



Advanced Minamata Assessment in Thailand

Part I: Project Information

GEF ID

10983

Project Type

EA

Type of Trust Fund

GET

CBIT

CBIT No

Project Title

Advanced Minamata Assessment in Thailand

Countries

Thailand

Agency(ies)

UNIDO

Other Executing Partner(s)

Pollution Control Department, Ministry of Natural Resources and Environment

Executing Partner Type

Government

GEF Focal Area

Chemicals and Waste

Taxonomy

Chemicals and Waste, Focal Areas, Mercury, Gender Equality, Gender Mainstreaming, Sex-disaggregated indicators, Influencing models, Strengthen institutional capacity and decision-making, Stakeholders,

Communications, Awareness Raising, Type of Engagement, Information Dissemination, Participation, Capacity, Knowledge and Research, Knowledge Generation, Training, Enabling Activities

Sector

Enabling Activity

Rio Markers

Climate Change Mitigation

Climate Change Mitigation 0

Climate Change Adaptation

Climate Change Adaptation 0

Type of Reports	Submission Date	Expected Implementation Start	Expected Completion Date	Expected Report Submission to Convention
Minamata Initial Assessment (MIA)	4/13/2022	9/1/2022	8/31/2024	12/31/2024

Duration

24In Months

Agency Fee(\$)

47,500.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CW-EA	GET	500,000.00	41,250.00
Total Project Cost(\$)		500,000.00	41,250.00

B. Project description summary

Project Objective

Strengthen national capacity to fulfill obligations under the Minamata Convention on Mercury and promote effective implementation of its provisions.

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co- Financing(\$)
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Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
1. Increasing national capacity on policy and strategic decision making towards implementation of the Minamata Convention	1.1 National capacity and coordination improved to prepare for implementation of the Minamata Convention	1.1.1 National inventory of emissions and releases of mercury and mercury compounds (level 2 and in accordance with article 8 of the Convention) developed and key sectors identified for intervention;	430,000.00	17,300.00
		1.1.2 National implementation plan (in accordance with Article 20 of the Convention and including national plan for controlling emissions and releases in accordance with Articles 8 and 9 of the Convention) and priorities for action on Mercury management drafted and put forward for endorsement;		
		1.1.3 Information disseminated and awareness raised to increase understanding and involvement of relevant stakeholder groups (public and private sectors, academia and civil society).		

Project Component	Expected Outcomes	Expected Outputs	GEF Project Financing(\$)	Confirmed Co-Financing(\$)
2. Monitoring and Evaluation	2.1 Project achieves objective on time through effective monitoring and evaluation	2.1.1 Periodic monitoring and terminal evaluation of project implementation completed	26,500.00	20,700.00
Sub Total (\$)			456,500.00	38,000.00
Project Management Cost (PMC)				
			43,500.00	3,250.00
Sub Total(\$)			43,500.00	3,250.00
Total Project Cost(\$)			500,000.00	41,250.00

Please provide justification

C. Source of Co-Financing for the Project by Name and by Type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
GEF Agency	UNIDO	Grant	Recurrent expenditures	17,250.00
Recipient Country Government	Pollution Control Department, Ministry of Natural Resources and Environment	In-kind	Recurrent expenditures	24,000.00
Total Co-Financing(\$)				41,250.00

Describe how any "Investment Mobilized" was identified

Not Applicable

D. GEF Financing Resources Requested by Agency, Country and Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNIDO	GET	Thailand	Chemicals and Waste	Mercury	500,000	47,500	547,500.00
Total Gef Resources(\$)					500,000.00	47,500.00	547,500.00

Part II. Enabling Activity Justification

A. ENABLING ACTIVITY BACKGROUND AND CONTEXT

Provide brief information about projects implemented since a country became party to the convention and results achieved

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 November 2019, 128 countries had signed the treaty and 114 had ratified it.

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.

Although Thailand did not sign the Convention by the time it was opened for signature, the country made several institutional arrangements and implemented several projects related to the Convention to prepare for being a Party and to support future implementation of the Convention. Thailand submitted an accession instrument to the Convention on 22nd June 2017 and became the 66th party to the Convention and, since 20th August 2017, Thailand has been fully enforced by the obligations of the Convention. Prior to being a party to the Convention, the country made the following institutional arrangements and implemented the following projects, chronologically:

1) Thailand established a National Sub-committee on the Minamata Convention under the National Environment Board in 2013. The Chair of the Sub-committee is a member of the National Environment Board and the present Sub-committee consists of representatives from 21 relevant agencies and four experts

2) The PCD implemented the project "Developing and Implementing Effective and Appropriate Mercury Management for Thailand" in 2013 after the National Sub-committee on the Minamata Convention was established. Under this project, a preliminary national inventory of emissions and releases of mercury and mercury compounds was developed using the UNEP Toolkit for Identification and Quantification of Mercury Releases (2010) in order to identify potential sources for controlling mercury emissions and releases. The inventory was developed through a support of the PCD and in collaboration with the King Mongkut's University of Technology Thonburi (KMUTT).

Based on the inventory results, the estimated releases of mercury to the environment in Thailand were around 32 tons of Mercury in 2010 (the inventory's base year). Major sources of the releases of mercury into the environment included (1) illegal dumping of municipal solid waste (5.7 tons of mercury), (2) mineral oils extraction, refining and utilization (4.8 tons of mercury), (3) natural gas extraction, refining and utilization (4.2 tons of mercury), and (4) uncontrolled incineration (3.7 tons of mercury). The preliminary inventory mostly used estimated data due to lack of primary data and some activity rates in the calculation might not actually reflect the real mercury situation in Thailand. Thus, the preliminary inventory needs to be further updated and improved as well as externally validated.

3) The PCD implemented the project 'The Study of Thailand's Readiness on Compliance with the Minamata Convention on Mercury' in cooperation with Thailand Environment Institute (TEI) through a support of the PCD in 2014. The aims of the project were (1) to review the mercury situation based on the preliminary inventory previously conducted and provisions of the Convention, (2) to consult with relevant authorities and stakeholders about their concerns, (3) to assess the impacts, advantages and disadvantages of becoming a Party or a non-Party to the Minamata Convention, (4) to review existing regulations regarding the implementation of the Convention obligations and (5) to recommend actions needed for ratification and implementation of the Minamata Convention for taking into account when making decisions to be a Party or non-Party to the Convention.

In this project, key actions and frameworks for actions required before and after accession to the Convention were advised and a number of stakeholder consultations and national public hearings were conducted. As a result, stakeholders and the public meetings agreed that Thailand should be a Party to the Convention.

4) The PCD implemented the project 'Preparedness Plan to Become a Party to the Minamata Convention on Mercury' in 2015. A technical working group called 'The Working Group on Preparatory Planning for accessing to the Minamata Convention on Mercury' was established by the National Sub-committee in order to develop an action plan for accession to and implementation of the Convention. The working group consisted of representatives from seven relevant agencies, namely, (1) the Department of Industrial Works (DIW) and (2) the Department of Primary Industries and Mines (DPIM) under the Ministry of Industry, (3) the Federation of Thai Industries (FTI), (4) the Department of Agriculture (DOA) under the Ministry of Agriculture and Cooperatives (5) the Food and Drug Administration (FDA) under the Ministry of Public Health, (6) the Department of Treaties and Legal Affairs under the Ministry of Foreign Affairs, and (7) the PCD, which serves as the secretariat.

The working group delivered two key outputs to the National Sub-committee for reviewing and approving: (1) The roadmap for accession to the Convention and (2) the detailed action plan for accession to and implementation of the Convention which defined frameworks, time lines, and designated responsible agencies. The plan included a detailed gap analysis of regulations related to Mercury and identification of policy interventions needed to implement the obligations of the Convention. Based on the plan, recommended actions included:

- a. Defining some mercury compounds in accordance with the obligations of the Convention to be the 3rd category of hazardous substances under the Hazardous Substances Act, B.E. 2535 (1992) to control and report the supply and trade of mercury.
- b. Issuing new regulations on prohibition or reduction of the use of mercury and mercury compounds in some products and manufacturing processes as well as of the import and export of mercury-added products, in accordance with the obligations of the Convention.
- c. Reviewing emission and effluent standards from point sources which emit or release mercury into the environment.
- d. Carrying out awareness raising and capacity building activities.

5) The National Sub-committee established another technical working group entitled 'The Working Group on Legislative Preparation to Support Minamata Convention on Mercury' at the end of 2016. The working group consisted of representatives from 10 relevant agencies, namely, (1) the DIW (2) DPIM, (3) Thai Industrial Standards Institute (TISI) under the Ministry of Industry, (4) FTI, (5) FDA, (6) Department of Treaties and Legal Affairs under the Ministry of Foreign Affairs, (7) Department of Mineral Fuels (DMF) under the Ministry of Energy, (8) Department of Foreign Trade (DFT) under the Ministry of Commerce, (9) Office of Natural Resources and Environmental Policy and

Planning (ONEP) under the Ministry of Natural Resources and Environment and (10) PCD acting as the secretariat.

The working group delivered the following key outputs to the Sub-committee for approving in preparation for the accession to the Convention: Gantt charts which included activities and timelines for amendment of regulations under the DPIM and DIW to be in accordance with article 3 (mercury supply sources and trade), under the DFT, DIW, TISI and FDA to be in accordance with article 4 (mercury-added products), under the DIW to be in accordance with article 5 (Manufacturing processes in which mercury or mercury compounds are used), under the DPIM to be in accordance with article 7 (Artisanal and small-scale gold mining), and under the DIW to be in accordance with article 8 (Emissions) of the Convention.

6) The PCD in collaboration with the United Nations Institute for Training and Research (UNITAR) implemented the project "Ratification and Early Implementation of the Minamata Convention on Mercury in Thailand" in 2017. The results of the project included seminars which disseminated information about the Convention to relevant stakeholders and the general public and leaflets of key messages of the Convention.

7) The PCD in collaboration with the Faculty of Public Health of Thammasat University implemented the project funded by the United Nations Environment Program (UNEP) on "Mercury emissions from coal combustion in Thailand" in 2017. Key results of the project included database of coal power plants in Thailand and an estimate of mercury emissions factor of coal power plants in Thailand.

After Thailand became a party to the Convention on 22nd June 2017, the PCD in collaboration with the Department of Environmental Quality Promotion (DEQP) under the Thai Ministry of Natural Resources and Environment, and the Ministry of Environment of Japan, started implementing the project "Strengthening capacity for multimedia mercury monitoring in the Asia Pacific Region". The aim of the project was to implement the article 22 of the Convention (effectiveness evaluation of the Convention) through building up national and central laboratories for mercury analysis and monitoring, developing national mercury monitoring plan, and disseminating information about the health and environmental risks associated with mercury among relevant stakeholders for decision making on mercury management. The project timeframe was from 2018 to 2020. Besides, the PCD has collaborated with the Pollution Control Department of Laos to support the implementation of the project "Ratification and Early Implementation of the Minamata Convention on Mercury in Laos" supported by UNITAR. The PCD will share experience and lessons learned of Thailand with Laos on the process for ratification of the Convention.

In addition, following the timelines for amendment of regulations submitted by the Working Group on Legislative Preparation to Support Minamata Convention on Mercury to the National sub-committee, some progress has been made by designated agencies including: 1) the DPIM has recently amended its regulation to prohibit the use of chemicals including mercury in the process of gold mining in order to remove and reduce mercury used in gold mining in accordance with article 7 (Artisanal and small-scale gold mining), and 2) the DIW has recently amended its regulation to include additional mercury compounds in accordance with article 3 (Mercury supply sources and trade) in the list of Hazardous Substances under the Notification of Ministry of Industry (B.E. 2560), i.e., mercury compounds that are only used in laboratories, mercury (I) chloride, mercury (II) sulfate, and mercury (II) nitrate were listed as Hazardous Substances Level 3 under responsibility of the DIW, which means that the import, export, production, and possession of these substances have to be permitted by the DIW.

Despite arrangements made and projects implemented, several barriers need to be overcome in order for Thailand to meet the obligations of the Minamata Convention. These include:

1) Capacity and information barriers: There is a need for an improved and updated national mercury inventory which is in accordance with the article 8 of the Convention and necessary for developing the national implementation plan and national priorities on mercury management:

The preliminary inventory developed in 2013 was at level 1 based on the UNEP 2010 toolkit. In this 2013 inventory, there was a lack of detailed data on mercury stocks, sources of emissions and releases. There was a lack of primary data collection and a lot of estimations were made especially in industry sectors (including oil and gas sectors). Thus, a national inventory needs to be updated and developed at level 2 based on the UNEP 2017 toolkit. As a result, a lot of primary data collection would be required especially in the industry sectors of Thailand, in which the issues of mercury emissions and releases are emerging and essential.

2) Policy and regulatory barriers: There are gaps in legislative and regulatory frameworks necessary for implementing the provisions of the Convention. Also, there is a need to develop a national implementation plan (in accordance with article 20 of the Convention and a national plan for controlling emissions and releases in accordance with articles 8 and 9 of the Convention, respectively), as well as national priorities for action on mercury management based on an improved and updated national inventory of mercury emissions and releases.

Recommendations for improving legislative and regulatory frameworks made in the action plan developed in 2015 for accession to and implementation of the Convention, as mentioned earlier, included the issuance of new regulations. The following regulations were advised to be issued:

- Prohibition of the primary mining of mercury under the Mining Act;
- Control of the supply sources and trade of mercury and mercury compounds under the Hazardous Substances Act;
- Prohibition of the use of Mercury for artisanal and small-scale gold mining (ASGM) under the Mining Act;
- Prohibition/ reduction of the use of mercury and mercury compounds in the manufacturing process under the Factory Act;
- Prohibition/ restriction of the use of mercury and mercury compounds in certain products such as dry cell batteries, switches and relays, lamps, cosmetics, antiseptics, etc.

Besides, the recommendations also included the revisions of the emission and effluent standards under the Enhancement and Conservation of the National Environmental Quality Act and the Factory Act, and the threshold limits of mercury for mercury waste management under the Factory Act.

Although Thailand developed the action plan for accession to and implementation of the Convention in 2015, the action plan was focused upon accession to the Convention and was based on the preliminary inventory developed in 2013. Therefore, there is a need to develop a detailed and comprehensive implementation plan for mercury management at national level and national priorities for action in order to implement the obligations of the Convention. The national implementation plan needs to be developed in accordance with article 20 of the Convention and will include national plan for controlling emissions and releases in accordance with articles 8 and 9 of the Convention, respectively, and will also include plan for issuing new regulations in accordance with the Convention.

Recently, sectoral plans on mercury management such as plan on mercury management in the public health sector have been developed. These sectoral plans need to be integrated into the national implementation plan. The national implementation plan and national priorities for action need to be developed based on an improved and updated national inventory in order to better reflect the current

situation of mercury in Thailand. An improved and updated inventory will lead to a better understanding of not only the current situation of mercury but also the trend of mercury emissions and releases due to changing regulations and policies related to mercury in certain sectors in Thailand. It will also be used to support prioritizing actions for mercury management.

3) Awareness barriers: The general public is not aware of the impacts of mercury on human health and the environment, and do not know how to deal with mercury-containing compounds and products owned and used. In order to implement the national implementation plan efficiently and successfully, information needs to be disseminated and awareness need to be raised widely to increase understanding and involvement of relevant stakeholder groups (e.g. public and private sectors, academia, and civil society).

With the accession to the Convention, Thailand will require assistance to formulate and apply sector-wide programs through cost effective approaches, within the context of its national development efforts. The development of the Advanced Minamata Assessment proposed will provide more information to enable policy and strategic decisions to be made, and will assist Thailand to identify priority sectors and activities within the country, and to efficiently and effectively implement the key obligations of the Minamata Convention.

B. ENABLING ACTIVITY GOALS, OBJECTIVES, AND ACTIVITIES

The proposal should briefly justify and describe the project framework. Identify also key stakeholders involved in the project including the private sector, civil society organizations, local and indigenous communities, and their respective roles, as applicable. Describe also how the gender equality and women's empowerment are considered in project design and implementation

The request of financial support from Global Environment Facility (GEF) is justified through investment in enabling activities to assist nations to fulfil essential communication requirements related to the Convention, make informed policy decisions, and assist in prioritizing activities.

Enabling activities have already been undertaken in Thailand with GEF's resources in order to assist the country in the implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs). The Advanced Minamata Assessment will complement the country's efforts to reduce significantly the exposure of harmful chemicals and wastes of global importance to humans and the environment.

The overall objective of this Advanced Minamata Assessment is to strengthen Thailand's national capacity to fulfil its obligations under the Minamata Convention and promote effective implementation of its provisions. In order to reach that goal, the activities proposed will assist the Government, industrial and health partners to better understand the national operations on mercury, as well as its emissions and releases, and to increase awareness among the public of risks to human health and the environment.

Following the support of GEF, mercury pollution sources can be more systematically identified to select areas for future intervention. GEF resources will also assist the country to disseminate project achievements at the national level and help to leverage international support as well as investments for additional projects in Thailand to promote sound chemicals management as a key component of inclusive and sustainable industrial development.

The key stakeholders involved in the project are as follows:

- **UNIDO** will act as the GEF implementing agency (IA) for this project. The UNIDO project manager will provide project implementation oversight. The UNIDO Regional Office in Thailand will play a significant role in providing country-level supervision and monitoring of the project.
- **The Pollution Control Department (PCD) of the Ministry of Natural Resources and Environment**, hosting the national focal point for the Minamata Convention on Mercury, is responsible for the day-to-day compliance with the Convention and its provisions. A National Project Coordination (NPC) team will be established and hosted by the PCD to provide overall project coordination of all GEF funded mercury related projects and ensure information sharing, coherence and maximum effectiveness. The PCD will appoint the national project coordinator and its credentials would be shared with UNIDO for review. The PCD also serves as the secretariat for the National Sub-committee on the Minamata Convention. Thus, the PCD will act as the national executing agency for this project and main governmental counterpart providing national leadership and will manage selected institution(s) to deliver the outputs, while the National Sub-committee on the Minamata Convention will evaluate the proposals and select an institution or a group of institutions. These activities will be executed via subcontract to the PCD. The subcontracting process will be administered by UNIDO according to UNIDO procurement rules and principles, and the "UNIDO General Terms and Conditions".

- **An institution or a group of institutions** may be appointed by the PCD to deliver the outputs of the project. The institution(s) will be selected through internal evaluations of qualifications and upon endorsement of the National Sub-committee on the Minamata Convention or may be procured through a restricted, competitive bidding process involving only reputable institutions. UNIDO will provide support in the preparation of the terms of reference and advise the PCD in the selection process. At this stage, there are at least four potential reputable institutions as seen in table 1 below:

Table 1: List of four potential reputable institutions for Thai third party which could deliver the outputs

Institutions	Type of institutions	Key strengths relevant for the project
King Mongkut's University of Technology Thonburi (KMUTT)	An engineering and technology university in Thailand, focusing on teaching, researching as well as serving the industry. One of the five universities under the Joint Graduate School of Energy and Environment (JGSEE).	- Experience in developing the preliminary national mercury inventory for the PCD in 2013 under the project "Developing and Implementing Effective and Appropriate Mercury Management for Thailand".
Thailand Environment Institute (TEI)	A non-profit, non-governmental research and think-tank institution, focusing on environment and sustainable development.	- Experience in conducting the project "Study of Thailand's Readiness on Compliance with the Minamata Convention on Mercury" for the PCD in 2014. - Experience in industrial environmental management, and providing a secretariat support for the Thai Business Council for Sustainable Development (TBCSD) with current membership of 36 industrial companies including oil and gas companies. TBCSD focuses on policy development in Thailand, capacity building with regard to business competitiveness and good practices, and raising public awareness of cultural and environmental issues.
Department of Environment Engineering, Kasetsart University	An academic and research institution focusing on environmental engineering.	- Research experience on mercury contaminated soils around wells. - Experience in conducting the 2013 preliminary Mercury inventory (only the waste sector) for the PCD. - Experience in conducting the national inventory for the PCD under the Pollutant Release and Transfer Registers (PRTR) project.

Institutions	Type of institutions	Key strengths relevant for the project
National Metal and Materials Technology Center (MTEC)	One of Thailand's National Research Center directed by the National Science and Technology Development Agency (NSTDA), under the Ministry of Science and Technology. A publicly funded governmental organization.	<ul style="list-style-type: none"> - In the process of conducting the national inventory of Persistent Organic Pollutants (POPs). - In cooperation with PTT Public Company Limited developing enzymes and catalysts for cleaning the Mercury-contaminated PTT's oil pipes on a pilot scale.

These activities will be executed via subcontract to the third party under the supervision of a **project-steering working group** assigned by The National Sub-committee of the Minamata Convention on Mercury. The subcontracting processes will be administered by UNIDO according to the "UNIDO General Terms and Conditions".

- The **project-steering working group** will consist of representatives from UNIDO, relevant ministries (e.g. Ministry of Industry, Ministry of Public Health, Ministry of Energy, and Ministry of Agriculture), authorities and associations (including industrial, mining and gender-related), and the PCD as the chairperson and secretariat. The working group will provide **overall** guidance and coordination for the implementation of activities, providing strategic inputs and contributions to project management as needed. All project amendments will be done in accordance with the UNIDO rules and regulations and GEF policies, in particular documents "GEF project and programmatic approach cycle" (GEF/C.39/Inf.3), "Guidelines on the project and program cycle policy" (GEF/C.52/Inf.06/Rev.01) and "GEF project and program cycle policy" (GEF/C.50/08/Rev.01).

- An **expert team** comprised of national and international consultants and technical specialists will be recruited to provide technical support. The team will be selected based on technical expertise to support appropriate policy and legal gap analysis, assist in development of the national mercury profile and plan activities for institutional capacity development. In agreement with national counterparts, experts will be appointed by the PCD and their credentials will be shared with UNIDO for review.

- **Users of mercury-added products**, such as the hospital, dentistry, lighting, handicraft, and cement industries will be sensitized through training and engaged with to promote the reduction and/or elimination of mercury. Based on the results of the updated national inventory, selected key industries will assist in the planning of interventions for future technology transfer and demonstration of mercury-free production methods to promote cleaner production in their respective industrial sectors.

- **Industry associations, academia, and any relevant civil society organizations** will act as a bridge to connect government agencies, technical experts, and relevant industries to assist in the development and implementation of policies to fulfil the obligations under the Convention. This network of associations will liaise with primary mercury extractors and users to increase awareness, share knowledge and promote the technology transfer to reduce Mercury uses within the enabling activities framework.

With regard to gender equality, working with Thai partners to encourage a multi-stakeholder and gender-sensitive approach in this project is an overarching priority that will help ensure the success and sustainability of all subsequent interventions to assess and strengthen Thailand's mercury management regime under the Minamata Convention. Therefore, under this project, gender mainstreaming will be promoted at all levels of the project. This will be addressed based on UNIDO's gender policy.

Women usually undertake a range of tasks within ASM mining operations (e.g. digging, panning, processing, transporting, cooking and cleaning), but their engagement is often concentrated around lower paid and lower value activities. Since women tend to be also under-represented in the decision-making processes relating to the ASGM sector and mercury management, both in the political and socio-economical spheres, affirmative steps will be needed to ensure adequate participation of all stakeholders, and especially women, in the activities of the projects:

Gender mainstreaming will be achieved by setting objectives and collecting when possible gender-disaggregated data in terms of women representation (as reflected in the indicators in annex C) for the key stakeholders that will be involved throughout the process (i.e. the relevant ministries of Thailand, industry associations, laboratories, universities, NGOs, civil society organizations, etc.). The gender-sensitive approach and promotion of women participation will also be accomplished by, for example, reaching out to NGOs, and other groups with significant representation of women and other vulnerable groups. Stakeholder institutions invited to participate in the national steering group will also be encouraged to nominate women as representatives if possible. During recruitment process, female candidates will be encouraged to apply. For candidates with similar technical qualifications, preference will be given to women. These key steps are expected to achieve strong participation of women throughout projects activities, in particular during the establishment of a coordination mechanism (activities 1.1.1.1 and 1.1.1.2), the training on mercury inventory (activity 1.1.1.3) and the dissemination of information (output 1.1.3). The involvement and participation of women and vulnerable groups will be summarized in the initial inventory report and gender disaggregated data collected to provide a basis for prioritization, development of sectoral intervention plans and future projects.

With regard to the development of training more specifically (activity 1.1.1.3), the biases in the education between men and women (e.g., participating women might be less equipped to understand, cope with, and anticipate the implications of chemicals exposure and environmental change or resource conditions) will be taken into account.

When identifying the national priorities for action (output 1.1.2), social factors that influence human exposure to mercury will be identified and covered. In particular, the gender division of labor in ASGM activities in Thailand will be duly taken into account, as well as the different social and economic implications of mercury pollution for men and women in the country. The implementation of needed policy reforms in the aftermath of the project is not only expected to reduce human and in particular women exposure to mercury, but also to contribute to longer term gender related goals associated with the SDGs such as increased maternal health, lower child mortality and cleaner water.

Further, the Advanced Minamata Assessment and other relevant documents will be reviewed by gender experts.

More generally, engaging with relevant industries and enterprises during the project may also be a powerful focal point for change. Environmental and social responsibility are on the rise in Thailand and involving the private sector in stakeholder consultations throughout the process could contribute to the future development of codes of conduct and other steps to reduce mercury hazards for workers and populations, and in particular women.

The project will have no impact on indigenous people groups as they are not present in the region where the project will be executed.

The majority of socio-economic benefits associated with this project will manifest when the interventions required under the Convention are implemented, contributing to the achievement of SDG 3 (Good health and well-being), SDG 11 (Sustainable cities and communities) and SDG 12 (Responsible consumption and production).

Refer to annex A for a total estimation of the GEF grant and co-financing budget breakdown and to annex B for a project execution arrangement. Budget for the final evaluation is included as part of the monitoring and evaluation as shown in table 2 of part II section E.

C. DESCRIBE THE ENABLING ACTIVITY AND INSTITUTIONAL FRAMEWORK FOR PROJECT IMPLEMENTATION

Discuss the work intended to be undertaken and the output expected from each activity as outlined in Table A

This project sets out the activities necessary to prepare an Advanced Minamata Assessment to support efficient and effective implementation of the Minamata Convention within the national context. The project will assist Thailand to plan these post-accession activities while mainstreaming sound mercury management into legal and institutional structures which are fully in line with national priorities.

The initiative will also help the country to collect baseline information on mercury use, emissions and releases that will serve as input to the design of future interventions required by the treaty, such as the development of a National Action Plan that may be required by the Conference of Parties within a few years of its entry into force. The planned activities per output are listed below:

Output 1.1.1: National inventory of emissions and releases of mercury and mercury compounds (level 2 and in accordance with article 8 of the Convention) developed and key sectors identified for intervention:

Activity 1.1.1.1: Conduct project coordination meetings;

Activity 1.1.1.2: Establish Project Steering Working Group;

Activity 1.1.1.3: Conduct national mercury inventory trainings (level 2);

Activity 1.1.1.4: Collect data for the national mercury inventory (level 2);

Activity 1.1.1.5: Develop national mercury inventory database;

Activity 1.1.1.6: Produce a national material flow of mercury and identify key sectors for intervention.

Output 1.1.2: National implementation plan (in accordance with Article 20 of the Convention and including national plan for controlling emissions and releases in accordance with Articles 8 and 9 of the Convention) and priorities for action on Mercury management drafted and put forward for endorsement:

Activity 1.1.2.1: Identify list of priority actions on mercury management for the country to meet its obligations under the Convention;

Activity 1.1.2.2: Develop a detailed national implementation plan (including short, medium and long-term goals, targets and outcomes), which addresses the issuance/amendment of regulations, the reduction of mercury in mercury-added products, the sound management of mercury waste, and the national reporting of mercury emissions and releases, and includes national plan for controlling emissions and releases in accordance with articles 8 and 9 of the Convention.

Output 1.1.3: Information disseminated and awareness raised to increase understanding and involvement of relevant stakeholder groups (public and private sectors, academia and civil society):

Activity 1.1.3.1: Develop communication materials, taking into account the impacts of mercury on and vulnerability of different gender groups;

Activity 1.1.3.2: Organize and conduct awareness raising campaigns and workshops, adapting time and location of the events to different gender groups' needs.

Project implementation and execution is expected to remain at low risk. UNIDO has solid experience in promoting environmentally sound management of mercury and plays an important role as co-lead of the ASGM sector under the Global Mercury Partnership. UNIDO has also extensive experience with enabling activities through the Stockholm Convention National Implementation Plans (NIPs) and NIP updates. UNIDO has subsequently assisted many countries to develop and implement their Minamata Initial Assessments and National Action Plans.

Lessons learned and experience gained by UNIDO in the Asian region through the development of mercury-related projects, as well as capacity building initiatives on POPs, are comparative advantages to the implementation of the project. The local and regional presence of UNIDO in the field will also help to ensure the smooth development of project activities.

For its part, the PCD has been actively working on mercury related issues in Thailand. It acts as the secretariat of the National Sub-committee for the Minamata Convention on Mercury and its Technical Working Group, and in that position drove the process for the preparation of the country's roadmap to accession as well as of the detailed action plans leading to accession. In addition to the Minamata Convention, the PCD hosts the focal point for the Basel, Rotterdam and Stockholm Conventions. Therefore, coordination on chemicals and waste management under other Conventions as well as with ASEAN community will be convenient and smooth. The PCD also already has experience with a number of nationally executed projects.

Refer to annex C for the logframe of the Advanced Minamata Assessment project.

D. DESCRIBE, IF POSSIBLE, THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT

The project is expected to be highly cost effective as it is fully in line with the goals of Thailand to fulfil the full range of its obligations under the Convention, as well as regulate anthropogenic emissions and releases of mercury in order to protect human health and the environment. With the GEF support, patterns of mercury consumption and release will be assessed, which will facilitate the design of targeted interventions. These in turn will provide global and local benefits through reduced emissions to the environment. Through institutional capacity development and enhancement at the national level, potential contamination risks from the uses of mercury-added products will also be minimized.

To ensure cost effectiveness, existing infrastructure and human resources at each governmental counterpart involved in the project will be efficiently utilized. Most project activities will be carried out by national experts. This will foster an increase in local and national capacity to manage mercury and will contribute to the cost effectiveness of the project through reduced consultancy fees and travel expenses.

E. DESCRIBE, DESCRIBE THE BUDGETED M & E PLAN

Monitoring and evaluation for this project will rely on several levels of review, quality control and feedback.

Overall M&E: It will be conducted by UNIDO through annual supervision visits to the country. Once a year, the project-steering working group will: (1) review and approve the project's annual work plan, (2) assess progress against M&E targets as indicated in the Project Results Framework, (3) approve interim and final reports, and (4) assess any gaps or weakness and make appropriate adaptive management decisions based on progress and achievements. The work plan for year two will be based on the results achieved in the first year, including associated budget allocations, in agreement with the GEF and UNIDO's documents, rules and guidelines, in particular 'Project and Program cycle policy' (OP/PL/01), and 'Guidelines on the project and program cycle policy' (GEF/C.59/Inf.03). The UNIDO Regional office in Thailand will assist and participate in monitoring and evaluation visits as needed. The final evaluation, to be conducted by an independent evaluator, will be arranged by the UNIDO project manager with support from UNIDO's Evaluation Group and reports submitted to the donor within 90 days of project end. Please see below for a summary of the monitoring and evaluation plan, as well as the related budget breakdown.

Programmatic M&E: As the executing partner, the third party will be responsible for day-to-day management and execution of related activities to achieve their respective outputs under the project, reporting semi-annually to PCD and UNIDO. Progress of activities and outputs against the targets and desired outcomes will be assessed bi-annually by the PCD using the means of verification and impact indicators for measurement explained in the Project Results Framework.

Financial Monitoring: All project costs will be accounted for and documented. Financial reports will be required from the executing agency according to UNIDO standard accounting procedures.

According to the Monitoring and Evaluation policy of the GEF and UNIDO, follow-up studies such as Country Portfolio Evaluations and Thematic Evaluations can be initiated and conducted. All project partners and contractors are obliged to (1) make available studies, reports and other documentation related to the project, and to (2) facilitate interviews with staff involved in the project activities.

Legal context clause: The Kingdom of Thailand agrees to apply to the present project, mutatis mutandis, the provisions of the Revised Standard Technical Assistance Agreement concluded between the United Nations and the Specialized Agencies and the Government on 4 June 1960.

Table 2: Monitoring and Evaluation table

M&E activity	Time	Budget (USD)	
		GEF Grant	Co-financing
Start-up workshop report	Within three months of project start	2,500	1,500
Project review by NSG at the end of year 1	Month 12	2,500	1,500

Project review by NSG at the end of the project	Month 24	2,500	2,000
Terminal evaluation	At project closure	19,000	15,700
Total M&E cost		26,500	20,700

F. EXPLAIN THE DEVIATIONS FROM TYPICAL COST RANGES (WHERE APPLICABLE)

Thailand is the 2nd largest economy in South-East Asia. It has a complex demography, with 76 provinces and a substantial sectoral and industrial diversity. Industry contributes 43.9 percent of GDP and there are over 3 million SMEs. The country would need much more resources than the recommended budget of 200k to do a proper analysis of mercury use in all sectors across all provinces.

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

A. Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Focal Point Name	Focal Point Title	Ministry	Signed Date
Mr. Jatuporn Buruspat	Permanent Secretary	Ministry of Natural Resources and Environment	12/27/2021

B. Convention Participation

Convention	Date of Ratification/Accession	National Focal Point
Minamata Convention on Mercury	6/22/2017	Mr.Jatuporn BURUSPAT, Permanent Secretary, Ministry of Natural Resources and Environment

ANNEX A: Project Budget Table

Please attach a project budget table.

Project components	Type of expense	Budget (USD)			Explanation	Execution modality
		Y1	Y2	Total		
Output 1.1.1: National inventory of emissions and releases of Mercury and Mercury compounds	National expertise	142,000	123,000	265,000		Execution agreement with PCD
	Training/Workshops	30,000	-	30,000		Execution agreement with PCD

Project components	Type of expense	Budget (USD)			Explanation	Execution modality
		Y1	Y2	Total		
(level 2 and in accordance with Article 8 of the Convention) developed and key sectors identified for intervention	Miscellaneous	4,000	1,000	5,000	<p>'This translation service is crucial given that most of the level 2 experts are non-Thai. Target participants include policy makers and national experts who are all Thai.</p> <p>= Year 1 Translation/interpretation service, 500 USD per translator per day, a one day event needs 2 translators per day. 1,000 USD per one day event. The training is expected for 2 times/for 2 days each time.= 4,000 USD for the interpreter/translator.</p> <p>= Year 2 : one day follow up training is planned, 1,000 USD</p>	Execution agreement with PCD
Subtotal output 1.1.1		176,000	124,000	300,000		
<u>Output 1.1.2:</u> National implementation plan (in	National expertise	33,000	33,000	66,000		Execution agreement with PCD

Project components	Type of expense	Budget (USD)			Explanation	Execution modality
		Y1	Y2	Total		
accordance with Article 20 of the Convention and including national plan for controlling emissions and releases in accordance with Articles 8 and 9 of the Convention) and priorities for action on Mercury management drafted and put forward for endorsement	Miscellaneous	2,000	2,000	4,000	'Year 1 & Year 2: car rental and gasoline for site visit for data collection: 10 days planned for each year (unit cost, 200 USD per day=100 USD per one vehicle per day + 100 USD of ; gasoline expense)	Execution agreement with PCD
Subtotal output 1.1.2		35,000	35,000	70,000		
Output 1.1.3: Information disseminated and awareness raised to increase understanding and involvement of relevant stakeholder groups (public and private sectors, academia and civil society)	National expertise	-	25,000	25,000		Execution agreement with PCD
	Training/Workshops	-	30,000	30,000		Execution agreement with PCD
	Miscellaneous	-	5,000	5,000	This budget is to prepare for dissemination and public awareness campaign using online event platform. The expenses might include licensed platform such as Zoom, Webmax, and others, as well as for contracting organizing team.	Execution agreement with PCD
Subtotal output 1.1.3		-	60,000	60,000		
Subtotal Outcome 1.1		211,000	219,000	430,000		

Project components	Type of expense	Budget (USD)			Explanation	Execution modality
		Y1	Y2	Total		
<u>Output 2.1.1:</u> Periodic monitoring and terminal evaluation of project implementation completed	National expertise	3,750	3,750	7,500		Execution agreement with PCD (monitoring)
	International expertise	-	10,000	10,000		UNIDO as implementing agency (evaluation)
	International travel	-	9,000	9,000		UNIDO as implementing agency (evaluation)
Subtotal Outcome 2.1		3,750	22,750	26,500		
Project management costs	National expertise	21,400	22,100	43,500		Execution agreement with PCD
Total project management costs		21,400	22,100	43,500		
Total project costs		236,150	263,850	500,000		