as the community connections and institutional knowledge continuity of UAQ and INECC.

229. The mining communities themselves are pushing forward with improving local education and alternative livelihoods. Independently of the project, Camargo miners sought help from UAQ to make a satellite school for their kids to keep them out of mining. Miners gave land for the school and they run special supplementary courses to improve their learning. This kind of local independent initiative and government cooperation shows that people in the region are engaged and eager for change.

Rating for Country Ownership and Driven-ness: Moderately Unsatisfactory

Communication and Public Awareness

230. As commonly happens, miners and other participants got an initial mistaken impression that the project would just give them money, partly because SEDESU had presented a program of theirs that offered a small payment to start another business and it was presented to the miners as a partner program. This confusion about which entities are providing funds (Queretaro state) and which will supply training and assistance (UNEP through INECC) was exacerbated when people also realized that the state funds (administered by SEDESU) are 40,000 pesos for individuals or up to 2 million pesos for cooperatives or group organizations larger than 10 people, and that none of the 7 million USD GEF/UNEP budget would be going directly to them. This caused many miners to lose interest in the project.

231. Ultimately the mercury hazards public awareness activities that were undertaken during the implementation of the project have influenced attitudes and are shaping behaviour change among miners and the wider community.

Rating for Communication and Public Awareness: Moderately Unsatisfactory

Rating for Factors Affecting Performance and Cross Cutting Issues:	Moderately Unsatisfactory
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VI. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

232. The strong implementation team has built durable relationships and respect within the mining communities, in spite of difficulties of access and restrictions on participation during covid and election blackouts. This project is of critical global importance, and it should be given a time extension with greater capacity in project management no change to the budget. The key drivers and assumptions that underpin this project have drastically changed during these extreme delays, and a sharp downward revision in expectations and indicator targets is necessary. Recommendations include increasing full time dedicated project staffing, minimizing components that have underperformed so far and are likely to yield few results (such as mercury field measurements and remediation activities), and giving more time in which to complete the project. Though progress lags behind expectation, a foundation has been laid upon which concrete accomplishments can be realized. All outputs have been initiated, though most activities are yet to begin. This project is based on a quite comprehensive Prodoc baseline, as well as good familiarity with mercury and mining issues among government and academic team members. This project's outcomes are strongly coherent with top priorities from municipal to global levels. Cooperation with state level economic programs increase the impact of both. But the project nevertheless failed to integrate activities, mutually support or synergize among ongoing related projects such as the Minamata National Action Plan (NAP). Using the NAP field investigation techniques at mercury mines could have given a much clearer impression of the hierarchy of roles and incomes throughout the mercury value chain. This project should take lessons from the NAP process and apply the same mining and mercury field estimation protocols. I found no other connection or complementarity with other UNEP initiatives.

233. The theory of change represents a coherent and realistic change process from a cause-and-effect perspective, however the relative strengths and significance of the drivers and assumptions identified have drastically changed. In 2017 large numbers of people returning to the Sierra Gorda region after being deported from the USA, and many major mercury source countries banned exports. The over optimistic indicator targets are the product of a misunderstanding of and/or changes to the nature of mining communities, miners' trust in government, and the widening income disparity between mining and any viable alternative livelihood. They need to be revised down according to new realities and the lessons learned so far.

234. Another aspect of the theory of change that needs reformulation is that part relating to monitoring and remediation. The assumption that one could effect and track changes in environmental mercury values within the life of the project is unrealistic given the physical extent and long history of contamination from the mercury mines in the region. Studies on immediate risks to community and human health are the only useful monitoring activities as they can identify body burdens among community members. The project in the following Project Steering Committee meeting should recommend reducing the budget for other monitoring and remediation goals (and all related activities and outputs) and put those funds in a revolving community investment pool where people can get help starting up their business. This project needs to expand what it is willing to undertake, and take in some of the lessons (and seek assistance from) the Planet GOLD program so that some kind of innovative micro-financing can be afforded to the miners of the Sierra Gorda region.

235. In practice, the project has been over reliant on workshops, interspersed with long periods of inaction. INECC procurement rules create long gaps in implementation, slowing the project down and causing miners and community members to lose interest and faith in the project. In future projects must look at any protocols, rules, and systems that would apply to the executing agency and analyze their potential effects and risks. Many miners in all areas have become disinterested in the project and convinced that it has no value to them. Also, they now know to fear the impending

illegality and possible criminalization of their main means of income. This will limit the potential reach of the project during its life, however this effect could be reversed if the project manages to create successful cases of miners transitioning to dignified and sufficiently lucrative alternative livelihoods. Having dedicated personnel in the field, living in and ideally chosen from among the local populace in the immediate communities in which the project is working, could help nurture nascent initiatives and provide a much needed and more constant presence in the villages.

236. The quality of the reports are low, budget tracking is poorly executed and there is improper allocation of activities to specific budget lines and categories that makes it difficult to see if the work plan is being followed. As of the 2024 Q3 report the project has spent 5.7% of their budget, which is startlingly low. This suggests that there is a need for greater assistance and oversight from UNEP on the execution of the project. Furthermore, the project must provide a more detailed accounting of cofinancing, ideally according to the same budget line framework as that used for the GEF funds. This information was provided belatedly and although this clarified the cofinance situation it remains important to highlight this deficiency in project management before the mid term review.

237. Limited but strong enrolment of miners and other project participants, many of whom are likely to follow through with their intended alternative livelihoods and are well positioned to benefit from the new business facilitation on offer from the project and state incentive programs. The entire project execution/implementation team has developed a much more nuanced and realistic picture of the sector they aim to change, and of the barriers and risks present and future. There has been important progress on all aspects of the project, with some improvements in terms of project management and field personnel. Ultimately, the present and future outcomes realized by this project would not have occurred had this project not been implemented. The project increased participation in the SEDESU alternative livelihoods incentive program among miners as it provided more encouragement and assistance in accessing them, as well as greater awareness of the hazards of mercury for themselves, their families, and communities. These are real, important, and durable gains that are directly attributable to this project.

238. Keeping the outdated assumptions about the eagerness of miners to abandon mercury production created impossible mercury elimination targets. This project has not performed well as measured against these targets. In reality, given the challenges experienced by this project, including Covid and the forced inactivity attributable to government procurement protocols and election season related restrictions, the project has actually progressed moderately satisfactorily towards completion of its goals. Most notably, the project is well positioned to fully comply with all expectations in regards to raising awareness throughout government and the affected members of civil society. It is reasonable to anticipate some degree of achievement of the key outcomes of the project, but the target reduction quantities need to be revised sharply downward in light of the difficulties faced by the project. The project is likely to result in a few miners choosing and succeeding in alternative livelihoods, and they will each employ up to 5 other people. If the project is able to restructure and focus all energy on component 2 there could be many miners transitioning. Government programs that will continue to replicate this long after the end of the project, thereby adding an element of sustainability beyond the life of the project. Hoped for mercury reductions are likely to be frustrated by a possible price shock-driven mercury rush and the expansion of organized crime in the sector.

239. The dedication, talent, and determination of the project team members is admirable and they have at times gone beyond their duty to connect with and maintain positive relationships in the communities. Highly capable executing and implementing teams have maintained program integrity, institutional capacity and community facing consistency despite some changes in leadership. Though the project has completed fewer than half of the activities set out in the work plan, this paradoxically represents a much greater proportion of the real 'work' of making change. When taking this into account, along with Covid, the forced inactivity attributable to government procurement protocols

and election season related restrictions, the project has actually progressed moderately satisfactorily towards completion of its goals. Many on the project team agree that performance so far has been moderately unsatisfactory, and they all regret that despite everyone's best efforts it has fallen short of its potential. Nevertheless, this project is of pivotal global importance, as it addresses the largest mercury supplier for all of the Americas and it must continue and be supported with the highest degree of priority. This project should be given a no cost extension of at least one year and much more administrative support and leadership from UNEP. There also needs to be stronger project management and community engagement for which full time personnel should be hired to increase capacity and reach.

Table 1: Project Performance Ratings⁶

Criterion	Summary Assessment	Rating
A. Strategic Relevance	Highly relevance and importance	HS
<i>1. Alignment to UNEP's, Donors and Country (global, regional, sub-regional and national) strategic priorities</i>	Broad global societal benefit	HS
<i>2. Complementarity/Coherence with relevant existing interventions</i>	Highly coherent	HS
B. Quality & Revision of Project Design	Plans became outdated	S
C. Effectiveness	Few concrete effects but some potential	MU
<i>1. Theory of change</i>	Didn't adapt to conditions	MS
<i>2. Availability of outputs</i>	Low quality	HU
<i>3. Progress towards project outcomes, including towards indicators</i>	Low, but indicators are outdated also	MU
<i>4. Likelihood of impact, includes innovativeness and replication and scalability</i>	Real but minimal impacts will be realized, possibly replicated	MS
<i>5. Adaptive management</i>	Survived COVID	MS
D. Financial Management	Poor reporting and burn rate	HU
<i>1. Adherence to UNEP's/Donor</i>	Poor reporting	HU

⁶ Most criteria will be rated on a six-point scale as follows: Highly Satisfactory (HS); Satisfactory (S); Moderately Satisfactory (MS); Moderately Unsatisfactory (MU); Unsatisfactory (U); Highly Unsatisfactory (HU). Sustainability and Likelihood of Impact are rated, also on a six-point scale, from Highly Likely (HL) down to Highly Unlikely (HU) and Nature of External Context is rated from Highly Favourable (HF) to Highly Unfavourable (HU).

Criterion	Summary Assessment	Rating
<i>policies and procedures</i>		
<i>2.Completeness of project financial information</i>	Poor reporting	HU
E. Efficiency	Some progress despite challenges	MS
F. Monitoring and Reporting	Poor reporting	HU
<i>1. Monitoring of project implementation</i>	Poor reporting	HU
<i>2.Project reporting</i>	Poor reporting	HU
G. Exit Strategy & Sustainability	Some sustainable outcomes	MS
H. Factors Affecting Performance and Cross-Cutting Issues	Lack of leadership	MU
<i>1. Project Inception</i>	Fair but became outdated	MS
<i>2. Quality of project management and supervision</i>	Inadaptable and rudderless	MU
<i>2.1 UNEP/Implementing Agency:</i>	Lead and assist better	MU
<i>2.2 Partners/Executing Agency:</i>	Administrative paralysis	HU
<i>3. Stakeholders participation and cooperation</i>	Sparse but resolved	MS
<i>4. Responsiveness to human rights and gender equality</i>	Fair	MS
<i>5. Environmental and social safeguards</i>	Few	MU
<i>6. Country ownership and driven-ness</i>	Strong	HS
<i>7. Communication and public awareness</i>	Weak	MU
Overall Project Rating	As good as could be expected given the circumstances.	MU

B. Lessons learned

240. Lesson 1: Key inception information can be easily misunderstood

241. Context/Comment: The inception phase is crucial for aligning expectations and clarifying project objectives, timelines, and scope. In this project, initial meetings may not have sufficiently clarified technical terms, roles, and boundaries of GEF funding, which led to confusion among stakeholders, particularly local beneficiaries. The lesson emphasizes the need for stronger communication strategies at the outset, using accessible language and repeated engagement, especially in projects that address complex environmental or technical issues like mercury mining

242. Lesson 2: Be careful when presenting relationships with government incentive programs to ensure proper attribution in the minds of the recipients. Also, it's hard for people to understand that you can spend 7 million dollars on a development project without being able to actually pay or gift things to beneficiaries directly. It is important to make that clearer at the outset to avoid raising unrealistic expectations.

243. Context/Comment: This lesson reflects a recurrent challenge in GEF-funded projects: stakeholders often equate project funding with direct economic aid or subsidies. In communities affected by poverty or economic vulnerability, the perception that a large-budget project should provide material support is strong. Furthermore, the overlap or confusion with other government programs can lead to attribution issues. The project should improve its communications by clearly differentiating between GEF-supported technical assistance and direct financial support programs from government or other donors, ideally through FAQs, community briefings, and continuous stakeholder engagement.

244. Lesson 3: Top managers must demand stringent personal safety protocols for everyone in the field

245. Context/Comment: Field missions for mercury-related projects inherently involve health and safety risks, especially when visiting active or abandoned mining sites. The MTR mission revealed inconsistent safety protocols across field visits. This lesson stresses that leadership must ensure that personal protective equipment (PPE), risk assessments, and contingency measures are not only available but enforced. This includes setting the tone from the top, where managers model compliance and demand accountability from teams and contractors.

246, Lesson 4: Those implementing chemicals hazards management projects such as this might not protect themselves from the chemical hazards they to which their employment exposes them, as shown in the midterm review field mission. They need to be protected by mandatory organizational and health protocols that specify hazardous contexts and the requisite protection such as gas masks.

247. Context/Comment: This lesson underscores the gap between knowledge and practice in health and safety in the chemicals sector. Although the project's objective includes safer management of mercury, personnel were observed entering hazardous areas without adequate protective gear. This contradiction weakens the credibility of project messages and exposes staff to serious health risks. The lesson supports the need for compulsory, institutionalized safety protocols tailored to mercury exposure scenarios, with training and enforcement mechanisms in place for all field personnel.

248. Lesson 5: Delays in implementation can invalidate otherwise sound plans.

249. Context/Comment: Implementation delays—whether due to administrative, procurement, or coordination issues—can undermine carefully developed strategies. In the case of this project, changing conditions on the ground (e.g., fluctuations in mercury demand, community dynamics, or

local governance) rendered some originally planned interventions less relevant or feasible. This lesson points to the need for adaptive management approaches and more flexible planning that allows for mid-course corrections in response to implementation delays.

250. Lesson 6: Socioeconomic and geopolitical conditions may sometimes change so much in between conception and inception that the theory of change becomes outdated.

251. Context/Comment: The design-to-implementation time lag in GEF projects can be significant. In this case, socio-political developments in the mercury mining regions—including migration, shifts in artisanal practices, or local governance changes—meant that some assumptions in the theory of change no longer held true. This lesson highlights the importance of updating the theory of change and project logic during the inception phase, and remaining responsive to real-time shifts in the operating context throughout implementation.

252. Lesson 7: Improve field socio-economic study methods

253. Context/Comment: Accurate understanding of the socio-economic conditions in mercury mining communities is vital for effective project interventions. However, the methods used in this project’s baseline and field surveys may have lacked depth or failed to capture informal economic dynamics and power relations. This lesson suggests strengthening participatory methods, triangulating data sources, and tailoring study tools to local contexts in order to produce more reliable and actionable socio-economic insights.

254. Lesson 8: This project should take lessons from the NAP process and apply the same mining and mercury field estimation protocols. Using the NAP field investigation techniques at mercury mines could provide a much clearer impression of the hierarchy of roles and incomes throughout the mercury value chain.

255. Context/Comment: The National Action Plan (NAP) for artisanal and small-scale gold mining (ASGM) in Mexico applied standardized and effective tools for estimating mercury flows and understanding the value chain. These same tools could benefit the mercury mining project by providing consistency in data collection and better comparability across sectors. This lesson encourages cross-project learning and methodological alignment within national mercury-related interventions, enhancing both the quality and coherence of outcomes.

C. Recommendations

Recommendation #1:	All project personnel should wear mercury-rated gas masks whenever approaching known mercury sources such as furnaces and should avoid them completely whenever possible.
Challenge/problem to be addressed by the recommendation:	Field missions observed poor adherence to occupational safety standards, putting personal at health risk
Priority Level:	High
Type of Recommendation:	Technical/Health & Safety
Responsibility:	Executing Agency/ field staff supervisors
Proposed implementation time-frame:	Immediate

Recommendation #2:	Assimilate all existing mercury data for the region into one very well written meta-study with proper analysis, synthesis, summary, and actionable conclusions.
Challenge/problem to be addressed by the recommendation:	Existing studies are fragmented, hindering comprehensive risk assessment and decision-making
Priority Level:	Medium
Type of Recommendation:	Technical/ Strategic
Responsibility:	Consultants / PCU / Technical partners
Proposed implementation time-frame:	Before end of project

Recommendation #3:	Improve field socio-economic study methods based on NAP protocols.
Challenge/problem to be addressed by the recommendation:	This information requires systematization to serve effectively as a baseline for ongoing monitoring.
Priority Level:	High
Type of Recommendation:	Operational
Responsibility:	Project Coordination Unit (PCU), EA, with UNEP support
Proposed implementation time-frame:	Before end of project

Recommendation #4:	Refocus energies on local resident miners such as those in Camargo and in places with more transient miners like Bucareli focus on the women instead
Challenge/problem to be addressed by the recommendation:	Transient populations (e.g., in Bucareli) are less likely to benefit from sustainable livelihoods interventions and differentiate participation strategies should be implemented
Priority Level:	High
Type of Recommendation:	Strategic
Responsibility:	Executing Agency / PCU
Proposed implementation time-frame:	Before end of project

Recommendation #5:	Focus on alternative livelihoods at the expense other outcomes
Challenge/problem to be addressed by the recommendation:	Alternative economic activities are key to reducing mercury mining sustainability: current resource allocation is misaligned
Priority Level:	High
Type of Recommendation:	Strategic/Financial
Responsibility:	UNEP/ PCU
Proposed	Before end of project

implementation time-frame:	
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Recommendation #6	Accelerate efforts to increase alternative livelihoods and reach the ambitious project indicator targets, such as enrolling more miners, increasing monetary incentives and support to miners, help create larger scale businesses that will gainfully employ miners beyond just family businesses.
Challenge/problem to be addressed by the recommendation:	Current project indicator targets are not clear how they will be achieved. A mechanism to adjust activities to indicators will be proposed
Priority Level:	High
Type of Recommendation:	Operational
Responsibility:	Executing Agency/ PCU
Proposed implementation time-frame:	Immediate

Recommendation #7:	Turn part of the unused budget into a revolving small loans fund to support new miner owned businesses
Challenge/problem to be addressed by the recommendation:	While the project's financial structure does not currently contemplate direct support for the implementation of miners' projects, the budget adjustments seek to channel funds toward practical and sustainable income-generating activities in mining communities.
Priority Level:	High
Type of Recommendation:	Strategic
Responsibility:	Executing Agency / PCU
Proposed implementation time-frame:	Before end of project

Recommendation #8:	Reduce elements that don't advance alternative livelihoods or human health, particularly those activities related to monitoring and remediation plans
Challenge/problem to be addressed by the recommendation:	While the project recognizes the need to prioritize activities that directly support alternative livelihoods and human health, it also acknowledges the national importance of maintaining strategic mercury monitoring efforts, particularly for the identification of critical contamination hotspots and the preliminary design of feasible remediation options.
Priority Level:	High
Type of Recommendation:	Strategic / Monitoring & Evaluation
Responsibility:	UNEP / PCU/ Project Steering Committee (PSC)
Proposed implementation time-frame:	During next PSC meeting

Recommendation #9:	Improve expense accounting of grant funds, especially cofinancing
Challenge/problem to be addressed by the recommendation:	the original conditions of co-financing institutions have evolved since the initial design phase of the project. In response, the project acknowledges the need to strengthen expense accounting practices, with particular emphasis on co-financing contributions
Priority Level:	Medium
Type of Recommendation:	Financial / Strategic
Responsibility:	UNEP/ PCU/ PSC
Proposed implementation time-frame:	Next PSC meeting

Recommendation #10:	Increase support in project management and presence in the communities with new personnel
Challenge/problem to be addressed by the recommendation:	In the planning of the next phase of the project, a specialized territorial follow-up strategy must be developed to strengthen project management and enhance presence in the communities.
Priority Level:	High
Type of Recommendation:	Strategic/Financial
Responsibility:	UNEP/ EA/ PCU
Proposed implementation time-frame:	Before end of project

Recommendation #11:	Improve reporting so as to make workshop, meeting, and expenditure reports clearer, more informative and complete
Challenge/problem to be addressed by the recommendation:	Reports lack clarity and data disaggregation, limiting transparency and assessment of outreach activities
Priority Level:	High
Type of Recommendation:	Operational
Responsibility:	EA
Proposed implementation time-frame:	Before end of project

Recommendation #12:	Reduce over reliance on workshops and underperformance on concrete activities
Challenge/problem to be addressed by the recommendation:	stakeholder engagement and trust-building, which was essential for gaining access and cooperation from community authorities, miners' groups, women's and children's groups, and other key local actors has not been properly reported. The project requires a more strategic logic organization of the generated information.
Priority Level:	Medium

Type of Recommendation:	Operational / Monitoring & Evaluation
Responsibility:	EA / Consultants
Proposed implementation time-frame:	Before end of project

Recommendation #13:	Coordinate and cooperate with successful programs of other agencies that operate in the region
Challenge/problem to be addressed by the recommendation:	Missed opportunities for synergy and scaling up successful interventions through collaboration with existing initiatives
Priority Level:	Medium
Type of Recommendation:	Strategic/ Operational
Responsibility:	EA/ UNEP / PCU
Proposed implementation time-frame:	Before end of project

ANNEX I. RESPONSE TO STAKEHOLDER COMMENTS

Response to stakeholder comments received but not (fully) accepted by the reviewers, where appropriate.

Page Ref	Stakeholder comment	Reviewer Response
Par 195	Monitoring plan justification	Monitoring according to provided documents is weak, therefore no change needed in this report.
248	Explanation on delays was given to the consultant	Text revised in response to concerns highlighted by Executing Agency team.

ANNEX II. PEOPLE CONSULTED DURING THE REVIEW

Organisation	Name	Position	Role in the project	Gender
UNEP	Ludovic Bernaudat	Head of Knowledge and Risk Unit	IA Representative	M
UNEP	Ramon Jimenez	Programme Management Officer	PSC Member	M
SEMARNAT QRO	Lucitania Servin	Head of SEMARNAT QRO	PSC Member	F
SEMARNAT QRO	Paloma Arce	Support of SEMARNAT QRO	Technical specialist	F
Ministry of Health	Monica Tejada	Short-term expert	Technical specialist	F
SEDESU	Mauricio Aguilera	Representative of SEDESU	PSC Member	M
UAQ	Izarely Rosillo	Short-term expert	Coordinator specialist	F
Federal protected areas	Fatima Lira	Short-term expert	Technical specialist	F
INECC	Ania Mendoza	EA Project Manager	EA technical specialist	F
INECC	Luis Sifuentes	EA short-term expert	EA technical specialist	M
SEMARNAT/DGGIMAR	Arturo Gavilan	Head of DGGIMAR	Chair of PSC	M
SEMARNAT/DGGIMAR	Teresa Rocha	DGGIMAR short-term expert	Technical specialist	F

ANNEX III. KEY DOCUMENTS CONSULTED

Project planning and reporting documents

- Reducing Global Environmental Risks through the Monitoring and Development of Alternative Livelihood for the Primary Mercury Mining Sector, Project Document with annexes, UNEP, 2020
- Reducing Pollution from Harmful Chemicals and Wastes in Mediterranean Hot Spots and Measuring Progress to Impacts, GEF CEO Endorsement Letter, 2020
- Report from the Kickoff and Inception Meeting of the Primary mercury mining in Mexico, UNEP, 2021
- Project Implementation Reports (PIRs) for GEF fiscal years 2022, 2023, and 2024, UNEP/GEF
- Project Steering Committee Meetings for 2021, 2022, 2023 and 2024, UNEP

Reference documents

- UNEP Evaluation Policy, rev. October 2022
- Glossary of Results Definitions, UNEP, ver. 8, 2023
- Guidance on the Structure and Contents of the Mid-Term Evaluation Report, UNEP, 2023
- GEF Monitoring and Evaluation Policy, GEF Evaluation Office, 2010
- Integrating Human Rights and Gender Equality in Evaluations, UNEG, 2014
- Ethical Guidelines for Evaluations, UNEG, 2020

ANNEX IV. REVIEW SCHEDULE

The review schedule in the MTR Terms of Reference was adopted to the available time frame for conduct and completion of the MTR. The main phases of the MTR schedule is presented below.

MTR Milestone	Timeline
Initial review of essential documents and preparation of the MTR inception report	September to mid October 2024
On-line interviews, review of the Project Information package and preparation of the evaluation field mission	Until end of October 2024
MTR missions to Mexico, in person interviews and data analysis	November 2024
Submission of draft MTR report	20 December 2024
Submission of final MTR report and Audit Trail	31 January 2025

ANNEX V. COMMUNICATION AND OUTREACH TOOLS

<https://www.unep.org/news-and-stories/story/time-running-out-mexicos-mercury-miners-seek-fresh-start>

[With time running out, Mexico's mercury miners seek a fresh start](#)

Insert any communication and outreach tools used to disseminate results (e.g. power point presentations, charts, graphs, videos, case studies, etc.) or provide links.

ANNEX VI. BRIEF CV OF THE REVIEWER

Name	Paul Cordy
Profession	Independent consultant
Nationality	Canadian
Country experience	Dr. Paul Cordy has over 20 years of international experience working across Latin America (e.g., Bolivia, Chile, Colombia, Costa Rica, Ecuador, Honduras, Nicaragua, Peru, Suriname), Africa (e.g., Democratic Republic of the Congo, Kenya, Tanzania), and Asia (e.g., Indonesia, Philippines). He has also collaborated with global institutions in North America and contributed to international policy and project development.
Education	Ph.D. in Mining Engineering – University of British Columbia, Canada (2014), specializing in mercury emissions from artisanal gold mining. M.Sc. in Physical Geography – UBC (2007), focused on avalanche prediction and environmental modelling. B.Ed. in Secondary Earth Science Education – UBC (2001) B.Sc. (Honours) in Geology – UBC (1999)

Key Specialties and Capabilities:

Environmental impact assessment and mercury monitoring

Clean gold processing technologies and mercury abatement

National policy development and emissions inventories

Artisanal and small-scale gold mining (ASGM) risk mitigation

Stakeholder engagement and training in rural and indigenous communities

Technical innovation in geophysical modelling, data visualization, and software development

Project evaluation, planning, and management in complex field conditions

Selected Assignments and Experience:

Consultant for UNDP, UNIDO, World Bank, USAID, Global Affairs Canada, and GEF, providing technical expertise on mercury reduction and sustainable mining practices

Designed and deployed methodologies that definitively linked mercury reduction interventions to environmental improvements in Colombia

Led capacity building efforts globally, training dozens of miners, technicians, and government staff

Supported national mercury action planning and policy development in multiple countries

Designed and managed mercury-free ore processing pilots in the Peruvian Amazon during COVID-19

Authored key publications on mercury contamination, pollution control, and mining's environmental impact

Developed a mercury storage and handling guideline adopted at national level in Peru

Created data-driven tools for avalanche prediction used province-wide in British Columbia

ANNEX VII. REVIEW TORS (WITHOUT ANNEXES)

Standard Format for Terms of Reference (ToR)

Request for:	☒ Consultant	☐ Individual Contractor
	☐ Full-time	☒ Part-time
Extension:	☐ Yes	☒ No
Type of extension:	☐ Cost	☐ No-cost
Extension history (previous PO numbers etc.)	Not applicable	

Job opening (JO) number:	SB-012768.08.01
Consultant Job Title:	Mid Term Review Consultant, Reducing global environmental risks through the monitoring and development of alternative livelihood for the primary mercury mining sector in Mexico GEF Full Size Project
General Expertise:	Environmental Affairs
Category:	Environment Management and Planning
Duration:	4 months
Organizational Unit:	Chemicals and Health Branch / GEF C&W Unit
Posting Period:	7days
Work Location:	Remote
Hiring Office Location:	Geneva, Switzerland

Background (Org. Setting)

–The United Nations Environment Programme (UNEP) is the leading global environmental authority that sets the global environmental agenda, promotes the coherent implementation of the environmental dimension of sustainable development within the United Nations system and serves as an authoritative advocate for the global environment.

–The overall objective of the UNEP's Economy Division is to encourage decision makers in government, local authorities and industry to develop and adopt policies, strategies and practices and technologies that promote sustainable patterns of consumption and production, make efficient use of natural resources, ensure safe management of chemicals and contribute to making trade and environment policies mutually supportive. It promotes the development, use and transfer of policies, technologies, economic instruments, managerial practices and other tools that assist in environmentally sound decision making and the building of corresponding activities.

–The GEF Unit of the Chemicals and Health Branch is responsible for the development and management of all GEF projects implemented by UNEP in the Chemicals and Wastes focal area. To date, the team has a portfolio of 100 projects represented over \$200 mil of GEF investment supporting countries in their implementation of the Stockholm Convention, the Minamata Convention and SAICM.

Notes to Consultants and Individual Contractors:

As per UN policy, Consultants and Individual Contractors may not apply for or be appointed to any position in the Professional or above categories and for positions at the FS-6 and FS-7 levels in the Field Service category within six months of the end of their current or most recent service. This restriction does not apply to associate experts (Junior Professional Officers) appointed under the Staff Rules.

ST/AI/2013/4 - 5.8 In order to limit the repeated use of the same consultant, either to perform different tasks within the workplan or a series of tasks within the same project, no consultant shall provide services for more than 24 months in a 36-month period, whether continuous or not, and irrespective of the cumulative months of actual work.

1. Purpose /Justification for request

Core details *(appear in the body of the published JO in Inspira)*

1.1 Explain the requirement for a consultant/individual contractor including the reference to the work programme *(box 1(a) of P.104/A) (summary of why consultant is needed)*

UNEP is the Implementing Agency of the Global Environment Facility (GEF) Chemicals and Waste focal area project named Reducing global environmental risks through the monitoring and development of alternative livelihood for the primary mercury mining sector in Mexico.

The GEF project “Reducing global environmental risks through the monitoring and development of alternative livelihood for the primary mercury mining sector in Mexico” has been designed to prevent the risks to environment and human health from mercury through the control of primary mercury mining and enabled environmentally and socially sound alternative economic activities and livelihoods in the state of Queretaro. This document concerns the country project in Mexico which is implemented by UN Environment.

The selection of Mexico in this GEF country project is based on the country’s demonstration of their commitment to the Minamata Convention on Mercury, including their past and current efforts to address primary mercury mining extraction and use in the supply chain. The project has two components: characterisation of primary mercury mining and reinforcement of control mechanisms; and introduction of alternative livelihood.

This full size project will contribute to magnify the global environmental benefits of the primary mercury mining situation in Mexico through sharing results achieved and knowledge gained with the global project for recording into the knowledge management platform.

The project started in Q3 2021, and having completed 2.5 years of implementation, is now required to have a mid-term review (MTR) of its implementation.

In line with the UN Environment Evaluation Policy and the UN Environment Programme Manual, the Mid-Term Review (MTR) is undertaken approximately halfway through project implementation to analyze whether the project is on-track, what problems or challenges the project is encountering, and what corrective actions are required.

The MTR will assess project performance to date (in terms of relevance, effectiveness and efficiency), and determine the likelihood of the project achieving its intended outcomes, including their sustainability.

1.2. Work location

Remote / home-based

Important: Administrative Instruction **ST/AI/2013/4, point 5.20:**

The fees of consultants and individual contractors are expressed in gross amounts. Consultants and individual contractors are responsible for determining their tax liabilities and for the payment of any taxes and/or duties, in accordance with local laws. The United Nations does not reimburse consultants or individual contractors for any taxes, duty or other contribution payable by the consultants or individual contractors on payments made under the individual contract. The United Nations does not issue statements of earnings to consultants and individual contractors.

1.3. Expected Duration *(box 1 (e) of P.104/A)*

4 months of work starting on 1 September 2024 and ending on 30 December 2024

1.4. Ultimate result of services *(box 1(b) of P.104/A) (describe final output briefly)*

The ultimate result of services is the final Midterm Review reports. Reports should follow the templates and approaches as detailed in UNEP Evaluation Office TORs for Midterm Reviews, which will be shared with the selected candidate.

1.5 Qualifications / special skills or knowledge *(box 1(a) of P.104/A)*

(indicate what expertise and experience, i.e. special skills or knowledge are required / essential to perform tasks and responsibilities and the level of expertise required)

- **Academic:** an advanced university degree in environmental or physical sciences, waste management, economics, international relations, or other relevant scientific or social sciences area.
- **Evaluation experience:** a minimum of 5 years of evaluation experience of projects in developing countries;
- **GEF experience:** familiarity with the GEF funding mechanism and experience of evaluating or working with at least 1 GEF project;
- **Mercury knowledge:** Understanding of Minamata Convention and their requirements on mercury usage reduction for the signatory parties.
- **Languages:** Proficiency in written and oral English and Spanish with strong writing and editing skills is required.
- **Other skills:** Excellent management of office computing tools including Microsoft Teams, Word, Excel, PowerPoint, and data analysis and standard statistical techniques. Good verbal communication skills with proven ability to liaise with external stakeholders in Governments, intergovernmental and non-governmental organizations.

1.6. Travel involved – *(box 7 of P.104/A) (indicate the required travel itinerary)*

☒ Applicable	☐ Not applicable
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If applicable, travel will be organized by:

☒ Substantive office	☐ Selected candidate
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International travel to Mexico will be required for this consultancy.

Other details *(not in published JO, but required for JO creation)*

1.7 Legislative authority reference *(box 1(c) of P.104/A) (e.g. GC or GA decision, if applicable)*

UNEP Governing Council decision SS.IX/1

(See also Overarching Policy Strategy of the Strategic Approach, paragraphs 15 and 28).

1.8 Title and identification number of programme / project *(box 1(d) of P.104/A)*

- GEF ID 10086 Reducing global environmental risks through the monitoring and development of alternative livelihood for the primary mercury mining sector in Mexico. Start Date July 2021, End Date December 2025

1.9 Is any other department or office of the Secretariat or any other organization of the United Nations involved in similar work to the best of your knowledge?

☐ Yes	☒ No
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2. Funding

2.1 Source of Funds (*box 4 of P.104/A*)

☐ Regular Budget	☒ Extra-budgetary
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2.2 Allotment Account / Budget Line (there may be more than one)

2.3 Indicative level of remuneration

Level of consultancy	B
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Total amount will be 30,000 USD. Payment will be made according to the tentative schedule below and the successful completion and approval of the following deliverables/outputs:

Payment number	Amount (USD)	Date	Deliverables/outputs
1	7,500	15 September 2024	Approved Inception Report
2	7,500	15 October 2024	Review mission and presentation on preliminary findings and recommendations
3	7,500	15 November 2024	Draft Final Main Evaluation Report
4	7,500	30 December 2024	Approved Final Main Evaluation Report

3. Outputs/Work plan

3.1 Objectives, output expectations and performance indicators

*(include the final and intermediate results and outputs of services which should be measurable; performance indicators should allow for the evaluation of the results; include details as to how the work must be delivered e.g. **electronic submission, hard copy, etc.**)*

- The objective is the completed MTR package for the project.
- The consultant is expected to deliver the outputs as attached in respective extended MTR TORs, in line with the UN Environment Evaluation Policy
- All reports are to be submitted as electronic submissions.

3.2 Specific tasks and responsibilities

(cover all aspects of work to be done, and do not use a table here)

1. Draft Inception Report and submit to Task Manager for review and approval
2. Desk review and analysis of project documentation
3. Online interviews and other consultations with stakeholders', surveys etc.
4. Powerpoint/presentation on preliminary findings and recommendations
5. Draft MTR report submitted to Task Manager following the outline to be provided in the detailed MTR TOR
6. Draft Report shared with the wider group of stakeholders
7. Final Main Review Report
8. Final Main Review Report shared with all respondents

3.3 Reporting lines

The consultant/individual contractor will report to (Direct supervisor) Grace Halla, Programme Officer.

The overall supervisor will be Kevin Helps, Portfolio Manager.

Screening questions (optional when advertising JO)

Tick one of these:

Question	Eliminating Yes	Eliminating No
Q1. Have you ever provided a midterm review or evaluation of at least one GEF project before?	x	
Q2. Do you have experience of working in chemicals and waste projects or initiatives?	x	
Q3. Are you familiar with the Minamata Convention on Mercury?	x	

ANNEX VIII. GEF PORTAL INPUTS

The following table contains text to be uploaded to the GEF Portal. **It will be drawn from the Review Report, either as copied or summarised text.** In each case, references should be provided for the paragraphs and pages of the report from which the responses have been copied or summarised.

Table II: GEF portal inputs

Question: What is the performance at the project's mid-point against Core Indicator Targets? <i>(For projects approved prior to GEF-7, these indicators will be identified retrospectively and comments on performance provided⁷)</i>	
Response:	
GEF Core Indicators	Indicative expected Results
Indicator 4. Area of landscapes under improved practices (excluding protected areas)	Target: 2,000 ha. No progress reported. Most sites are within protected areas and no land-use improvement initiatives are currently under implementation. This indicator is now considered unrealistic due to regional changes and unchanged mining activity
Indicator 9. Chemicals of global concern and their waste reduced	Target: 140 tons of mercury. No mercury reduction can currently be reported because no mines have closed. The evaluator recommends shifting to a per-miner mercury reduction model, but even this may overstate impacts if new miners replace those who transition out
Indicator 11. People benefitting from GEF-financed investments	Target: 100,000 (53,000 female; 47,000 male). Though exact figures are not reported, the project has increased awareness of mercury hazards and participation in alternative livelihood programs (e.g. SEDESU). However, sustained impact and benefits remain limited due to low trust and engagement
Question: What has been the progress, challenges and outcomes regarding engagement of stakeholders in the project/programme? <i>(This should be based on the description included in the Stakeholder Engagement Plan or equivalent documentation submitted at CEO Endorsement/Approval)</i>	
Response:	
Stakeholder engagement was strong in breadth and effort but faced critical early misunderstandings. Many miners believed the project would offer direct financial aid, leading to disillusionment when it did not. Workshop attendance declined over time, and trust eroded. However, engagement with	

⁷ This does not apply to Enabling Activities

female stakeholders in Bucareli has been more successful. Stakeholder participation was rated "Moderately Satisfactory"
Question: What has been the progress, challenges and outcomes regarding gender-responsive measures and any intermediate gender result areas? <i>(This should be based on the documentation at CEO Endorsement/Approval, including gender-sensitive indicators contained in the project results framework or gender action plan or equivalent)</i>
Response: The project incorporated gender considerations from its inception and implemented gender-responsive activities, particularly in Bucareli, where women are highly vulnerable. Daycare support enabled women's participation in workshops, and awareness campaigns reached female mercury roasters in San Joaquin. Despite logistical barriers, these efforts have begun addressing gender gaps and health risks. Rated "Moderately Satisfactory"
Question: What has been the experience at the project's mid-point against the Safeguards Plan submitted at CEO Approval? The risk classifications reported in the latest PIR report should be verified and any measures taken to address identified risks assessed. <i>(Any supporting documents gathered by the Consultant during this review should be shared with the Task Manager for uploading in the GEF Portal)</i>
Response: Although the project addressed certain risks (e.g. mercury exposure from domestic retorts), implementation of health and safety protocols was inconsistent. MTR field visits revealed unsafe practices, including exposure to mercury fumes without protective equipment. The lack of mandatory field safety enforcement remains a critical gap. Safeguards implementation was rated "Moderately Unsatisfactory"
Question: What has been the progress, challenges and outcomes regarding the implementation of the project's Knowledge Management Approach, including: Knowledge and Learning Deliverables (e.g. website/platform development); Knowledge Products/Events; Communication Strategy; Lessons Learned and Good Practice; Adaptive Management Actions. <i>(This should be based on the documentation approved at CEO Endorsement/Approval)</i>
Response: Knowledge management was weak. Project reports lacked clarity, were poorly structured, and failed to link findings to project outcomes. Public communication caused confusion about the project's role and funding. Although some awareness on mercury hazards improved, the evaluator recommends stronger editorial oversight and better synthesis in reports. Communication was rated "Moderately Unsatisfactory"
Question: What are the main findings of the review?
Response: The project faced major delays from COVID-19, outdated assumptions, and weak management. Still, it succeeded in raising awareness, building trust in some communities, and promoting alternative livelihood pathways. However, the project fell short of meeting original targets due to flawed design and shifting local conditions. A no-cost extension and strategic realignment focused on livelihoods is

recommended to achieve meaningful outcomes

ANNEX IX. GEF RISKS TO ACHIEVING PROJECT OUTCOMES (FOR GEF FUNDED PROJECTS)

Summarize risks that might affect the achievement of desired outcomes and the mitigation measures which are planned or already undertaken to address these. The risk rating should reflect the *residual* risk to achieving outcomes after considering the implementation of mitigation measures. The rating scale is: High, Substantial, Moderate, Low. See the *GEF Risk Appetite* document (GEF/C.66/13) for more information and its Annex B for a description of each risk category. Note that the rating for the “Environment and Social” category should be the same as the risk rating for Safeguards.

RISK CATEGORY	RATINGS	ASSESSMENT AND MITIGATION MEASURES
CONTEXT		
Climate	Low	No mitigation measures needed
Environment and Social	Moderate	Risk of environmental degradation during mercury waste collection, stabilization and possible transport. Monitor implementation of the waste and remediation assessments in line with the Environment, Health and Safety (EHS) document.
Political and Governance	Moderate	Project has successfully building ownership, interest and commitment of Government institutions (both federal and regional) and stakeholders despite the constant political challenges in the past years. Monitor political development and adjust implementation accordingly (if necessary)
INNOVATION		
Institutional and Policy	Moderate	Delays posed by administrative clearance for the consultancies have limited the implementation of activities. Assist the EA technical capacity to accelerate the process.
Technological	Low	No mitigation measures needed
Finance and Business Model	Low	No mitigation measures needed
EXECUTION		
Capacity for Implementation	Substantial	Implementation has slowed down due to administrative constraints. Accelerate recruitments through a sound planning for pending consultancies according to the annual approved workplan.
Fiduciary	Low	No mitigation measures needed
Stakeholder	Low	No mitigation measures needed
Other	n.a	n.a
Overall Risk Rating	Moderate	Sum of the above rating