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United Nations Development Programme

Project Document for projects financed by GEF Trust Funds

Project title: Strengthening Indonesia's Reduction and Elimination in the Distribution and Supply Chain of Mercury from National Health (SIRENE)		
Country(ies): Republic of Indonesia	**Implementing Partner (GEF Executing Entity):** Ministry of Environment (MoE)	**Execution Modality**: National Implementation Modality (NIM)
Contributing Outcome: **Indicative UNDP CPD 2026-2030 Outcome 2:** A lower carbon, climate resilient Indonesia succeeds advancing a just energy transition and the sustainable management of biodiversity and natural resources for the benefit and wellbeing of all. Presidential Regulation of Indonesia Number 12 of 2025 concerning the RPJMN 2024-2029, National Priority 2: strengthening national defense and security systems and promoting national self-reliance through food security, energy, water, sharia economy, digital economy, green economy, and blue economy, which also emphasise government priority in improving waste collection and procession, as well as residue processing, and advancing a circular economy ecosystem by fostering the development of environmentally sustainable products. Triad of Development (*Trisula Pembangunan*) serves as theRPJMN overarching framework guiding Indonesia's development priorities, emphasizing three core pillars: poverty eradication; human capital development, and economic growth driven by industrial down streaming and value-added production.		
UNDP Social and Environmental Screening Category: Moderate	**UNDP Gender Marker:** **GEN2**	
Quantum Award ID: 1545741	**Quantum Project ID: 01005637**	
UNDP PIMS ID number: PIMS9660	**GEF Project ID number: 11546**	
LPAC meeting date: 24 February 2026		
Last possible date to submit to GEF: 20 June 2025		

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Latest possible CEO endorsement date: 20 December 2025	
Project duration in months: 60 months	
Planned start date: 31 Mar 2026	**Planned completion date:** 31 Mar 2031
Expected date of Mid-Term Review (MTR) submission to the GEF: 15 July 2028	**Expected date of Terminal evaluation (TE) submission to the GEF:** 15 July 2031
Expected Operational Closure Date: 15 October 2031	**Expected Financial Closure Date:** 15 April 2032

Brief project description:

Medical waste and hospitals wastewater contribute to the anthropogenic mercury emissions to the environment, and more specifically, medical waste incinerators are regarded as considerable source of mercury emission in Indonesia. Many instruments used in hospitals, health care facilities and laboratories in Indonesia contain mercury, such as thermometers, sphygmomanometers, dental amalgam, medical batteries, electrical equipment, thermostat probes in gas appliances, pressure gauges, gastrointestinal tubes, lamps, cleaners and degreasers, laboratory chemicals and pharmaceutical products.

This project will support the government of Indonesia and relevant stakeholders in the healthcare sector to eliminate mercury in the distribution and supply chain of medical devices through policies and regulations, establishing a system to track, collect and safely dispose of existing mercury-containing wastes through BAT/BEP, and establishing a mechanism for the sustainable replacement of MCMDs. The project will also support the circular practices of electronic medical devices that are free from mercury to prevent future buildup of e-waste from the healthcare sector.

The project will reduce and safely dispose of 20 metric tons of mercury from Indonesia's Health sector and avoid emissions of 20 g TEQ/year of UPOPs. 100 mt of POP-containing plastics will be collected and safely disposed of.20,000 tons of recyclable plastic and metals material will be collected and recycled. 100,000 people directly involved in these supply chains (35,000 female and 65,000 male) will benefit from this initiative

FINANCING PLAN	
GEF Trust Fund grant GEFTF	USD 6,590,000
UNDP TRAC resources	USD 0
Confirmed cash co-financing to be administered by UNDP	USD 0
(1) Total Budget administered by UNDP	**USD 6,590,000**
PARALLEL CO-FINANCING	
UNDP	USD 1,000,000
Ministry of Environment	USD 1,634,925
Ministry of Health	USD 1,807,291

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National Research and Innovation Agency (BRIN)	USD 666,667
Wastec International Ltd	USD 14,778,000
Asosiasi Produsen Alat Kesehatan Indonesia (ASPAKI)	USD 15,423,000
(2) Total confirmed co-financing to this project not administered by UNDP	**USD 35,309,883**
(3) Grand-Total Project Financing (1)+(2)	**USD 41,899,883**

SIGNATURES:

Signature:  Rosa Vivien Ratnawati Primary Secretary	**Agreed by Ministry of Environment**	**Date/Month/Year:** 05-May-2026
Signature: Signed by:  167D6562D44041D... Sara Ferrer Olivella Resident Representative	**Agreed by UNDP**	**Date/Month/Year:** 04-May-2026

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II. ACRONYMS AND ABBREVIATIONS

BAT/BEP	Best Available Techniques/Best Environmental Practices
FSP	Full Sized Project
BRIN	National Research and Innovation Agency
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
GAP	Gender Action Plan
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
KLH	Kementerian Lingkungan Hidup (*Ministry of Environment* in Bahasa Indonesia)
LOA	Letter of Agreement
M&E	Monitoring and Evaluation
MoE	Ministry of Environment
MoH	Ministry of Health
NPD	National Project Director
PIF	Project Identification Form
PB	Project Board
PIR	GEF Project Implementation Report
PM	Project Manager
POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
SESA	Strategic Environmental and Social Assessment
SESP	Social and Environmental Screening Procedure
STAP	GEF Scientific Technical Advisory Panel
UPOPs	Unintentional Persistent Organic Pollutants
WGC	Working Group Coordinator
BPPS NCE	Bureau for Policy and Programme Support, Nature, Climate and Energy

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III. DEVELOPMENT CHALLENGE

MERCURY PHASE-OUT

Indonesia has ratified the Minamata Convention on Mercury through Law No. 1l of 2017 concerning Ratification of the Minamata Convention on Mercury. Following this ratification, The National Action Plan for Mercury Reduction and Elimination (RAN-PPM) has been established through Presidential Regulation Number 21 of 2019 and it is regulated under the Ministry of Environment (MoE) Number P.81/Menlhk/Setjen/Kum.1/10/2019 for the implementation of the RAN-PPM. In addition, Presidential Regulation Number 12 of 2025 concerning the RPJMN 2024-2029, National Priority 2, stipulated "Strengthening national defense and security systems and promoting national self-reliance through food security, energy, water, sharia economy, digital economy, green economy, and blue economy" which also emphasise government priority in improving waste collection and procession, as well as residue processing. The presidential regulation Number 12 of 2025 on RPJMN 2024-2029, National Priority 2 sets out the target for advancing a circular economy ecosystem and fostering the development of environmentally sustainable products. The SIRENE Project will contribute to the achievement of the green economy index and improvement of environmental quality index. The Government of Indonesia has taken an action toward the Mercury-Containing Medical Measuring Devices (MCMDs) elimination target through issuance of law and regulations. Under the National Action Plan, the main responsible and supporting institutions for the health priority sector, particularly for mercury-containing medical devices from healthcare facilities are MoE and MoH. In carrying out their activities, MoE and MoH are supporting each other. In some of its activities, MoH is also supported by Ministry of Home Affairs (MoHA). For hazardous wastes management, under Government Regulation (*Peraturan Pemerintah* in Bahasa Indonesia) PP 22/2021, the prominent institutions involved are MoE, Ministry of Transportation (MoTransp), and Ministry of Trade (MoT). Ministry of Health of Indonesia (MoH) has also issued Ministerial Regulation Number 41 Year 2019 concerning the Phase-out and Withdrawal of Mercury-Containing Medical Devices in Healthcare Facilities with targeting by 31 December 2020 that 100% of health care facilities are not using MCMDs. It is mandatory that all the health facilities replacing the MCMDs with alternative devices which environmentally friendly. Under *Permenkes (*Ministry of Health) 41/2019, the institution responsible for eliminating mercury-containing medical devices is each respective healthcare facility, while withdrawal of the discarded mercury-containing medical devices is conducted by central or local government through MoH or local health in coordination with MoE or local environmental agency.

The Ministry of Environment (MOE) has also issued Ministerial Regulation Number 27/2020 concerning the Management of Mercury-Containing Medical Device Waste. This regulation covers the management of different types of mercury-based thermometers, mercury-based sphygmomanometers and dental amalgam with a mandatory phaseout deadline of no later than December 31, 2025. The regulation is a guideline for the implementation of the management of MCMDs including procedures for collection, temporary storage, transportation, storage at storage depots, treatment and/or export of the discarded MCMDs. Currently, unused MCMDs are still stored in a special temporary storage in healthcare facilities and are to be transferred to storage depots which will be provided in each province.

MERCURY-CONTAINING MEDICAL WASTE MANAGEMENT

The Government of Indonesia issuance the policies, laws and regulations relevant to managing of mercury and mercury wastes from healthcare facilities in Indonesia.

Table 1: Policies, laws, and regulation relevant to management of mercury and mercury waste from healthcare facilities in Indonesia.

No	Policies, Laws and regulations	Relevant topic regulated
1	Law Number 32 Year 2009 concerning Environmental Protection and Management	Chapter VII of the Law regulates on management of hazardous substances and hazardous wastes.
2	Law Number 17 Year 2023 concerning Health Law	The law focuses on prevention, access to health services, health resilience, and efficient and transparent health financing.

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No	Policies, Laws and regulations	Relevant topic regulated
3	Law Number 44 Year 2009 concerning Hospitals	Article 11 (1): Facilities in hospitals may include, among others, wastes management facility.
4	Law Number 11 Year 2017 concerning Ratification of the Minamata Convention on Mercury	Ratification of the Minamata Convention on Mercury.
5	Law Number 11 Year 2020 concerning Job Creation	Amend several provisions in Law No. 32/2009, Law No. 36/2009, Law No. 44/2009.
6	Government Regulation Number 74 Year 2014 concerning Road Transport	Requirements for motor vehicle transporting hazardous goods including hazardous substances.
7	Government Regulation Number 74 Year 2001 concerning Hazardous Substances Management	Mercury compounds including Inorganic mercury, Alkyl mercury, Alkyloxyalkyl mercury, Aryl mercury are classified as hazardous substances with restricted use.
8	Government Regulation Number 47 Year 2016 concerning Healthcare Facility	Healthcare facilities include, among others, primary healthcare (puskesmas), health clinics, hospitals.
9	Presidential Regulation Number 21 Year 2019 concerning National Action Plan for Reduction and Elimination of Mercury	Target achievement for elimination of mercury-containing medical devices is 100% by 2020. The health priority sector is one of the 4 (four) priority sectors in RAN-PPM. Activities for mercury elimination for the health priority sector include, among others, development of guidelines, inventory, substitution, provision of a storage depot in each province in Indonesia and storing of mercury-containing medical devices in the storage depots.
10	Government Regulation Number 22 Year 2021 concerning Hazardous Wastes Management (PP 22/2021)	Management of hazardous wastes from determination until disposal. Mercury wastes, wastes contaminated with mercury and medical devices containing mercury is included in Annex IX of this regulation.
11	Government Regulation Number 30 Year 2021 concerning Implementation of Traffic Field and Road Transport	Amend several provisions in Government Regulation Number 74 Year 2014.
12	Presidential Decree Number 61 Year 1993 concerning Ratification of the Basel Convention on The Control of Transboundary Movements of Hazardous Wastes And Their Disposal	Ratification of the Basel Convention.
13	Minister of Environment Regulation Number 14 Year 2013 concerning Symbol and Label of Hazardous Wastes	Procedures and technical requirements for symbol and label of hazardous wastes including shape, colour, size, material and attachment of the symbol and label.
14	Minister of Transportation Regulation Number PM. 90 Year 2013 concerning Safety of Transportation of Dangerous Goods By Airplane as amended by Minister of Transportation Regulation Number 58 Year 2016	Ministry of Transportation enacts provisions for safety of dangerous good transport with airplanes and the Director General of Civil Aviation supervises the implementation. The provisions cover, among others, airplane operators, classification, restriction of dangerous goods transport, packaging, labelling and marking, education and training for personnel handling transport of dangerous goods, and monitoring.

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No	Policies, Laws and regulations	Relevant topic regulated
15	Minister of Transportation Regulation Number 29 Year 2014 concerning Maritime Environment Pollution Prevention	The Director General of Sea Transportation issued an approval letter of hazardous wastes transportation for ships already complying with hazardous wastes transportation requirements.
16	Minister of Transportation Regulation Number PM. 48 Year 2014 concerning Procedures for Loading, Arranging, Transporting and Unloading Goods by Train as amended by Minister of Transportation Regulation Number PM. 52 Year 2016	In Article 7, specific for transportation of hazardous substances and hazardous wastes, transporters must have license from the Ministry of Transportation after receiving recommendation from competent institution. Article 43 regulates requirements for transportation of hazardous substances and/or hazardous wastes with train.
17	Minister of Environment Regulation Number P.56/Menlhk- Setjen/2015 concerning Procedure and Technical Requirement for Hazardous Wastes Management from Healthcare Facilities (Permen LHK P.56/2015)	Procedure and technical requirement for reduction, segregation, storage, treatment and landfilling of hazardous wastes. Article 23: Mercury waste should not be incinerated.
18	Minister of Environment Number 6 Year 2021 Number concerning Management of Hazardous Waste	Outlines the procedures and requirements for managing hazardous and toxic waste, also known as "B3" waste. It replaces several older regulations and establishes a comprehensive framework for B3 waste management, including reduction, storage, collection, transportation, utilization, treatment, and disposal. The regulation also covers aspects like application and issuance of technical certifications for B3 waste management and the requirements for various aspects of B3 waste management, such as thresholds for determining B3 waste, storage facilities, and recording practices.
19	Minister of Health Regulation Number 57 Year 2016 concerning the National Action Plan for Control on Health Impact from Mercury Exposure Year 2016-2020	Article 2: Scope of the national action plan covers; 1. situation analysis; 2. policy and strategy; and 3. activity and target achievement
20	Minister of Environment Regulation Number P.81/Menlhk/ Setjen/Kum.1/10/2019 concerning Implementation of Presidential Regulation Number 21 Year 2019 concerning National Action Plan for Reduction and Elimination of Mercury	1. Procedures for development of local action plan for reduction and elimination of mercury (RAD-PPM); 2. Monitoring and evaluation of RAN-PPM and RAD-PPM; 3. Reporting of RAN-PPM and RAD-PPM; and 4. System for integrated monitoring and evaluation of reduction and elimination of mercury.
21	Minister of Environment Regulation Number P.74/MENLHK/ SETJEN/ KUM.1/10/2019 concerning Hazardous Substances and/or Hazardous Wastes Emergency Response Program	1. Development of hazardous substances and/or hazardous wastes management emergency program; 2. Training and rehearsal of hazardous substances and/or hazardous wastes management emergency; 3. Handling of hazardous substances and/or hazardous wastes emergency; 4. Establishment of hazardous substances and/or hazardous wastes Emergency Centre; 5. Guidance.

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No	Policies, Laws and regulations	Relevant topic regulated
22	Minister of Health Regulation Number 7 Year 2019 concerning Environmental Health in Hospitals	Annex 1. of this Regulation includes safeguarding hazardous wastes starting from containers, transportation, temporary storage and treatment. Wastes containing mercury should not be incinerated due to risk of its toxic vapour release. Treatment can be conducted by transporting the wastes to a hazardous wastes treatment facility. Prior to disposal, wastes are stored in a hazardous wastes temporary storage facility with strict monitoring.
23	Minister of Health Regulation Number 41 Year 2019 concerning Phase-out and Withdrawal of Mercury-Containing Medical Devices in Healthcare Facilities (Permenkes 41/2019)	Article 3 : In order to implement RAN-PPM for the health priority sector, elimination of mercury-containing medical devices namely thermometers, sphygmomanometers and dental amalgams is conducted by 31 December 2020 at the latest. Article 4: Elimination of mercury-containing medical devices is conducted through: preparation of policy or written commitment from the director of healthcare facility; assessment and inventory of mercury-containing medical devices; substitution with non-mercury-containing medical devices; and 4. temporary storage of mercury-containing medical devices.
24	Minister of Environment Regulation Number P.27/MENLHK/SETJEN/KUM.1/12/2020 Concerning on the Management of Mercury-Containing Medical Device Waste	Guidelines and technical instructions for the management of medical device waste containing Mercury which includes collection; temporary storage; transportation; storage depot ; processing; and/or export.
25	Minister of Environment Regulation Number 75 Year 2019 concerning on Producer Waste Reduction Roadmap	Outlines a roadmap for reducing waste generated by producers, with a specific focus on plastic waste. The regulation sets a target for producers to reduce waste from product and packaging sales by 30% before 2029. It also emphasizes the concept of Extended Producer Responsibility (EPR) and allows for various solutions, including the use of degradable materials, recycling, and reuse of packaging waste.
26	Minister of Environment Regulation Number 9 Year 2024 concerning on Management of Waste Containing Hazardous and Toxic Materials and Hazardous and Toxic Waste	Focuses on the management of waste containing hazardous and toxic materials (B3 waste). It provides a framework for the entire lifecycle of B3 waste, from generation to disposal, with the goal of promoting safe and sustainable waste management practices. The regulation also outlines the roles of different stakeholders, including government, businesses, and the public, in ensuring proper waste handling
27	Minister of Transportation Decree Number KM. 17 Year 2000 concerning Guidelines for Handling Dangerous Material/Goods in	Minister of Transportation enforces the “International Maritime Dangerous Goods (IMDG) Code” and its

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No	Policies, Laws and regulations	Relevant topic regulated
	Shipping Activities in Indonesia as amended by Minister of Transportation Regulation Number: KM. 02 Year 2010	supplement as guidelines for handling dangerous materials/goods in shipping activities in Indonesia.
28	Director General of Land Transportation Decision Letter No. SK.725/AJ-302 DRJD/2004 concerning Transportation of Hazardous Substances on the Road	Scope of the decision covers requirements of vehicle transporting hazardous substances, driver and driver assistant of vehicle transporting hazardous substances, trajectory of hazardous substances transportation, operation of hazardous substances transportation.
29	Circular Letter of Director General of Sea Transportation Number UM. 003/1/2/DK-15	Director General of Sea Transportation regulates hazardous wastes transportation for ship carrying Indonesian flag.
30	Circular Letter of Director General of Pharmacy and Medical Devices Number HK.02.02/V/0720/2018	Determination of validity period of distribution license and distribution of mercury-containing medical devices. Mercury-containing medical devices can only be distributed or traded in Indonesia until 31 December 2018. If distributors still have the products at their warehouse after 31 December 2018, the products should be destroyed in ways according to MoE or re-exported.
31	Circular Letter of Director General of Health Service Number HK.02.02/V/0361/2019	Each healthcare facility, owned by government or private must: 1. Have hazardous wastes temporary storage; 2. Have license for hazardous wastes temporary storage from local environmental agency at regency/city level. 3. Comply with design criteria for the hazardous wastes temporary storage according to PP 101/2014 and Permen LHK P.56/2015. Stop purchasing and use of mercury-containing medical devices. Collect mercury-containing medical devices and store them in a safe and protected container and separated from other hazardous wastes in a hazardous wastes temporary storage prior to withdrawal notice from the competent institution.
32	Circular Letter of Director General of Health Service Number HK.02.02/I/2899/2019	Following Circular Letter of Director General of Health Service Number HK.02.02/V/0361/2019, each healthcare facility must eliminate mercury-containing medical devices as soon as possible and no later than end of 2020 with measures as determined in the Circular Letter of Director General of Health Service Number HK.02.02/I/2899/2019.

In light of the approaching phase-out of MCMDs, several policy, regulatory instruments and action plans were issued by the Government of Indonesia to ensure the introduction and appropriate application of MFMDs in medical facilities, and by the general public as listed in tables above. However, many of these measures are only recommended measures rather than compulsory ones, which require a thorough review and assessment to identify gaps and overlaps, close loopholes and harmonize approaches and propose relevant mandatory by laws.

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THE CHALLENGE ON MCMDs PHASE-OUT AND ENVIRONMENTALLY SOUND MERCURY-CONTAINING MEDICAL WASTE MANAGEMENT

Ministry of Health of Indonesia (MoH) has issued Ministerial Regulation Number 41 Year 2019 concerning the Elimination and Withdrawal of Mercury-Containing Medical Devices in Healthcare Facilities. The regulation does not provide any technical guidelines for collection, transportation, storage, treatment, and substitution potential for the mercury-containing medical measuring devices.

The Government of Indonesia is required to create a special regulation for mercury waste treatment that does not contradict with Government Regulation Number 22 of 2021. One of the provisions of the mercury waste regulation is to define mercury waste storage as treatment activities, allowing mercury waste to be held for more than 365 days if specific requirements are met.

It is recommended that laws and regulations be enacted to reconcile the definition of hazardous chemicals as defined by Government Regulation Number 74 of 2001 with hazardous substance as defined by other relevant agencies regulations, including symbols, labels, and characteristics. If this is not possible, harmonization can be achieved by informing the public that the definition and scope of this agreement are truly the same in terms of symbols, labels, and qualities agreed upon by mutual consent. There needs to be a common guideline that aligns symbols and labels and the Material Safety Data Sheet (MSDS).

Mercury inputs to society should be understood here as the amounts of mercury made available for potential releases through economic activity in the country. This includes mercury intentionally used in products such as thermometers, blood pressure gauges, fluorescent light bulbs, etc. It also includes mercury mobilized via extraction and use of raw materials which contains mercury in trace concentrations.

In the health sector, the use and procurement of mercury-containing medical devices in all health care facilities has been prohibited since 2020 for mercury elimination, in accordance with Minister of Health Regulation Number 41 of 2019. The Ministry of Environment (MOE) has also issued Minister of Environment Regulation Number P.27/Menlhk/Setjen/Kum.1/12/2020 to regulate the collection, temporary storage, transportation, storage at storage depots, treatment and/or export of the discarded mercury-containing medical devices. So far, mercury-containing medical devices that is no longer used is still stored in a special temporary storage in healthcare facilities to be further withdrawn to storage depots which will be provided in each province. However, the regulation does not yet provide BAT/BEP related Mercury end-processing technology. Moreover, this technology is also not yet available in Indonesia. The Government of Indonesia needs to develop BAT/BEP for m376,089ercury end-of-life management.

As for the introduction and application of mercury-free thermometers and sphygmomanometers in medical facilities, policies and regulatory framework at national or local levels to promote their introduction and application are lacking. Besides, many training materials focused more on mercury-containing medical thermometers and sphygmomanometers rather than mercury-free ones, which need to be updated. Furthermore, standards for the manufacture of mercury-free thermometers and sphygmomanometers are required to be updated to ensure the manufacturing of products that meet the necessary requirements.

Finally, obsolete mercury-containing medical thermometers and sphygmomanometers from medical facilities were listed in the Classified Catalogue of Medical Wastes issued by National Health and Family Planning Commission, but gaps in policies, regulatory framework, guidance, tools and actions plans still exist in the interim storage of mercury and the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers and mercury contaminated sites.

CIRCULAR ECONOMY

The adverse health effects of mercury exposure, particularly on the nervous system, pose significant risks to humans, including unborn children and infants. The global dispersion of mercury necessitates collective international efforts to address mercury pollution.

The Minamata Convention on Mercury, adopted in 2013 and entered into force in 2017, aims to protect human health and the environment from mercury emissions and releases. Under this international agreement, signatory countries, including Indonesia, are obligated to implement measures to control mercury supply and trade, regulate

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mercury-added products, and enforce other provisions. Specifically, Article 4 of the Convention prohibits the manufacture, import, and export of specified mercury-added products, including mercury-containing medical devices like thermometers and sphygmomanometers, effective after the 2020 phase-out date.

In accordance with the Minamata Convention, mercury regulation has been established. To fulfill the Convention's mandate, the Government of Indonesia has issued Presidential Regulation No. 21/2019, outlining the National Action Plan for Reducing and Eliminating Mercury. The plan aims to eliminate mercury by 2030, focusing on four priority areas, as outlined in Presidential Decree No. 21/2019.

The National Action Plan for the Reduction and Elimination of Mercury (RAN PPM) prioritizes four sectors: manufacturing, energy, small-scale gold mining, and health. The RAN PPM is implemented from 2018 to 2030. Specifically, in the health sector, the elimination of mercury, according to the RAN PPM, will be achieved by 2020. The target of mercury elimination in the health sector is specifically for sphygmomanometers, thermometers, and dental amalgam, with a 100% achievement before or at the end of 2020 for use in all health care facilities (hospitals, health centers) throughout Indonesia.

In response to the Presidential Regulation on the National Action Plan for the Reduction and Elimination of Mercury (RAN PPM), the Ministry of Health issued Ministerial Regulation Number 41 of 2019 concerning the Elimination and Withdrawal of Mercury-Containing Medical Devices (MCMDs) in Health Service Facilities. The elimination of mercury-containing medical devices is an effort to prohibit the use of mercury-containing medical devices and to replace them with alternative materials that are friendly to human health and the environment. The withdrawal of Mercury-Containing Medical Devices is the removal or taking of mercury-containing medical devices from health service facilities to be stored in a storage depot.

To achieve the target of eliminating mercury from the health sector by December 2020, the Ministry of Health accelerated the implementation of the RAN PPM and Ministerial Regulation Number 41 of 2019. The Ministry of Health conducted an online and offline inventory of mercury-containing medical devices. This is intended to determine the number of mercury-containing medical devices that will be managed nationally. Efforts to obtain data on the number of devices were made through a letter from the Directorate General of Health Services number KL.03.01/1/0215/2020 dated January 28, 2020 regarding the Submission of the Reporting Form for the Elimination of Mercury-Containing Medical Devices. The online inventory is available at https://bit.ly/borangalkesmerkuri.

As part of the implementation of mercury removal in the health priority sector, the Ministry of Environment (MoE) has issued Ministerial Regulation Number 27 of 2020 concerning the Management of Mercury-Containing Medical Waste. This regulation serves as a guideline for the management of mercury-containing medical devices, including collection, temporary storage, transportation, storage in storage depots, and further processing.

The Withdrawal of Mercury-Containing Medical Devices is the transfer or retrieval of mercury-containing medical devices from Health Service Facilities to be stored in storage depots. The withdrawal referred to in this regulation is not the recall of medical devices from distributors and retailers. The withdrawal is carried out from the temporary storage of mercury-containing medical devices in Health Service Facilities to the storage depots provided by the MoE.

Current State of Medical Waste Management in Indonesia

Indonesia generates a significant amount of medical waste, estimated at 376,089 tonnes/day from healthcare facilities[1]. Waste management is regulated under various regulations, including Government Regulation No. 7 of 2019 and the Ministry of Health's (MoH) Regulation No. 2 of 2023 and Ministry of Environment's (MoE) Regulation No 56 of 2015. However, compliance with these regulations is inconsistent across healthcare facilities.

According to Government Regulation No. 6 (2013) issued by the Ministry of Trade, hospitals are evaluated using a color-coded rating system: black (no waste management efforts), red (non-compliant environmental management), blue (compliant environmental management), and green/gold (exceeding compliance requirements). An assessment of 121 hospitals revealed that eight were rated black, 70 red, and 43 blue, indicating widespread non-compliance

[1] Linda Fitrianingsih, & Mohamad Yaser. (2023). Analisis Pengelolaan Limbah Medis Padat Menurut Permenkes No. 7 Tahun 2019 Di Rumah Sakit Tahun 2022. Jurnal Ilmu Kesehatan Dan Gizi, 1(4), 48–61. https://doi.org/10.55606/jikg.v1i4.1705

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with government regulations. The assessment and the established monitoring mechanism are expected to encourage hospitals to improve their environmental management practices in the future.[2]

Current Status of MCMD Withdrawal

In the other hand, the healthcare sector has shown significant progress to reduce mercury-containing medical devices (MCMD(s)) by avoiding the use these devices, at first hand, and temporarily storing these in the same Healthcare Facilities. However, the initial actions lack continued collection effort and the provision of appropriate storage depot, experience and effectiveness of transportation mode, and final disposal facilities due to the limited availability of sufficient technology to carry out the final processing of MCMDs.

Mercury-based medical devices are gradually being replaced with mercury-free, digital medical devices. The medical devices focused on in the SIRENE project are thermometers, blood pressure monitors, and dental amalgam. To encourage the use of mercury-free medical devices in public healthcare facilities, support from both the government and the private sector is essential. In this context, the government is represented by the Directorate General of Pharmaceuticals and Medical Devices (Ditjen Farmalkes) under the Ministry of Health. This Directorate General has the authority to formulate and implement policies related to the management of pharmaceuticals and medical devices.

In order to ensure the availability of safe, beneficial, high-quality, and affordable medical devices, as well as to create a healthy living environment, the Directorate General of Pharmaceuticals and Medical Devices is responsible for revoking distribution permits and monitoring the circulation of MCMDs. Based on the Circular Letter of the Director General of Pharmaceuticals and Medical Devices Number: HK.02.02/V/0720/2018 concerning the Determination of the Validity Period of Distribution Permits and Circulation of Medical Devices Containing Mercury, the revocation of all distribution permits for MCMDs has been carried out by medical device distributors. It also addresses information from the public and stakeholders indicating that medical devices containing mercury are still found in circulation, being sold directly or through electronic catalogs.

In efforts to interfere with the supply chain of mercury-free medical devices, it is also necessary to involve manufacturers and importers of medical devices. This is related to the concept of a circular economy that will be implemented in Indonesia. The circular economy approach emphasizes reducing waste, reusing resources, and recycling materials, which aligns with the goal of transitioning to mercury-free medical devices. By engaging all stakeholders, including producers and importers, the government can ensure a sustainable and environmentally friendly supply chain for healthcare equipment, ultimately supporting public health and environmental protection. Mercury-containing medical devices in health service facilities that have already been eliminated need to be managed as mercury-containing medical waste to avoid negative impacts on the environment and human health.

The management of mercury-containing medical waste involves a multi-stage process, as outlined by the Ministry of Environment (MoE)[3]. It starts with collecting waste from hospitals, clinics, and other sources. The collected waste is then placed in secure containers to prevent accidents during transportation. After collection, the waste is stored temporarily in a designated area until it's transported to a storage facility. During transportation, the waste is carried in secure containers on trucks equipped with safety features. Once it arrives at the storage facility, the waste is stored in a secure area designed to protect the environment and public health. Next, the waste is transported to a treatment or export facility, where it undergoes specialized treatment to remove the harmful effects of mercury. Alternatively, the waste may be exported to a facility that meets international waste management standards. Throughout this process, careful planning and attention to detail ensure the safe transportation of waste to its final destination. This process highlights the importance of safety, coordination, and responsibility in managing mercury-containing medical waste. Each stage is crucial in minimizing environmental impact and protecting human health.

[2] WHO. Report on health-care waste management (HCWM) status in Countries of the South-East Asia Region (SEA Region), April 2017.

[3] Siwi, W.P. (n.d.). Pengelolaan Limbah Alat Kesehatan Mengandung Merkuri. URL: https://sib3pop.menlhk.go.id/index.php/articles/view?slug=pengelolaan-limbah-alat-kesehatan-mengandung-merkuri

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Overview of health care facilities in Indonesia

Healthcare facilities classification in Indonesia follows the Government Regulation Number 47, Year 2016. The types of healthcare facilities include: individual healthcare practitioner practices, community health centers, clinics, hospitals, pharmacies, blood transfusion units, health laboratories, optical clinics, forensic medical facilities, and traditional healthcare facilities. This project will focus on all types of facilities, including (i) hospitals, (ii) clinics, (iii) independent medical practices, and (iv) primary healthcare (puskesmas). To ensure the provision of quality healthcare services, the Ministry of Health has established regulations and registration requirements for these facilities. This overview provides an insight into the current state of healthcare facilities in Indonesia, including the number and distribution of registered hospitals, clinics, and independent medical practices, as well as their ownership and service capabilities[4].

(i) **Hospitals** registered with the Ministry of Health are managed by various institutions or organizations, including central government, local government, TNI/POLRI (Indonesian military and police), state-owned enterprises, and private entities. Based on the type of services provided, hospitals are categorized into General Hospitals (RSU – Rumah Sakit Umum) and Specialty Hospitals (RSK – Rumah Sakit Khusus). The number of hospitals in Indonesia as of 2023 consists of 2,636 General Hospitals (RSU) and 519 Specialty Hospitals (RSK). The breakdown of **3,155 hospitals**, comprising 242 general hospitals owned by the central government, 849 general hospitals owned by local governments, 1,545 private general hospitals, and 519 specialty hospitals.

(ii) A **clinic** is a health service facility that provides basic and/or specialized medical services comprehensively. According to the Minister of Health's Circular Letter Number: HK.02.02/II/4392/2020 on Clinic Registration, the Ministry of Health has urged all clinics in Indonesia to register online through a website-based application at registrasifasyankes.kemkes.go.id. Based on the Ministry of Health's data as of December 2023, there are **17,261 registered clinics** in Indonesia, owned by the government (ministries/agencies, military/police, and local governments) and private entities (community). The breakdown of registered clinics in Indonesia includes 1,950 government-owned clinics and 15,311 privately owned clinics. Based on the clinics' service capabilities, there are 14,564 primary clinics and 2,697 main clinics.

(iii) **Independent Medical Practice Based** on Law Number 17 of 2023 on Health, independent medical practice is one of the types of health care facilities (fasyankes). Independent medical practice includes Independent Doctor Practice Places (TPMD - Tempat Praktik Mandiri Dokter) and Independent Dental Doctor Practice Places (TPMDG - Tempat Praktik Mandiri Dokter Gigi). According to the Minister of Health's Circular Letter Number: HK.02.02/II/4406/2021 on Registration of Independent Medical Practice Places, the Ministry of Health has urged doctors and dentists in Indonesia who practice independently to immediately register online through a website-based application at registrasifasyankes.kemkes.go.id. Based on data on the application as of December 2023, there were 12,411 registered independent medical practices, consisting of **8,465 TPMD** and **3,946 TPMDG**. The province with the highest number of registered Independent Doctor Practice Places (TPMD) is East Java Province, with 1,587 TPMD. The province with the highest number of registered Independent Dental Doctor Practice Places (TPMDG) is also East Java Province, with 1,365 TPMDG.

(iv) **Puskesmas**. The Minister of Health Regulation Number 43 of 2019 on Primary Healthcare states that a community health center (puskesmas) is a health service facility that provides community health services and primary individual health services, with a focus on promotional and preventive efforts in its working area. The number of puskesmas in Indonesia in 2023 is **10,180**, consisting of 4,210 inpatient puskesmas and 5,970 outpatient puskesmas.

Estimated number of medical devices and potential Hg content in health care facilities in Indonesia

Based on data surveyed from 39,061 healthcare facilities across 34 provinces in Indonesia, it is estimated that the potential baseline mercury (Hg) content originating from stored unused, unbroken thermometers (198,488 units) and sphygmomanometers (532,873 units), minding an average mercury content of 1.5 grams per thermometer and 65 grams per sphygmomanometer, is approximately 0.30 ton from Thermometer, 34.64 tons from

[4] Profil Kesehatan Indonesia 2023, Kementerian Kesehatan. URL: https://kemkes.go.id/app_asset/file_content_download/172231123666a86244b83fd8.51637104.pdf

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sphygmomanometer, and 127.52 tons from dental amalgam, totaling 162.46 tons of mercury in unused, unbroken stoked MCMDs (see Table 2), highlighting a significant opportunity to fast track mercury elimination.

Table 2. Estimated baseline number and quantity of Mercury (Hg) in unused and unbroken medical devices

Type of Health Care Facility	Number	Type of Medical Devices									
		Average Number		Estimated Number of Unit		Estimated Hg Content (Gr)			Estimated Hg Content (Ton)		
		Thermo-meter	Sphygmo-manometers	Thermo-meter	Sphygmo-manometers	Thermo-meter	sphygmo-manometers	Dental Amalgam	Thermo-meter	Sphygmo-manometers	Dental Amalgam
Hospital	3155	25	60	78875	189300	118312.5	12304500	16693	0.12	12304.50	16.69
Clinics	17261	3	3	51783	51783	77674.5	3365895	48833	0.08	3365.90	48.83
Independent Doctor Practice Places	8465	2	2	16930	16930	25395	1100450	1988	0.03	1100.45	1.99
Puskesmas	10180	5	27	50900	274860	76350	17865900	60009	0.08	17865.90	60.01
Total	**39061**	**35**	**92**	**198488**	**532873**	**297,732**	**34,636,745**	**19,352,580**	**0.30**	**34.64**	**127.52**

In addition to the above unused, unbroken MCMDs contained in Table 1, broken MCMDs have also been also collected and being safely stored in healthcare facilities. Based on representative data obtained from the national consultant's study in developing the PIF, it is estimated that the breakage rate is 12% for mercury-containing thermometer and 13% for sphygmomanometer. Mercury content from broken and unbroken MCMDs stored at healthcare facilities totaling 166.90 tons Table 2 below shows the total units and quantities of mercury contents in MCMDs.

Table 3. Estimated baseline number and quantity of Mercury (Hg) in unbroken and broken medical devices

Description	Estimated Number of Units		Estimated Hg Contents (g)		Estimated Hg Contents (ton)		
	Thermo-meters	Sphygmo-manometer	Thermo-meters	Sphygmo-manometer	Thermo-meters	Sphygmo-manometer	Dental Amalgam
Total (unbroken)	198,488	532,873	297,732	34,636,745	0.30	34.64	127.52
Percentage of breakage	12%	13%	-	-	-	-	--
Total (broken)	23,819	69,273	35,729	4,502,745	0.04	4.50	-
Total unbroken and broken MCMDs	**222,307**	**602,146**	**333,461**	**39,139,490**	**0.34**	**39.14**	**127.52**

Both unused, unbroken, as well as broken MCMDs will be addressed by the project, in undergoing safe and environmentally sound collection, transportation, stabilization, solidification and temporary storage at the safe storage facilities at an established waste management enterprise.

Key Challenges and Barriers

This project has identified four root problems and four barriers hindering the phase-out of mercury-containing medical thermometers and sphygmomanometers, as well as the adoption of mercury-free alternatives in healthcare facilities. These challenges have been pinpointed as key obstacles that must be addressed to ensure a seamless transition to mercury-free medical devices.

The root problems are categorized into:

(i) Limited institutional capacity – Indonesia has numerous regulatory frameworks and policies supporting mercury reduction and phase-out in the health sector. Nevertheless, the country lacks the capacity to enforce laws implementing these frameworks and policies, hindering the reduction and phase-out of mercury-containing medical devices (MCMDs). Weak supervision and control over MCMD distribution and supply chains,

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combined with inadequate coordination between central and local government health agencies, compound the problem.

(ii) Limited technical capacity – Indonesia has very limited experience in handling collected MCMDs. The country lacks norms and a regulatory framework for mercury transport and storage. Furthermore, Indonesia's capacity to transport and collect MCMDs from health facilities is limited.

(iii) Limited access to available and appropriate technology – The country has limited capacity to access available and appropriate technologies (BAT/BEP) that comply with the Minamata Convention. Furthermore, Indonesia lacks guidelines on proper handling and management of mercury-containing waste, as well as information on stockpiles of such waste.

(iv) Limited capacity to monitor – The country has weak monitoring and evaluation mechanisms to track project outputs and outcomes. Additionally, there is a lack of dissemination of lessons learned from the project.

The four barriers as follow:

(i) Limited political capacities – Indonesia's top management lacks sufficient support and oversight to manage domestic mercury circulation. Moreover, top management has an inadequate understanding of mercury's dangers. The country also needs more community-based initiatives to raise public awareness about the health risks associated with mercury.

(ii) Geographical constraints – Geographical factors in Indonesia pose challenges to safe mercury and mercury waste handling. Furthermore, a lack of concern about mercury's dangers stems from a general lack of understanding and awareness about its risks.

(iii) Limited public knowledge – Participation from relevant stakeholders is limited, and the situation is made more challenging by insufficient support from top management.

(iv) Limited budget available – The project faces several challenges, including insufficient budget allocation, limited human resource capacity, and inadequate involvement of relevant stakeholders.

Theory of Change (ToC)

To cope with the four (4) root problems and the four (4) barriers identified above, the project has 4 (four) components expected to achieve the objective focusing on:

(a) Strengthening policy and regulatory frameworks to support the phase-out of MCMDs.

(b) Enhancing technical and institutional capacity on MCMDs phase-out and mercury-containing medical waste management.

(c) Developing and piloting circular models to promote mercury-free alternatives for MCMDs.

(d) Monitoring, documenting, and sharing project results and best practices.

Most specifically, in order to implement the Component 3 “Developing and piloting circular models to promote mercury-free alternatives for MCMDs”, the GEF intervention will be critical to engage with CSOs, NGOs and local private sector partner sectors.

a) The engagement in Medical Devices sectors will be highly dependent of private sector as the proposed project activities will interlink a complex supply chain of alternatives and will also promote a circular chain to assure the proper disposal of both current obsolete devices, but also future phased-in electronic devices that are replacing MCMDs.

b) During project preparation phase (PPG phase), the Government of Indonesia will start screening these chains (work which will be continued during implementation) to identify the relevant private sector stakeholders that can benefit from the project.

c) Also, related to the private sector partners for the supply chain areas, there is a need to further engage with the stakeholders already working in the mercury temporary storage to strengthen operations and apply proper BAT/BEP. Hence, these stakeholders may also be supported towards scaling up operations for the

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solidification facilities, and for this, the Government of Indonesia has a short list of companies operating in the area of healthcare waste management which will be further screeded during PPG phase to assess their capacities to contribute with the project.

d) It is noted that the scope of mercury-related issues, it is acknowledged that a relatively large number of NGOs and CSOs do work on that area from several angles/sectors, and the Government of Indonesia is cognizant of the importance of their participation in public debate, but also as knowledge providers and potential replicators. The PPG phase will start to work on mapping these entities, while these will be formally engaged during implementation phase of the project through public calls, but also potentially as part of the Project Board consultative committee.

Also related to the Component 3 "Developing and piloting circular models to promote mercury-free alternatives for MCMDs", the GEF intervention will support the Government of Indonesia in assisting/piloting activities in 4 (fours) regional areas that will be selected during PPG phase. The 4 (four) Regional Areas refer to the structure of Environmental Management in Indonesia. Indonesia is an archipelagic state consisting of large and small islands. The project will pay attention to the 4 (four) main groups of Islands (Sumatera, Kalimantan, Sulawesi, Maluku and Papua and Java, Bali and Nusa Tenggara) following the regional offices of environmental management in the country. This regional mechanism is expected to strengthen the process and progress of mercury reduction and phase-out.

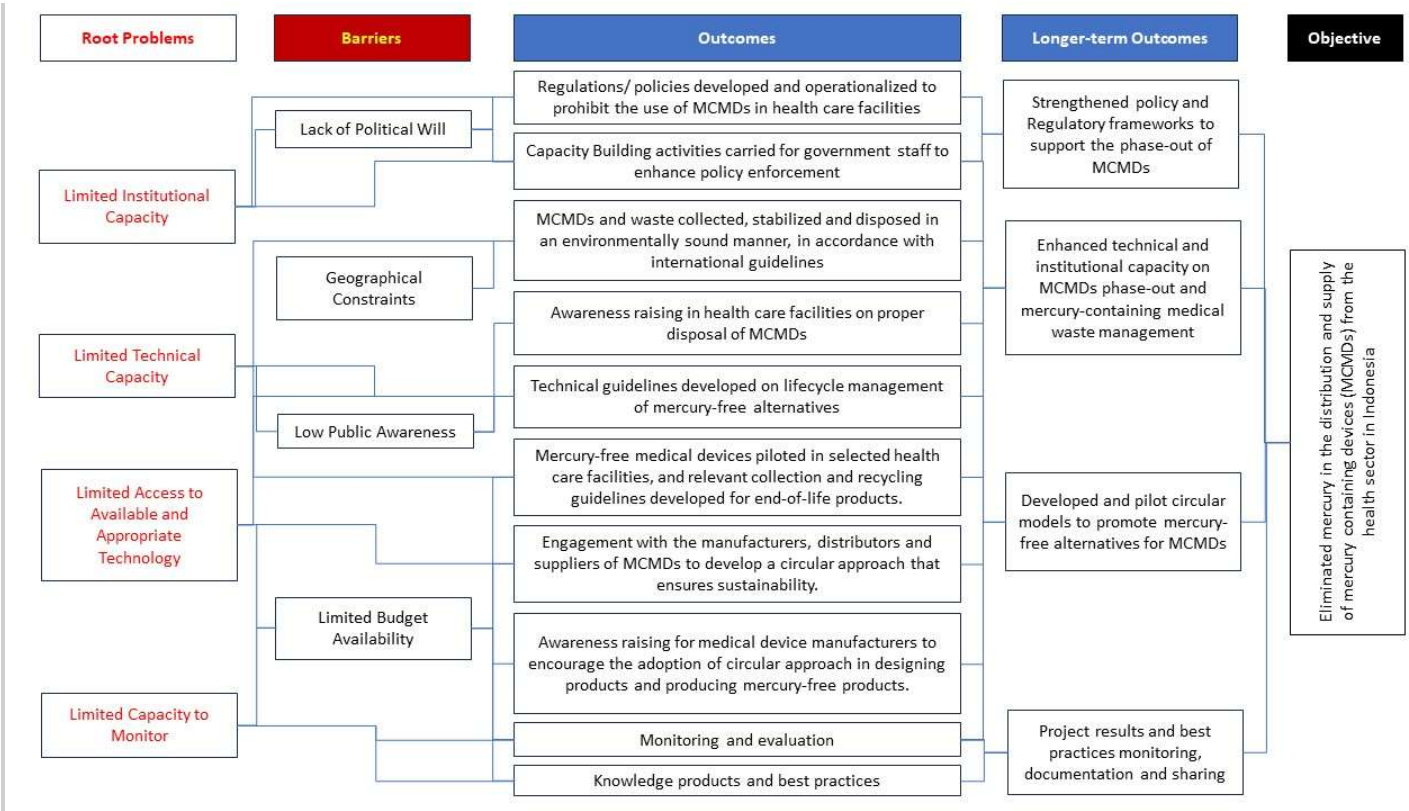


Fig 1 - Theory of Change

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IV. STRATEGY

Project Objective

The Project will assist the Government of Indonesia to eliminate mercury in the distribution and supply chain of mercury containing medical devices (MCMDs) from the health sector, establish systems and introduce technologies for mercury safe disposal and create mechanism for the sustainable and circular introduction of mercury free medical devices (MFMD).

Project Description

The Project will directly work with 3,122 hospitals, 10,260 Primary Health Care (PHC) and more than 5,000 health care facilities located across Indonesia, in coordination with other ministries and agencies and relevant stakeholders, specially from the private sector, to perform actions that will lead to reaching the intended objective through:

Component 1: Policy and regulatory frameworks strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector

The Ministry of Environment has been actively working with local and regional authorities to encourage the establishment of provincial and district action plans to reduce and eliminate mercury. The project will engage with the Ministry of Health; Ministry of Energy and Mineral Resources; Ministry of Cooperative and Medium and Small Enterprises; Ministry of Villages; National Research and Innovation Agency (BRIN); Ministry of Women and Children Protection; Ministry of Industry, Ministry of Trade, Ministry of Finance, Ministry of National Development Planning (BAPPENAS) to strengthen collaboration and the governance network around the distribution and supply chain of mercury containing medical devices (MCMD), together with intensive engagement activities on mercury pollution by central government. Through intensive engagement on mercury pollution at the national level, the project is targeted to prevent risk of environmental contamination by mercury-containing devices, while promoting proper response to mercury spills and ensuring environmentally sound disposal of mercury waste.

This project will develop a capacity-building program for medical personnel, healthcare workers, and prospective medical/healthcare students at universities. This can be achieved by strengthening the implementation of health transformation on the fifth and sixth pillars, namely Health Human Resources and Health Technology.

Referring to the recommended actions outlined in Minamata Initial Assessment (MIA), in component 1, the project will perform activities meant to develop and establish gender-sensitive and gender-responsive regulatory and policy frameworks in regard with the total phase-out of MCMDs, regulatory frameworks concerning mercury collection, distribution, temporary storage, and disposal. It will strengthen the capacity of Indonesia at national and sub-national levels to enhance policy enforcement by strengthening coordination and cooperation, enforcing commitments, and ensuring inclusive processes in a gender and social inclusive manner, also addressing potential Social and Environmental Impacts of these frameworks using a Strategic Environmental and Social Assessment (SESA).

Under the coordination of the Ministry of Health (assisted by health institutions at the provincial and district levels), the project will facilitate and organize a gender-sensitive and gender-responsive strategy to totally phase-out of mercury-containing medical devices and provide assistance in the substitution by mercury-free medical devices. The Ministry of Health will issue recommendation to all health facilities which cover by Government Regulation Number 47 Year 2016 concerning Healthcare Facilities. Those including hospital of class A, B, C, and D and primary health care (PHC) and other health care facilities consisting of 3 levels, namely: main (that has specialized medical care), middle, and primary (a people-centered rather than disease-centered service that addresses the majority of a person's health needs throughout their lifetime including physical, mental and social well-being).

In the end, Healthcare Facilities are expected to commit not using mercury-containing medical devices and to establish schedules/roadmaps towards the replacement of baseline MCMDs for MFMDs, The Governance and Regulatory structure will also enhance compliance of health service institutions to meet agreed standard. Policies regarding oversight and supervision will be issued to strictly monitor the commitment of all health facilities.

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This component will address the policy and regulatory barriers as it will systematically evaluate measures (including administrative, legal, financial and economic instruments, etc.) to phase-out the MCMDs and engage the manufacturing enterprises to promote the introduction and use of MFMDs in medical facilities and also to manage the waste from the MCMDs and MFMDs.

The project will develop and implement integrated approach consisting of policy and regulatory measures, quality standards, process, mechanism and associated capacities to meet the requirements of the Minamata Convention. Activities under this component will help strengthen regulatory and institutional baseline levels of effort under the National Plan and providing opportunity for integration between different public sector entities and broader consultation amongst private and public partners.

In addition, it is expected that the project to develop a capacity-building program for medical personnel, healthcare workers, and prospective medical/healthcare students at universities. Through the training modules produced by the project from all 3 components, including GESI awareness program.

Collaboration between Ministries and Institution mechanism will be established by the project to jointly oversee the assessment and review of the policy, regulations, tools, action plans and guidelines required to improve the Regulatory Framework. In case of need to develop/update specific regulations/standards, and in coordination with appropriate private sector partners and other stakeholders such as civil society, the mechanism will provide the proper guidance to the project team on these activities.

The project will develop implementation action plan on policy and regulatory frameworks on chemical management and on the use of mercury-free products to update regulatory measures and strengthen management capacity. These activities will be accompanied by capacity-building programmes geared to relevant health workers in charge of the monitoring, supervision, regulation and enforcement of the phase-out of MCMDs. In addition, the Ministry of Health will develop collaboration mechanism with other international health institutions, such as WHO to ensure incorporation of international best practices, assessment of international standards and experiences on monitoring and management systems that can facilitate the smooth implementation of MFMDs in the medical facilities.

Finally, the project will also promote cooperation with relevant stakeholders to develop appropriate frameworks on green procurement standards and action plans to phase-in mercury-free medical devices at medical facilities, as well as to create mechanisms to support the long-term phase-out of mercury from the medical device production sector, and to cover any initial cost increases related to procurement of non-mercury devices by key medical facilities.

Component 2: Technical and institutional capacities of private sector stakeholders enhanced on MCMDs phase-out and environmentally sound mercury-containing medical waste management improved.

At present, all unused and broken MCMDs are still stored in the health facility units. The facility units have limited experience in handling collected MCMDs, and face challenges to comply with regulatory framework for mercury transport and storage, also lacking capacity to safely transport MCMDs from the health facility units to mercury storage. In addition, the geographical challenges unique to Indonesia which consists of thousands of islands and bring concerns due to a general lack of understanding and knowledge about the dangers of mercury are factors that hamper the collection and distribution of MCMDs and will be addressed within this component.

Prior to final stabilization and storage, the project will assist the Government of Indonesia to develop methods and techniques for transporting and collecting mercury originating from medical devices in safe temporary storage. The collection has a requirement to guarantee that the packaging is safe. The transportation needs a requirement of vehicle (ship) and permit to deliver mercury waste. Mercury collected from health care facilities requires good and safe handling. Indonesia has a unique geographical large area. There are many big and small islands. Besides culture, social and economic factors could influence the mercury handling styles, even though there is a guidance for it. The other aspect for consideration is how to transport the substance from one island to the other that requires suitable vessels (transport mode). The Government of Indonesia has to provide licensed ships (boats) able to deliver it (since not all ships have permits to transport hazardous waste) and hence, digital tools will also be used to support proper control over Hg stocks during these procedures.

The Project will ensure that any Social and Environmental identified risk is properly management throughout its components, and in particular under Component 2, it will assure that (i) the interim storage facilities at the selected

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enterprises (under the Component 2) will comply with the "Minamata Convention's Guidelines on the environmentally sound interim storage of mercury", (ii) A Spill Prevention and Management Plan will be developed and implemented at all demonstration sites for safe handling and disposal of mercury-containing obsolete devices and safely cleanup of accidental mercury releases; and (iii) through the environmental audit of the interim storage facilities, will take into consideration flood and other natural disaster risks when locating and assessing available storage facilities to minimize the risk of any natural disaster-caused contamination.

A series of gender-sensitive activities will also be implemented in component 2, including: assess the situation of mercury use, collection, storage in Health Care Facilities (HCF), develop and strengthen the policy and regulatory framework in regard with mercury collection, distribution and temporary storage, develop and establish the technical guidance on the mercury collection, transportation and temporary safe storage, and asses potential to establish pilot mercury temporary storage from mercury-containing medical devices in at least four (4) regional areas.

The project will facilitate the engagement of the Implementing Partner with the National Research and Innovation Agency (BRIN), as the responsible institution in collaboration with the Ministry of Health, which will coordinate the collection, distribution, and implementation of safe techniques for mercury temporary storage. It will be assured that appropriate Best Available Techniques/ Best Environmental Practices (BAT/BEP) are applicable through the guidelines and guidance instruments. The scope of work will include designing an effective collection strategy, determining the appropriate type of transportation, and processing the permits, determining temporary storage locations, and providing safe temporary storage techniques for mercury, piloting their application in, at least, one (1) temporary storage site to be selected during project preparation.

Component 3: Circular models are developed and piloted to promote and sustain the large scale replacement to mercury-free alternatives for MCMDs.

The project will closely work with the National Research and Innovation Agency (BRIN) and, in addition with other relevant research institutions in Indonesia to develop, introduce and promote applicable non mercury technology to the health care facilities / hospitals. The project will implement an environmentally safe and traceable technology for temporary storage of collected mercury at national scale, (in line with Article 10, paragraph 4, of the Minamata Convention, in terms of "enhancing capacity-building for the environmentally sound interim storage of such mercury and mercury compounds").

From the beginning the project will involve the private sector (including NGOs) in collecting, operating the stabilization/solidification equipment, and landfilling the stabilized and solidified mercury waste. Hence, the project will facilitate the government to work with the private sector that has the facilities to collect and store the mercury waste. In this respect, an arrangements/agreements framework will be prepared, as a memorandum of understanding (MOU) between the Ministry of Environment and relevant private sectors institutions.

The health sector has shown significant progress to reduce MCMD by not using these devices and temporarily storing these in Health Care Facilities. However, the progress has not been followed up by the provision of appropriate storage depot, transportation mode, and final disposal facilities. This is due to the limited availability of sufficient technology to carry out the final processing of MCMD.

A high-quality technology that guarantees preventing potential hazard to human health and the environment considering persistent characteristics of mercury is critical for the success introduction of the safe temporary storage facility as intermediary step would then be transported to the location of processing facilities, in which the mercury waste will be processed in the solidification/stabilization equipment. After that, the solidified mercury will be transferred (transported) to safe final storage.

The project will improve capacities of one (1) national laboratory by assisting with the introduction of a laboratory scale mercury stabilization and solidification technology. This activity will provide important knowledge/lessons/technology transfer capabilities to local partners and institutions for the scale up and strengthening of their capacities to operate larger scale mercury stabilization/solidification equipment/facilities to strengthen in at least 4 (four) regional areas, namely: (1) Regional 1 covering Aceh, North Sumatera, West Sumatera, Riau, Riau Islands, West Kalimantan; (2) Regional 2 covering Bangka Belitung Islands, Jambi, Bengkulu, South Sumatra, Lampung, Banten, West Java, DKI Jakarta, DI Yogyakarta, Central Java; (3) Regional 3 covering Central

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Kalimantan, South Kalimantan, North Kalimantan, East Kalimantan, East Java, Bali, West Nusa Tenggara, East Nusa Tenggara; (4) Regional 4 covering South Sulawesi, Southeast Sulawesi, Central Sulawesi, West Sulawesi, Gorontalo, North Sulawesi, Maluku, North Maluku, West Papua, Central Papua, Mountainous Papua, Southern Papua, Southwest Papua, Papua. The project is expected to provide national-wide impacts through the presence of Regional Areas, and specific locations and partner will be selected either during project preparation phase or during the initial first year of implementation. The final safe storage needs for Indonesia will then be assessed and potential final disposal sites identified and recommended for the Government (either local or for export).

The Project will ensure that any Social and Environmental identified risk is properly management throughout its components, and in particular under Component 3 it will ensure that a Spill Prevention and Management Plan will be developed and implemented at all demonstration sites for safe handling and disposal of mercury-containing obsolete devices and safely cleanup of accidental mercury releases; facilities handling mercury (and its wastes) will take into consideration flood and other natural disaster risks when locating and assessing available storage facilities to minimize the risk of any natural disaster-caused contamination.

Component 4: Project results monitored, documented, and shared.

The Government of Indonesia monitoring and evaluation capacity concerning the achievement of project outputs and outcomes and lack of dissemination concerning the lessons (best practices) being learned from the project will be strengthened with this component.

To achieve optimum outcomes, the project will perform several activities consisting of assessing and applying Social and Environmental Screening Procedure (SESP) and enhancing gender-equality and social inclusion (GESI) to accelerate mercury reduction in health sectors, collecting lessons-learned and best practices for knowledge management at national and international communities, assuring effective and efficient project management in compliance with GEF and UNDP, implementing Gender Action Plan and awareness raising activities on collection, transport, storage and disposal of mercury and mercury waste.

Semi-annual, annual, mid-term and final monitoring and evaluation to detect obstacles and provide the necessary solutions will be strictly implemented to ensure the successful achievement of the output and outcome of the project.

V. RESULTS AND PARTNERSHIPS

Project Objective: The Project will assist the Government of Indonesia to eliminate mercury in the distribution and supply chain of mercury containing medical devices (MCMDs) from the health sector, establish systems and introduce technologies for mercury safe disposal and create mechanism for the sustainable and circular introduction of mercury free medical devices (MFMD).

Objective Indicators:. There are a number of targets the Project will work towards achieving the Project's overall objectives, in addition to outcomes generated through implementation of project activities of the four (4) components of the Project. These include:

Objective Indicator 1:. 100,000 direct project beneficiaries disaggregated by gender, 50,000 female, 50,000 male

Objective Indicator 2: 20 metric tons of mercury reduced from Indonesia's National Health Sector. Calculated based on the following justifications. Please see Annex 16 for the calculated results

- Average amount of mercury content at Sphygmomanometer which is 65 grams (the data retrieved from the development of PIF).
- Average amount of mercury content at thermometer which is 1.5 grams (the data retrieved from the development of PIF)
- Numbers of health facility in Indonesia, based on data from Ministry of Health in 2024 which covering hospitals, clinics, independent doctor practices and primary healthcare (puskesmas).

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- Estimated number of thermometers belong to the health facility, based on the data collected by Ministry of Health (2022).
- Estimated number of Sphygmomanometers belong to the health facility, based on the data collected by Ministry of Health (2022).

Objective Indicator 3: 20 g TEQ/year of UPOPs emissions avoided; 100 mt of POP-containing plastic collected and disposed safely containing 5 tons of PBDEs which emissions will be avoided with avoided open burning.

Objective Indicator 4: 20,000 tons of recyclable plastic and metals material collected and recycled; 10,000 metric tons of CO2e emissions avoided.

Expected Results

Project Component 1: Policy and regulatory frameworks strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector.

The project will close the gaps between the current regulatory system and the requirements of the Minamata Convention on Mercury on the phase-out of the production of MCMDs and link them with the end-user application of MFMDS and their wastes. Therefore, cooperation between the ministry, institution and private sector with gender inclusivity are necessary to jointly develop the necessary regulatory frameworks, action plans and guidelines, and identify appropriate private sector partners is required to phase out the MCMDs and enterprises and introduce MFMDs and their waste in medical facilities. Through close the gaps the project will also enhance the policy and regulatory framework of institutional capacities and technical capabilities of public and private stakeholders.

Outcome 1.1: Regulations/policies developed or strengthened, proposed and/or operationalized to prohibit the use of MCMDs in health care facilities.

The project will develop the capacity of national institutions, government agencies and private sector partners, to assess, plan, implement, support and monitor sustainable for total phase out the use of mercury-containing medical devices in health care facilities. It will do so by initially assessing the capacity of these project partners, developing plans for strengthening their capacity and subsequently implementing these.

- Reviewing and updating the current policy and regulations on operation to prohibit the use of MCMDs in health care facilities and introduce MFMDs and their waste in medical facilities with consideration of gender strategy.
- Reviewing and updating the current policy and regulations on MCMDs and their wastes for collection, distribution, and temporary safe storage with consideration of gender strategy.
- Developing conclusion and recommendation for implementing.

Output 1.1.1: Regulatory and policy frameworks proposed for total phase out the use of mercury-containing medical devices.

Activity 1.1.1: Establish an action plan to formulate proposals and training plan for the development and strengthening of regulatory and policy framework, and the strengthening of management and enforcement capacities to facilitate the total phase-out of mercury-containing medical devices, including but not limited to five (5) action oriented implementation plans that will be developed at national and sub-national level

Output 1.1.2: Gender sensitive regulatory and policy framework concerning mercury collection, distribution, temporary storage, and disposal developed/strengthened.

Activity 1.1.2: Review, develop and strengthen existing regulatory and policy framework concerning mercury collection, distribution, temporary storage, and disposal with a gender-sensitive and inclusive strategy. Develop conclusion and recommendations for implementation. At least four (4) policies and regulations will be developed or strengthened.

Outcome 1.2: Sensitive and inclusive Capacity Building activities carried out for government staff (both national and sub-national) to enhance policy enforcement and oversight.

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The project will build the capacity of all entities involved in/responsible for MCMDS and MFMDS and their waste in the 4 project priority sites. This capacity building plans will include the provision of training and workshops to increase capacity on how to i) coach all level government institution in adopting better practices; ii) monitor on-going practices and improve enforcement of local regulations and standards; iii) support policy and regulatory reform to make essential steps for implementation easier, faster and less costly; iv) improve cross sectoral coordination; and v) ensure that gender dimensions are incorporated in all health sector related support. It also to ensure better coordination and exchanges of experiences and lessons-learned between national, regency and sub-district level staff, the project will also provide joint training on it.

Output 1.2.1: Coordination and cooperation mechanisms between central and local governments established and strengthened.

The project will improve the coordination among entities, improve the capacity of entities for regional and local oversight of health care activities, and make the collection, distribution, temporary storage, disposal process easier and the issuing of environmental licenses and other permits simpler, clearer and more affordable so that they are accessible and well-functioning.

Four (4) cooperation mechanism from regional areas will be established to strengthen the phase-out of mercury-containing medical devices (MCMDs) in the health sector. Each district should have its own regulation that is to be harmonized with regional regulations and for which a guidance document will be developed to support the regulation's implementation.

> *Activity 1.2.1*: Coordinate with relevant ministries between central and local governments to support the phase-out of mercury-containing medical devices (MCMDs) in the health sector. Cooperation mechanism established and strengthened to support the phase-out of mercury-containing medical devices (MCMDs) in the health sector.

Output 1.2.2: Phase-out of use of MCMDs oversight and Hg elimination commitments enforced for health facilities.

The project will support and oversee the phase-out the use of MCMDs and Hg elimination through signing and enforcing the phase-out commitments with 10,000 health facilities across Indonesia.

> *Activity 1.2.2:* Secure MCMDs phase-out commitments with 10,000 health facilities across Indonesia and enforce commitments made on MCMDs phase-out and Hg elimination

Output 1.2.3: All levels of Governmental institutions in charge of the regulatory systems for mercury collection, distribution, and storage capacitated in new rules and regulations.

The project will assess and improve capacity of national, provincial, regency, sub-district (if any) level policies, plans, regulations, standards and measures and strengthen the regulatory systems for mercury collection, distribution, and storage. The policy and regulatory measures will be improved to further advance mercury phase-out in the health sector for all level government institutions.

> *Activity 1.2.3*: Review and update existing policy and regulations at all level of governments institutions on MCMDs and their wastes for collection, distribution, and temporary safe storage. Conduct assessment, formulate conclusion and recommendations, with results disseminated, and training conducted to strengthen capacities of all entities involved in/responsible for MCMDs and MFMDs and their wastes at the four (4) priority regional areas.

Output 1.2.4: Inventories of stocks of Hg wastes and MCMDs are updated and assessed and real situation of mercury use, collection and storage in Health Care Facilities (HCF) are known.

The project will assess the real amount of MCMDs across Indonesia, not only at 4 regional areas. The data will be used as the baseline information for developing strategy, action plan of MCMDs collection and storage in Health Care Facilities (HCF). The data will be used as inventory by the Government of Indonesia and will be reported to Minamata Convention.

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Activity 1.2.4: Develop method and mechanism to conduct the inventory; including schedule for collection and distribution on withdrawal of the MCMDs. Disseminate the mechanism to all health sector facilities across Indonesia (state or private health facility).

Project Component 2: Technical and institutional capacities of private sector stakeholders enhanced on MCMDs phase-out and environmentally sound mercury-containing medical waste management improved.

Project Component 2 aims to enable manufactures who previously produced MCMDs to soundly manage remaining mercury, stockpiled devices and/or contaminated areas on premises contributing to the phase-out of at least 20 metric tons of mercury.

The project will build capacity of the companies in the use of mercury-free alternative technologies as well as facilitating MCMDs phase-out and environmentally sound management of MCMD waste. The project will also support the company on necessary document permit preparation. This is important as private sector could continue their business with mercury-free products that will be accepted locally and internationally. The project will also work on establishing partnership with manufacturers and health facilities on MCMDs replacement.

For private sector stakeholder on MCMDs waste management, the project will engage with waste management/processing companies by developing SOP, and BAT/BEP for collection, transportation, temporary storage and disposal of MCMDs and sound management of waste produced by MFMDs, and wastes generated in the production of MFMDs.

Outcome 2.1: MCMDs and their wastes are collected, stabilized (solidified) and disposed of in environmentally sound manner, in accordance with national regulations, international guidelines and Best Environmental Practices (BEP) and based on Gender sensitive principles.

The project will develop a national BAT/BEP and Standard Operation Procedure (SOP) which refer to national (current regulations) and international guidelines for **collecting, stabilizing and disposing** of related MCMDs that will be conducted at four (4) regional areas covering all the health facilities from provincial, regency to district level for state and private health facilities according to Permenkes No. 41 Tahun 2019. The BAT/BEP and SOP will also take into consideration gender equity and inclusive participation.

During preparation of the documents it will involve the assessment of available/current data from BORANG and ASPAK system developed by the Ministry of Health making it possible to conduct further data collection. The results of data collection will set up the project baseline in terms of the amount of MCMDs to be presented to the relevant government agencies, who in turn can use this data to inform the NAP process and reporting process for the Minamata Convention. Outcomes of the assessment will help the health facilities (state and private) and private sectors/enterprises in the priority sites, to identify by degree of the **willingness, readiness and capacity** of health facilities, private sector/enterprises among other selection criteria.

Output 2.1.1: Technical guidance/guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established.

The Government of Indonesia has issued the Mercury Elimination Policy in the Health Sector and the Status of Mercury Medical Device Recall in Indonesia on the management of mercury-containing medical device waste regulated under PermenLHK 27/2020 which is interrelated with Permenkes 41/2019. The implementation of mercury-based medical device waste management faces several obstacles and challenges, including the availability of budget on mercury-based medical device management; there are areas that have disadvantaged medical equipment; validation of mercury medical device data and information by regions; There is no final treatment technology to manage MCMD waste. The project will prepare guidelines for implementing the regulations and upcoming withdrawal of mercury-based medical equipment including expanding the scope of socialization to all types of health facilities; optimization of funding for transportation and waste management; handling and management of broken or damaged MCMDs and continuous monitoring and evaluation.

Activity 2.1.1.1: Develop at least three (3) national technical guidance/guidelines for collection, distribution and temporary storage. The technical guidance will cover the factor of air emissions from facilities handling mercury-containing waste, including air monitoring for mercury storage and processing facilities.

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Activity 2.1.1.2: Facilitate approaches that improve coordination and increase collaboration (a) within the private sectors, (b) between private and public sectors. The focus will be on partnerships that can deliver solutions on collection, distribution, and temporary safe storage of MCMDs and their wastes. The project will focus on public-private partnerships (PPPs) that have a systemic impact, involving multiple players addressing issues at the district, regency, province or national level. In collaboration with these partners, the project aims to develop and establish a technical guidance/guidelines process for collection, distribution, and temporary safe storage. At least three (3) partnership mechanisms with the private sector will be established at the national level and at the local level for collection, distribution and temporary storage.

Activity 2.1.1.3: Provide on-going capacity building, technical assistance support to ensure the further development and strengthening of collaboration and partnerships for sustainable collaboration and partnership to address future waste produced.

Output 2.1.2: Health facility management capacities to adopt mercury-free medical devises are strengthened through gender-sensitive capacity building.

Health facility personnel in particular are required to be trained on aspect of proper packaging, collecting, distributing and temporary storage of the MCMDS by following the guidance, BAT/BEP developed from Output 2.1.1. In addition, to strengthen the capacity of health facility personnel, the project will map out of the plastic recycling chain, plastic recycling areas, recycled plastic supply routes, involved entities, population and gender of workers handling PBDE-containing plastics. Through the mapping, entities identified as handling significant quantities of POPs and PBDE-containing plastics will be primary participants in capacity building activities under Component 3 to support their implementation of BAT/BEP in their POPs and PBDE-containing plastic processing. Furthermore, for reducing waste produced from MFMDs, the project will provide training on basic technical electromedical which will conducted through Training of Trainer (ToT) mechanism. With the training models developed and trainings conducted, at least 10,000 health facilities for primary healthcare (*puskesmas*) level will participate in the training and at least 50,000 persons will be trained at the four (4) regional areas (30,000 female and 20,000 male).

Activity 2.1.2.1. Develop at least five (5) national training modules on collecting, packaging, distributing and temporary safe storage of the MCMDs and their waste at primary healthcare (*puskesmas*) level, RSUD, RSU, private health sector, private clinic, etc. involving experts from association of health sector, universities, private sector, related Ministries. The complete package of training resources will be integrated as a curriculum in project's partner such as nursing schools, medical faculties to ensure long-term sustainability and to further build the capacity of future health workers.

Activity 2.1.2.2: Develop training module for managing plastic produced from MCMDs, MFMDs and other equipment from health facility; Develop Training of Trainer (TOT) module for technical electromedical; Developing relevant trainings model to staff and medical institutions and promote knowledge and experience sharing about the replacement of MCMDs

Activity 2.1.2.3:: Conduct training at 4 regional areas on collection, distribution, temporary storage, and management of plastic waste and technical electromedical.

Activity 2.1.2.4: Develop relevant researches/investigation to technically support introduction and adoption of mercury-free alternatives in the health facilities.

Output 2.1.3: Pilot plant for temporary storage from medical devices containing mercury established.

The National Research and Innovation Agency (BRIN) has made a prototype design for elemental mercury storage and mercury-based medical devices. The prototype has been tested in the structural strength laboratory at BRIN. In addition to mercury containers, BRIN has also designed a prototype of warehouse for storing mercury medical devices, it also has a monitoring system to monitor the actual number of mercury-containing medical devices (SIPAMER). The SIPAMER system allows all medical devices to be labelled with a QR code to enable monitoring the location of mercury-containing medical devices during the mercury-based medical device waste management process. This prototype technology from BRIN will be further developed by the project to establish a pilot plant for mercury temporary storage.

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The mercury storage will be operated and managed by a private sector entity where the land for stationing the storage will be located at a private sector's place. In-kind legal permit for establishing the pilot plant will be provided by private sectors.

A*ctivity 2.1.3.1: A*ssess potential candidates for one (1) pilot plant for temporary storage with support of experts from association of health sectors, universities, private sectors, and related Ministries. Preparing the design and technical specifications which will cover the factor of air emission from facilities handling **mercury-containing waste,** including air monitoring for mercury storage and processing facilities and taking into consideration gender-sensitive dimensions with support of expert from National Standard Agency and other related experts.

Activity 2.1.3.2: Procuring equipment and spare-part for mercury storage, sign Memoranda of Understanding (MOU) in partnership with private sectors.

Activity 2.1.3.3 Conduct training/capacity building on the pilot plant for up-scaling to the four (4) regional areas with involvement of the private sectors. The project will partner with local manufacturers on up-scaling to the 4 regional areas.

Output 2.1.4: Gender and Social Inclusive (GESI) awareness programme on MCMDs replacement, collection and disposal to health facilities is created and implemented.

GESI awareness program aims at achieving gender equality and drive fundamental changes in behaviors, attitudes, and norms within health care staff across Indonesia through priorities in social and cultural change. The project will evaluate programs or projects implemented to determine how successful the project is in achieving gender equity and social inclusion on MCMDs replacement, collection and disposal from health facilities across Indonesia through activities at the 4 regional areas.

The project will identify critical gaps, challenges, and opportunities for increasing organizational gender equity and also to create gender action planning for Project Components 1, 2, 3 and 4. It will recommend ways of addressing these challenges and opportunities, suggesting improvements and innovations on MCMDs replacement, collection and disposal from health facilities.

Activity 2.1.4.1: Ensure gender equity and social inclusion planning dimensions are duly considered by government agencies and private sectors, facilitate and strengthen participation and influence of women in project activities.

Activity 2.1.4.2: Develop best practices and standards on gender equity and social inclusion, to facilitate identification and problem solving, on gender issues and to promote inclusive and fair decision-making process under the project.

Project Component 3: Circular models are developed and piloted to promote and sustain the large scale replacement to mercury-free alternatives for MCMDs.

This component accelerates the transition to mercury-free healthcare by developing and piloting circular economy (CE) models. It focuses on three key outcomes: establishing technical guidelines, piloting mercury-free devices, and assessing innovative financing mechanisms. By integrating these approaches, it creates a replicable framework for eliminating mercury in healthcare, supporting environmental stewardship and social responsibility.

Outcome 3.1: Technical guidelines developed on lifecycle management of mercury-free alternatives.

Outcome 3.1 focuses on developing technical that integrate CE principles and gender-sensitive approaches to address every stage of the device lifecycle—from design and procurement to use and end-of-life disposal. By establishing standardized criteria for eco-design, socially inclusive procurement, and safe recycling practices, the guidelines aim to reduce environmental harm, enhance healthcare safety, and promote equitable access to mercury-free technologies.

Output 3.1.1: Circular models for mercury-free medical devices (MFMDs) to support MCMDs accelerated replacement assessed.

The healthcare industry is a significant contributor to waste, generating large amounts of hazardous and non-hazardous substance, including medical devices. The medical device industry contributes to waste in three main

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ways. Recyclable devices are often thrown away with biological waste, rather than being properly recycled. Additionally, toxic chemicals are released when devices made from PVC (Polyvinyl chloride)-based devices and from Waste Electrical and Electronic Equipment (WEEE) are disposed of. Furthermore, the increasing use of single-use devices also adds to the waste problem, exacerbating the environmental impact of the industry.[5] Medical waste management has traditionally followed a linear economy model, which has led to environmental and health challenges. Transitioning to a CE offers a sustainable solution by promoting waste reduction, reuse, recycling, and proper disposal.

The process is expected to begin at healthcare facilities, where MCMDs are inventoried and categorized into broken and unbroken devices. Broken MCMDs are sent directly to a hazardous waste temporary storage facility, while unbroken ones undergo primary and secondary wrapping before being temporarily stored at the facility and then transported to a provincial depot. From there, waste management companies handle transportation and processing, dismantle the MCMDs to recover hazardous substance like mercury, and stabilize any remaining residues for safe disposal. Recyclable materials, such as metals and plastics, are sent to recycling companies, where they are processed into raw materials for use in manufacturing, thereby supporting a circular economy. This systematic approach ensures safe handling, resource recovery, and environmental protection throughout the lifecycle of MCMDs.

The circular strategy will adhere to the Product Value vs Criticality Matrix principle. This framework facilitates the visualization of trade-offs among various circular strategies. The 'Product Value', represents the economic value of a functional product, ranging from high to low; and 'Criticality', which categorizes medical devices based on the risk level they pose to human health, determined by the nature of patient contact. Applying this matrix, devices such as thermometers and blood pressure monitors, that are focus of this project are classified as medium-value products with non-critical risk levels. Based on this classification, it is recommended that these medical devices are suitable candidates for recycling, aligning with CE principles[6].

A circular business model (CBM) for MFMDs is expected to emphasize sustainability by integrating design for recyclability, reuse, and closed-loop production across the device lifecycle. Manufacturers produce MFMDs with modular, recyclable materials and collaborate with distributors and suppliers to deliver devices to healthcare facilities. Non-functional or end-of-life devices are sent to maintenance facilities for repair or refurbishment; those beyond repair enter a waste management system where they are dismantled into hazardous and non-hazardous components. Non-hazardous substance are recycled into new production, while hazardous waste is processed and disposed of safely. The model promotes education and training for proper device management. This approach minimizes waste, reduces reliance on virgin materials, and balances economic and environmental goals. Further, this project will assess a suitable circular business model that suits the SIRENE project.

Activity 3.1.1.1: **Develop and assess a withdrawal scheme for mercury-containing medical devices (MCMDs).** This activity focuses on establishing a structured withdrawal scheme to phase out MCMDs while ensuring their safe management throughout the disposal process. A lifecycle management guidance document will be developed to systematize protocols for collecting obsolete MCMDs, dismantling them to isolate hazardous components elemental mercury (Hg), and managing waste recovery. Key steps include: (1) collection and dismantling, where safe protocols will be established for gathering devices and separating mercury and other toxic materials; (2) hazardous waste management, which involves stabilizing and solidifying mercury waste to prevent environmental contamination; and (3) material recovery, where uncontaminated materials (e.g., plastics, metals) will be recycled and reintegrated into production cycles, either for new MFMDs or other products (upcycle/downcycle). This approach ensures compliance with environmental standards while supporting the transition to mercury-free healthcare systems.

Activity 3.1.1.2: **Develop and assess a circular economy model for mercury-free medical devices (MFMDs).** This model is a circular business model (CBM), as a continuation from withdrawal scheme of MCMDs. The proposed

[5] Guzzo, D., Carvalho, M. M., Balkenende, R., & Mascarenhas, J. (2020). Circular business models in the medical device industry: Paths towards sustainable healthcare. Resources, Conservation & Recycling, 160, 104904. https://doi.org/10.1016/j.resconrec.2020.104904

[6] Towards design strategies for circular medical products. Kane, G.M., Bakker, C.A., Balkenende, A.R., 2017. Towards design strategies for circular medical products. Resour. Conserv. Recycl. 0–1. https://doi.org/10.1016/j.resconrec.2017.07.030

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CBM is aimed to accelerate the replacement of MCMDs. The CBM will be developed in consultation with the Ministry of Health (MoH), Ministry of Environment (MoE), healthcare facilities, electromedical technicians (e.g., medical device maintenance staff), waste management and recycling companies, and medical device supply chain actors (manufacturers, distributors, suppliers) and CSOs on each regional site. It will be customized to align with Indonesia's healthcare infrastructure and regulatory framework, ensuring practicality, scalability, and effective implementation of circularity principles.

Output 3.1.2: Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed.

This output will facilitate stakeholder consultations to develop comprehensive Green and Gender-Sensitive Procurement and Technical Guidelines, supporting the circular management of mercury-free medical devices, and guiding the phased introduction of these devices in healthcare facilities. Based on this output, there are 2 identified activities:

Activity 3.1.2.1: Development of **Green and Gender-Sensitive Procurement Guidelines.** The Green and Gender-Sensitive Procurement Guidelines aim to establish clear criteria and processes for sourcing MFMDs that embody circular economy principles and promote gender equity. These guidelines encompass three key components: (i) Environmental Criteria, which outline standards for eco-design, such as recyclability; (ii) Social Criteria, which prioritize accessibility, affordability, and safety for marginalized groups, including women and rural communities; and (iii) Supplier Requirements, which set expectations for manufacturers, including take-back programs. Furthermore, the guidelines incorporate Gender Integration strategies to ensure women's participation in procurement decisions and support women-owned businesses.

Activity 3.1.2.2: Development of **Technical Guidelines for Circular Management of MFMDs**. To ensure the environmentally and socially responsible management of MFMDs, the project will develop Technical Guidelines for the sustainable management of targeted medical devices (e.g. thermometers and sphygmomanometers), from use to disposal. These guidelines will provide actionable protocols for every stage, starting with design and manufacturing. To make sure that circularity concept being implemented, the project require that the medical devices should meet requirements for durable, repairable, and recyclable devices. This project also emphasize the importance of gender-sensitive training for healthcare workers, equipping them with safety protocols and maintenance procedures that promote their health and safety. At the end-of-life stage, the suggested guidelines outline recycling and disposal strategies, such as take-back systems and material recovery, to minimize waste and maximize environmental benefits.

Outcome 3.2: Mercury-free medical devices piloted in selected health care facilities, collection and recycling guidelines developed for end-of-life products and disposal technologies/strategies piloted taking into consideration gender and social inclusive approaches.

Output 3.2.1: Medical devices manufacturers, distributors, and suppliers had incorporated circular economy principles on disposal of Hg-based and electronic-based devices in their CSRs and/or other relevant internal practices, Policies, or strategies.

The transition to a circular economy is critical for addressing the environmental and health risks posed by MCMDs and MFMDs. By prioritizing resource efficiency, waste reduction, and closed-loop systems, stakeholders across the medical device lifecycle, include manufacturers, distributors, and suppliers, these parties are responsible to support sustainability in medical device industries. This effort integrates circular principles such as designing for recyclability, refurbishing devices, and safely managing hazardous substance, while aligning with corporate social responsibility (CSR) goals and regulatory requirements. CSR plays a pivotal role in mediating the relationship between green investment, green financing, and sustainable business performance. Investors are increasingly prioritizing companies that emphasize sustainability, driving demand for green financing and shifting investment patterns towards more sustainable industries[7].

[7] Ye, J.; Dela, E. The Effect of Green Investment and Green Financing on Sustainable Business Performance of Foreign Chemical Industries Operating in Indonesia: The Mediating Role of Corporate Social Responsibility. Sustainability 2023, 15, 11218. https://doi.org/10.3390/su151411218

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Activity 3.2.1.1: **Integration of circular economy principles into corporate practices and adoption of circular design and production practices.** This activity focuses on integrating circular economy principles into corporate practices and manufacturing processes, ensuring the adoption of circular design and production practices. Key actions include:

- ***Redesigning Medical Devices and Operational Processes:*** Aligning product design and operational processes with circularity, using durable, repairable, and recyclable materials to extend devices lifespan[8] and reduce waste.
- ***Product Design for Circularity:*** Designing devices for easy disassembly, using materials that are durable, repairable, and recyclable. In addition to redesigning materials and durability, the project will also ensure compliance with the RoHS2 directive[9], which regulates the use of hazardous substances in electrical and electronic equipment. Ensuring adherence to the RoHS2 directive and POPs content limits for MFMDs, minimizing environmental footprints.
- ***Hazardous Material Management and Recycling Systems:*** Safely collecting and recycling 100 tonnes of POP-contaminated plastics (containing 5 tonnes of PBDEs) and 20,000 tonnes of recyclable plastics/metals over the 5-year project period.

Specialized waste management firms will handle recycling, conserving resources and preventing emissions from open burning. Furthermore, CSR programs will drive green financing and sustainable business performance, incentivizing investments in emissions reduction, and eco-friendly production.

Activity 3.2.1.2: **CSR-Driven Education and Stakeholder Training for Sustainable MFMD Management**. This activity supports distributors and suppliers in developing and implementing comprehensive education and training programs, integrated into CSR initiatives. The programs focus on promoting environmentally responsible handling, maintenance, and disposal practices for MFMDs, ensuring a safer and more sustainable ecosystem. Key actions as mentioned follow are aimed to enhance stakeholders' awareness and capacity for sustainable MFMD management, reducing environmental impacts and promoting a circular economy.

- ***Training Programs***: Developing and providing gender-sensitive guidelines and training materials, targeting 100,000 beneficiaries (50% women, 50% men), including healthcare professionals biomedical technicians, and CSOs in 4 regional areas.
- ***Partnerships:*** Collaborating with at least one distributor and one supplier to pilot training programs in healthcare facilities, demonstrating practical application of circular economy principles, and also involving CSOs on each regional area.
- ***After-Sales Support:*** Leveraging CSR programs to provide maintenance services, ensure long-term device sustainability, and promote sustainable end-of-life management practices, collaborated with CSOs on each regional area.

Output 3.2.2: One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented.

The Government of Indonesia has some options to establish a national mercury reference laboratory which are P3KLL laboratory, BRIN, and PT. Waste International. Those labs are able to analyze mercury in environmental samples. While it currently lacks dedicated equipment for mercury stabilization and solidification, the laboratory has the potential to serve as a scalable pilot plant. This would enhance its capacity and support the development of similar facilities in four additional locations, leveraging existing infrastructure for broader impact.

[8] According to healthcare personnel at healthcare facilities, lifespan of MFMDs are shorter compared to MCMDs. For example, digital thermometers have an average lifespan of only 2-3 years, while digital blood pressure monitors last around 5 years. Assuming a one-year end-of-life period for MFMDs, the estimated annual waste generation from 39,061 healthcare facilities in Indonesia is approximately 731,361 units per year, comprising digital thermometers and blood pressure monitors

[9] The RoHS2 Directive, requires that a company eliminate the use of heavy metals and flame retardants that can have a negative impact on workers. In order to comply with RoHS2 Directive, a part must also certify that it does not contain more than trace amounts of all six 'banned' substances. This is especially important for printed circuit boards, which may use one of the two restricted substances as a flame retardant. URL: https://mcdcg.com/blog/rohsweee/comply-with-rohs2-directive/

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The capability of this lab will be improved through this project. The project will provide important knowledge, lessons, and technology transfer capabilities to the designated laboratory and its potential local partner institutions for the scale up and strengthening of their capacities to operate larger scale mercury stabilization and solidification equipment/facilities to strengthen in four potential regional areas.

Activity 3.2.2: **Upgrading Laboratory Infrastructure and Capabilities.** This activity focuses on transforming the P3KLL laboratory into a pilot plant for mercury stabilization and solidification. Identified actions as follow:

- ***Technical training visit:*** The project will facilitate two training sessions in Japan and Australia. In Japan, participants will visit the Nomura Kohsan Itomuka Plant in Hokkaido to study stabilization and solidification process[10]. This technology converts mercury into stable mercury sulfide (HgS) via mechanical-chemical reactions. The HgS is further solidified with modified sulfur, producing a dense, durable, and environmentally resistant material suitable for safe disposal in landfills or underground mines. While in Australia, participants will observe operations at the BMT Australia Mercury Treatment Facility in Kwinana Beach, Western Australia. Operational since December 2019[11], this facility uses vacuum distillation to stabilize mercury into cinnabar.
- ***Infrastructure Enhancement:*** Establish a qualified laboratory equipped with advanced mercury stabilization and solidification technologies.
- ***Scalable Model Development:*** Building capacity to replicate the pilot in four additional locations, using lessons learned to strengthen national mercury waste management systems.

Output 3.2.3: Hg stabilization and solidification strategies and solutions upscaled to four (4) locations in partnership with Public-Private selected institutions.

Mercury (Hg) stabilization and solidification strategies and solutions will be upscaled in total four locations through partnerships between selected public and private institutions. The mercury processing technology developed in the previous stage (output 3.2.2) will be scaled up and applied in these four locations. The project will collaborate with BRIN to develop and implement effective Hg stabilization and solidification strategies.

Activity 3.2.3.1: **Establishment of public-private partnerships and infrastructure scaling.** This activity focuses on formalizing partnerships and deploying technology across four locations. Key components include:

- ***Partnership Frameworks:*** Drafting MoUs between the MoE and private entities, including PT Wastec International, to govern roles in mercury collection, stabilization, and landfill operation s[12].
- ***Site Selection and Infrastructure:*** Establishing facilities in four regional areas, namely Regional 1 represented in Medan, Regional 2 represented in Jakarta, Regional 3 represented in Surabaya and Regional 4 represented in Makassar. Those locations were selected for their strategic geographic coverage, existing infrastructure, and cost effective to serve neighboring cities.
- ***Technology Deployment:*** Scaling up stabilization/solidification methods (developed in Output 3.2.2) with technical support from the BRIN.

Activity 3.2.3.2: **Operational implementation and capacity strengthening.** This activity ensures the effective operationalization of mercury waste management systems. Main steps to achieve this target include:

- **Private Sector Engagement by Involving CSOs and private institutions in**: (i) Mercury Collection; (ii) Equipment Operation: Training staff to manage stabilization/solidification processes; (iii) Landfill Compliance: Ensuring stabilized mercury meets safety standards for disposal.

[10] Mercury Technology Bulletin Series. Stabilization and Solidification of Mercury. URL: https://www.env.go.jp/en/chemi/mercury/mcm/mtbs-en-20_009.pdf

[11] BMT Asia - State-of-the-art mercury treatment facility opened URL: https://bmt-mercury.com/asia/blog/state-of-the-art-mercury-treatment-facility-opened/

[12] PT Wastec International is prioritized due to its proven track record in hazardous waste management, including mercury-contaminated waste from Indonesia's oil and gas sector.

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- **Capacity Building:** Conducting workshops for public and private stakeholders on technology operation, safety protocols, and regulatory compliance.
- **Monitoring and Evaluation:** Developing metrics with BRIN to track environmental impact, waste diversion rates, and operational efficiency across the four locations.

Outcome 3.3: Financing mechanisms to support replication and scale up of MCMDs replacement in collaboration with local fund providers/banks assessed.

This outcome focuses on establishing inclusive financing mechanisms that address systemic barriers and incentivize healthcare facilities to adopt safer technologies. This is to ensure the sustainable transition from MCMDs to MFMDs.

Output 3.3.1: Development of gender-sensitive financing mechanisms that explored in collaboration with local fund providers/banks and new/revamped finance solutions proposed.

The project will collaborate with local banks, microfinance institutions, and lenders to design and implement gender-sensitive financing mechanisms that prioritize women-led businesses/healthcare facilities and cooperatives in the healthcare and waste management sectors. These mechanisms will facilitate affordable and accessible loans for the procurement of mercury-free medical devices and related investments.

Activity 3.3.1: **Design of Gender-Sensitive Financial Products.** This activity involves collaborating with local banks, microfinance institutions, and green funds to design and offer tailored financial mechanisms, such as lower interest rates, subsidized loans, and gender-sensitive financial products, to incentivize healthcare facilities, particularly those led by women, to adopt circular economy practices, including the use of recyclable MFMDs and take-back programs. CSOs on each regional area will be involved on this process.

Project Component 4: Project results monitored, documented, and shared

Project Component 4 will strengthen the monitoring and evaluation capacity on the achievement of project results and ensure lessons learned and best practices are captured, documented and disseminated to facilitate knowledge sharing. To achieve optimum outcomes, the project will perform several activates consisting of assessing and applying Social and Environmental Screening Procedures and enhancing gender equality and social inclus9on (GESI) to accelerate MCMD replacement, sound management of mercury and waste, and adoption of MFMDs in the health sector.

Outcome 4.1: Monitoring and evaluation activities carried out as per GEF requirements.

Output 4.1.1: Social and Environmental Screening Procedure (SESP) periodically reviewed and updated.

In addition to a pre-SESP, a full SESP was developed at the PPG stage, the experience and knowledge gained at the SESP development stage will take into full account in the monitoring and application of the SESP and risks management during project implementation.

*Activity 4.1.1: Conduct o*n-going monitoring of the risks identified in the SESP and undertake risks management, with support from the safeguard expert.

Output 4.1.2: Gender Action Plan and awareness raising activities on collection, transport, storage and disposal of mercury and mercury waste.

Activity 4.1.2: Conduct gender-sensitive training and implement Gender Action Plan and awareness-raising training activities on collection, distribution, transport, temporary storage and disposal of mercury and mercury waste, ensuring gender dimension and social inclusion.

Output 4.1.3: Periodic monitoring, and reporting, Project Implementation Reports (PIR), Mid-Term Review and Terminal Evaluation.

Activity 4.1.3: Develop gender-sensitive Monitoring and Evaluation (M&E) Plan for continuous and periodic progress review for each activity, drawing from the Project's M&E Plan. Perform all UNDP & GEF required monitoring activities ensuring timely submission of required reports with high quality standards.

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Outcome 4.2: Learning and knowledge sharing activities carried out and knowledge products developed and shared (including lessons-learned from the perspective of gender-equality and social inclusion implementation).

Output 4.2.1: Lessons-learned and best practices for knowledge management are collected and shared at national and international levels.

Activity 4.2.1: Develop mechanism to capture lessons-learned and best practices, develop knowledge-sharing mechanism strategy and communication platform to promote exchange of knowledge and experience.

Agreement on intellectual property rights and use of the logo on the project's deliverables and disclosure of information:

To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed per relevant policies, notably the UNDP Disclosure Policy[13] and the GEF policy on public involvement[14].

Resources required to achieve the expected result:

The project is supported with a GEF grant in the amount of USD 6,590,000 to be administered by UNDP. An additional support of USD 35,309,883 in cash and in-kind co-financing will be from contributors as listed in the table below. GEF grant will be efficiently and effectively utilized to support the project activities as described in the four (4) Project Components, as well as resources (Project Management Costs) required to support effective and orderly implementation of the project interventions. Project budget allocation GEF grant of USD 313,810 is allocated to support project interventions under the four Project Components:

- **USD 940,000** is allocated to support Project Component 1 to close the gaps between the current regulatory system and the requirements of the Minamata Convention on Mercury on the phase-out of the production of MCMDs and link them with the end-user application of MFMDS and their wastes.
- For Component 2, GEF grant in the amount of **USD 1,169,900** will be allocated to to enable manufactures who previously produced MCMDs to soundly manage remaining mercury, stockpiled devices and/or contaminated areas on premises contributing to the phase-out of at least 20 metric tons of mercury.
- GEF grant of **USD 3,634,090** is allocated for the project to focus on advancing the global transition to mercury-free healthcare by developing and piloting circular economy models that enable the large-scale replacement of mercury-containing medical devices (MCMDs). Building on three interconnected outcomes, the initiative will first establish technical guidelines for lifecycle management of mercury-free alternatives, ensuring safe and sustainable practices from production to disposal. .
- GEF grant in the amount of USD **532,200** has been allocated to cover budgetary requirement to facilitate knowledge sharing, awareness and training and monitoring and evaluation activities to environmental and social safeguards, ensuring efficient and effective project implementation and timely progress of project interventions.
- Finally, an amount of **USD 313,810** has been budgeted to support a Project Management Unit (PMU) with engagement of a National Project Manager and a Project Assistant to undertake the day-to-day overall project implementation, with necessary related technical and management support, travel costs and facilities for efficient and effective functioning.

The co-financing of USD 35,309,883 has been committed by the contributors indicated in the table below, with their respective contributions and the relevant outputs the co-financing will support.

[13] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/
[14] See https://www.thegef.org/gef/policies_guidelines

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Co-financing source	Co-financing type	Name of Co-financier	Investment Mobilized	Co-financing amount
Recipient Country	In-kind	Ministry of Environment	Recurrent Expenditure	1,634,925
Recipient Country	In-kind	Ministry of Health	Recurrent Expenditure	1,807,291
Recipient Country	In-kind	The National Research and Innovation Agency (BRIN)	Investment Mobilized	666,667
Private Sector	Grant	Medical Devices Manufacturers, Importing Companies	Investment Mobilized	15,423,000
Private Sector	In-kind	Waste Management Companies	Recurrent Expenditure	14,778,000
GEF Agency	In-kind	UNDP	Recurrent Expenditure	1,000,000
Total				**35,309,883**

Partnerships:

The project will work with different partners from both the public and private sector to achieve the above mentioned results. Many parties will be involved in the preparation and implementation of the project. The roles and responsibilities of various stakeholders directly involved in project implementation. These include:

- UNDP, is the GEF Implementing Agency (IA) responsible for the oversight of the project;
- Ministry of Environment (MoE), as the administrative authority on environmental protection, work including mercury related activates in Indonesia. As the focal point for the implementation of the Minamata Convention in Indonesia, MoE is the National Executing Agency (Implementing Partner) for this project;
- The Project Board/Steering Committee (PB/SC) is an Inter-ministerial Steering Group, PB/SC comprises of MoE and other ministries like the Ministry of Health, BRIN etc. It will provide overall guidance and coordination for the implementation of the relevant project activities and ensure that inputs and contributions are available as required; The PB/SC will secure the cooperation, as necessary, with key Ministries and other public/private decision-making bodies, to ensure that execution of activities occurs smoothly and in an integrated way with overall national policies and planning;
- The Project Management Unit (PMU) will be established and based in office under direction of MoE.
- Participating production facilities and medical facilities will be the major role-players in the demonstration of technology transfer to and application of mercury-free alternatives;
- Associations and research institutions that are well connected with industries and the healthcare sector will provide information and coordination in implementing relevant activities and provide technical/policy consultation as well as awareness raising and environmental risk assessment of contaminated sites;
- Research institutions and laboratories will be engaged in the gap identification of the regulatory framework, R&D for mercury-free medical devices. The project also seeks public participation by consulting those potentially affected by the production, use and management of MCMDs.

During the project's preparation, a series of consultations, interviews, online review and site visits were undertaken with all types of different stakeholders such as local environmental management departments, medical devices manufacturers, medical institutions, waste management facilities. Assessments were carried out in order to collect information on the opportunities and constraints the various stakeholders are facing. The project mobilized stakeholders from both the public and private sector through knowledge sharing.

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Risks and Assumptions (as per GEF Requirements and Templates):

RISK CATEGORIES	RATINGS	ASSESSMENT AND MITIGATION MEASURES
CONTEXT		
Climate	Low	The project will engage with collection and transport service providers to support the safe collection, packaging, transport, temporary storage and eventually disposal of MCMDs, Hg wastes and POPs contaminated plastic, hence these services will lead to temporary increase of GHG emissions due to transport activities. However, the project will devise mechanism on undertake efficient use of transport modes to minimize GHG generation. The project also promote the reduction of GHG emissions (10,000 metric tons of CO_2e emission reduction) from unsound waste and HG disposal practices, hence the net emissions will be monitored during project cycle.
Political and Governance	Moderate	The Government of Indonesia is implementing of government agencies and reallocation of state budget that may influence and impact project implementation, but it is unlikely to halt the project implementation in achieving its outcomes and outputs based on previous experiences with GEF projects in similar situation.
INNOVATION		
Institutional and Policy	Moderate	Indonesia is pursuing a 20-year development plan, spanning from 2025 to 2045. The plan is segmented into 5-year medium-term development plans called RPJMN (*Rencana Pembangunan Jangka Menengah Nasional* or Mid-term National Development Plan) 2025-2029 , each with a different set of development priorities (World Bank, 2023). Hence, despite of recent national elections and the change in power of ruling Party and the expectations around the follow up plan after 2025 and future elections that will occur during project lifecycle, it is considered that the Institutional and Policy related risk that could impact this project proposal is MODERATE, since the project serves to respond the country's commitment to the Minamata Convention, which is already well crystalized action within the institutional frameworks of the Ministries of Environment and Health.
Technological	Moderate	The National Research and Innovation Agency (BRIN) is committed to support the project in strengthening the progress of mercury reduction and temporary storage in medical devices and how to treat it in accordance with the Minamata Convention.
Financial and Business Model	Moderate	As per World Bank (2023) report, in July 2023 Indonesia regained upper-middle group according to the World Bank's income classification status after falling out in 2020 due to the impact of COVID-19 on the economy. With a post-pandemic recovery underway, poverty reduction has received a boost. As of March 2023, Indonesia's poverty rate was at 9.36 percent, after having risen to 10.2 percent in September 2020. Indonesia's economic growth is underpinned by a pick-up in private consumption and positive terms-of-trade. GDP growth is projected at 5.0 percent in 2023 and to an average of 4.9 percent over the medium term in 2024-2026. Hence, the project takes into consideration two (2) initial business model to support the financial sustainability of its actions: in one hand, support Government budgeting prioritization to fund the replacement of MCMDs by mercury-free devices under the usual procurement programmes for public healthcare units, while in the other hand, support private sector to identify BAT/BEP with better cost-effectiveness and identify financial mechanisms that can be used to upscale the structure of waste management of medical devices in the country. The current effort of the Government in state budget reallocation may present an unforeseen impact. However, as public healthcare facilities' operational budget are outside the state allocation, such possibility of negative impact is minimal.
EXECUTION		

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Capacity for Implementation	Moderate	Currently, the Implementing Partner (IP) or Executing Agency (EA) is involved in 6 on-going projects and 2 approved projects (some having significant delays and there are some known weaknesses of the IP in financial and procurement management from the assurance activities. As per GEF guidelines, at this PPG stage, the Implementing Partner and the GEF OFP have request project support services from UNDP. With the support of a Project Management Unit (PMU) being established for the day-to-day implementation of project activities, and the structure of four (4) Working Groups (staffed with one Working Group Coordinator and one Project Assistant) responsible for each of the four (4) project components, and one Regional Facilitator for each of the four (4) regional project locations, together with recruitment and procurement support provided by MoE, implementation capacities will not be limited. The IP will carry out its execution services.
Fiduciary	Moderate	The Government of Indonesia has limited financial capacity to fund the program. In addition, According to Law No. 1/2004 on State Treasury and Government Regulation No. 10/2011 on Procedures for Procurement of Foreign Loans and Grants, the fund cannot be transferred onward to another ministry or agency once it enters the ministry's treasury account. This is a significant constraint for multi-sectoral GEF projects which require cross-ministerial collaboration and flexible allocation of resources. The inability to reallocate funds to other government bodies or non-government partners severely hampers implementation. (Here is the link to the mentioned regulation: https://berkas.dpr.go.id/jdih/document/pp/1715.pdf). Any allocation or reallocation of grant funds must be recorded in the annual State Budget (APBN) and approved by Parliament. This budget revision process is lengthy—up to 18 months—and only takes place once per year. This results in considerable delays for projects that require timely disbursement or span multiple fiscal years. Once foreign grant funds are integrated into the APBN, they are subject to national public financial management rules, including taxation, annual budget cycles, and strict fiscal discipline. There is also a risk that these funds could be absorbed into the general treasury, making them unavailable for project-specific use. As a rule, funds allocated in a particular budget year are intended for use within that year only. UNDP will monitor the transfer of funds to the IP and the implementation performance to analyse constraints in engaging with executing partners as per Regulatory limitations. In case the risk becomes an issue, a mitigation plan that could include having UNDP to provide limited executing services to allow transfer of funds to happen smoothly
Stakeholder	Low	Relevant stakeholders have strong commitment to strengthen the efforts of the Government of Indonesia.

Social and Environmental Risks (SESP)

No	Event	Caused by	Impact(s)	Risk Category and Sub-category (including Risk Appetite)	Impact, Likelihood and Risk Level (see Annex 3 Risk Matrix)	Risk Owner (individual accountable for managing the risk)	Risk Treatment and Treatment Owner
1	Duty bearers, and other relevant stakeholders may fall short of capacities to meet their obligations in the Project upon the development of the	Lack of financial and human capacities of involved actors to adhere to the regulatory	Increased risk of environmental contamination and public health impacts. Failure to reaching the objective of phasing	Social and Environmental	Impact (I) = 3 Likelihood (L) = 4 **Moderate**	National Project Manager (NPM)	Through Component 1, the NPM will facilitate the Ministry of Environment and Ministry of Health to support the training needs assessment and develop a targeted training plan (guided by the SES) to ensure that the relevant officials receive adequate training to understand their new extended responsibilities arising from the improved Institutional and Regulatory Frameworks being developed

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	new coordination and regulatory mechanisms	requirements and guidance	out mercury in medical sector in				by the project in terms of new legislation, guidelines and mandatory standards. Similarly, the development of the capacities of private actors (i.e. hazardous waste operators) will be supported within the Project
2	Inadequate participation of women in consultations, policy decision making and design of modalities for capacity building in uptake of non-mercury technologies and safe management and disposal of obsolete mercury devices	Women are disproportionally represented in low- and medium-level healthcare personnel, namely in caring and supporting professions (cleaning, maintenance) that directly work with MCMDs and are often in charge of their collection and disposal. However, women are also often under-represented in the management and executive positions responsible for design and implementation of safeguards and risk mitigation measures.	Women might bear higher health risks from the exposure to mercury in workplace, and might lack of adequate capacity building support to acquire new skills required for work with the mercury-free substitute equipment and related waste streams.	Social and Environmental	I = 3 L = 4 **Moderate**	National Project Manager (NPM)	The **Gender Action Plan** addresses potential risks and includes dedicated measures to mainstream gender in all project components. I.e.: • Activity 1.1: Develop and enforce gender-sensitive policies and regulations on mercury phase-out. • Activity 1.2: Conduct gender-responsive capacity-building programs for policymakers, healthcare workers, and regulatory authorities. • Activity 1.3: Ensure women's participation in policy-making committees and regulatory frameworks. • Activity 2.1: Provide gender-sensitive training programs on mercury waste management and safe handling. • Activity 2.2: Conduct outreach programs targeting female healthcare workers and informal waste sector workers. • Activity 2.3: Develop safety guidelines that include gender-specific exposure risks and protection measures. • Activity 3.1: Promote the inclusion of women in decision-making roles in the procurement and disposal of mercury-containing medical devices. • Activity 3.2: Ensure women-led businesses and cooperatives are involved in sustainable mercury-free technology solutions. • Activity 3.3: Establish mentorship programs to support women in waste management and recycling industries. • Activity 4.1: Collect and analyze sex-disaggregated data on project impacts. • Activity 4.2: Integrate gender-sensitive indicators in project monitoring and evaluation. Activity 4.3: Share best practices and lessons learned on gender-inclusive mercury management at national and international levels.
3	Inadequate involvement of certain stakeholder groups, including those	Lack of financial and human capacities of	Compliance costs may disproportionately burden already	Social and Environmental	I = 3 L = 3	National Project	Stakeholder engagement will be undertaken to ensure fair representation of small and medium sized medical facilties, and medical equipment suppliers, or other stakeholders

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	located in vulnerable or marginalized communities in the Project design and exclusion from the project benefits	involved actors to participate in the development of regulatory framework, lack of resources to co-finance implementation of project activities.	disadvantaged stakeholders. That in turn can hinder the progress in phasing out the MCMDs use and sound handling of the mercury wastes in peripheral and otherwise disadvantaged communities		**Moderate**	Manager (NPM)	otherwise be marginalized from participating in any supporting mechanisms A **Stakeholder Engagement Plan** (SEP) has been prepared to incorporate these engagement activities. In addition, the project will raise the awareness of enterprises on possible green finance instruments, and to facilitate their access to government and/or private banking investments, to support green procurement, application of mercury-free medical thermometers and sphygmomanometers, sound management of obsolete mercury containing devices, any related capacity building and awareness activities in medical facilities. The capacity building activities will also target mercury handling waste management operators, and will include transfer of technology for safe mercury final disposal on a transparent and fair basis.
4	Risk of mercury contamination of the environment and worker/community exposure during collection, transport and storage of waste mercury-related equipment, devices and elemental mercury in the course of the Project	Accident during handling, transport, or inadequate storage of mercury containing MCMDs, or elemental mercury	Health impacts on the involved staff and local environmental contamination	Social and Environmental	I = 4 L = 2 **Moderate**	National Project Manager (NPM)	The Project will ensure that the interim storage facilities at the selected enterprises (under the Component 2) will comply with the "Minamata Convention's Guidelines on the environmentally sound interim storage of mercury" by confirming the following: - Site is appropriate and abides by local zoning requirements. - Facility is designed to facilitate the safe handling of containers. - Indoor air is vented outside, and where levels of mercury call for venting via activated carbon or other mercury capture systems, system is installed and operational. - Site is equipped with a fire protection system. - Emergency response plan in place and local fire department, where available, is sufficiently informed, trained, equipped and otherwise prepared to safely handle any fires at the facility. - Facility is constructed of non-combustible materials and non-combustible materials should be used for pallets, storage racks and other interior furnishings. - A drainage and collection system for discharged water exists enabling mercury monitoring from the site. - Floors of storage facilities are covered with mercury-resistant materials and have no cracks. - The facility is clearly marked with warning signs and

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							secured to avoid theft and unauthorized access. Should any of these requirements not be met, then activities will be undertaken to introduce them, including retrofitting of the storage facility. Referring to the above-mentioned guidelines, containers that store mercury will meet the following criteria: - They are not damaged by any materials previously stored in them or have contained materials that could adversely react with mercury or mercury compounds. - Their structural integrity is intact. - They are not excessively corroded. - They have a protective coating (paint) to prevent corrosion. - They are gas- and liquid-tight. - Labelled in line with the globally harmonized system of classification and labelling of chemicals. A Spill Prevention and Management Plan will be developed and implemented at all demonstration sites for safe handling and disposal of mercury-containing obsolete devices and safely cleanup of accidental mercury releases ensuring that: - Brooms are not used to clean up broken devices because they will spread the mercury. - A vacuum cleaner should only be used if it is specifically designed to collect mercury. - Contact with broken glass should be avoided. Furthermore the UNDP GUIDANCE ON THE CLEANUP, TEMPORARY OR INTERMEDIATE STORAGE, AND TRANSPORT OF MERCURY WASTE FROM HEALTHCARE FACILITIES will be used as a reference point for assessment and implementation of the additional availabnle mitigation measures.
5	Mercury pollution due to the impact of natural disaster on temporary or final storage (e.g. flood).	Natural disaster, potentially exacerbated by the climate change	Health impacts on the involved staff and local environmental contamination	Social and Environmental	I = 3 L = 1 **Low**	National Project Manager (NPM)	Same as above, the Project, through the environmental audit of the interim storage facilities, will take into consideration flood and other natural disaster risks when locating and assessing available storage facilities to minimize the risk of any natural disaster-caused contamination.
6	Impact on indigenous peoples communities	Medical facilities serving to	Higher risk of non-compliance with	Social and Environmental	L = 4 I = 1	National Project	Stakeholder engagement plan and stakeholder consultations will involve customary peoples where/if

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		customary peoples communities will likely belong to the small or distant facilities for which the mercury phase out implementation costs will be relatively higher. Local communities might also be comparatively less aware of mercury related health hazards.	safety standards for mercury handling, collection and transport. Higher mercury-related health risks for local community		**Low**	Manager (NPM)	relevant. No dedicated Indigenous Peoples Plan as per relevant UNDP Standard 6 is envisaged.

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Stakeholder engagement:

The stakeholders in the national government and sub-national government agencies, private sector, associations, research institutions, academia and development partners were identified and analyzed under the two key sectors covered in the Project. The key information assessed under stakeholder identification and mapping includes:

(i) Details of the stakeholders consulted during the identified and engaged in the PIF and PPG stages;
(ii) Relevant stakeholders in the national health sector and their MFMD manufacturers with their specific mandates, roles and responsibilities, present activities, issues, constraints, challenges and risks;
(iii) Roles and responsibilities of various stakeholders in the project implementation;
(iv) Private sector engagement, including investments, partnerships, and co-financing; and

During the PPG process, based on the Project Identification Form (PIF), a stakeholder analysis was conducted to identify key stakeholders, assess their interests in the project and define their roles and responsibilities in the project implementation. After the analysis, further actions were taken to identify and assess the project key stakeholders through consulting and discussing with UNDP, the Ministry of Environment (MoE), Ministry of Health (MoH), Agency Research and Innovation National (BRIN), Association Producent of Medical Devices (ASPAKI), PT. Wastec International for medical waste management, the other members of the project preparation team, and survey of the demonstration enterprises and medical facilities. Based on the consultations and survey, the Stakeholder Engagement Plan for the project implementation, monitoring, and evaluation has been developed and annexed to Annex 8 to this document. The key points are:

- Dissemination of the proposed project activities to the stakeholders, especially relevant female in an appropriate and accessible manner;
- The project related trainings will target toward especially women;
- Setting up grievance redress mechanisms;
- Setting up project information request procedure for the broader public;
- Integration of implementation situation of the Stakeholders Engagement Plan into the project annual report; and
- Consultation with the key stakeholders for the project mid-term review and terminal evaluation, and making the evaluation reports accessible to the stakeholders.

The Project Manager will be responsible for facilitating and monitoring implementation of this Stakeholder Engagement Plan, with the demonstration production enterprises and demonstration medical facilities' coordination of their implementation. The monitoring results will be included in the annual Project Implementation Report.

South-South and Triangular Cooperation (SSC/TrC):

Mercury (Hg) persists in the environment for long periods by cycling back and forth between the air and soil. It is a global pollutant able to travel over long distance via air and water, leading to both local and global mercury contamination.. Exposure to mercury is particularly dangerous for pregnant and breastfeeding women, as well as children, since mercury is most harmful in the early stages of development.

Despite the mandates of the Minamata Convention, mercury-containing medical devices (MCMDs) continue being used in many health facilities throughout the region. Knowledge on the proper handling of MCMDs and sound management of mercury and mercury waste, especially with the damaged MCMDs, are often lacking or ignored. The experience and knowledge gained in this project, on the collection, distribution, transport, stabilization and solidification of mercury for safe temporary storage, will provide regional cooperation opportunities with countries in similar situation, through regional workshops and information exchanges and technology and management cooperation, with regard to the still in use MCMDs, the necessary promotion and awareness for MCMDs replacement with MFMDs to benefit Indonesia and neighboring countries. The pilot at laboratory scale for mercury stabilization and solidification technology will not only benefit Indonesia, but can be shared with neighbouring countries required similar technology.

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Gender equality and Women's Empowerment:

In line with the gender equality policies and strategies of both UNDP and the GEF, a Gender Action Plan (GAP) has been developed. This GAP is meant to serve as a strategic framework to ensure gender equality. It will support in mainstreaming gender concerns and equality throughout and across the project components. The document provides an overview of the various relevant gender-related policies, plans, tools and resources existing in Indonesia; as well as an analysis of the status of women in health workforce.

The purpose of having GAP is to institutionalize the commitment to gender equality across every stage of this project, and create a roadmap that outlines specific goals, actions, and measurable outcomes to address gender disparities.

The GAP includes strategies and actions to promote women's and men's equal participation in, make contribution to, and benefit from the project which considers different roles, needs, priorities, power, and responsibilities of relevant women and men

The GAP developed is included as Annex 10 to the Project Document. The GAP put forth the desired gender-related impact and outcomes of the project and commends concrete actions on how gender can be mainstreamed in various project activities. The Plan will be revisited at the onset of project implementation.

Knowledge:

Experience and knowledge gained, lessons-learned from the project, in particular the process for the collection, distribution, transport, stabilization and solidification of mercury, temporary storage and sound management of mercury waste are valuable and replicable. The project, under Component 4, has built in output (Output 4.2.1) to establish a knowledge sharing and awareness mechanism that will generate and share knowledge of the project results. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation through lessons-learned.

The results from the pilot at laboratory scale for mercury stabilization and solidification technology will be valuable knowledge and updated the technology for sound management for safe temporary storage of mercury and mercury waste.

The project will identify, analyze, and share and exchange on lessons-learned that may be beneficial to the design and implementation of similar future projects.

Innovativeness, Sustainability and Potential for Scaling Up:

The National Research and Innovation Agency (BRIN) not only provide technology support to the project, but has already good knowledge and know-how on manufacturing locally containers for safe storage of mercury. This innovation will present a low cost and effective solution for the managing the temporary storage of mercury.

Digital Solutions:

Governmental entities and many industry entities have vastly deployed digitalization in their daily transactional activities. Health care facilities in Indonesia Central Pollution Control Board (CPCB), in particular, has established online portal utilized in the management and control of many of their daily operational activities. The project can make sue to engage their digital solution in support of the many activities to be conducted under this project, in partnership with the health care facilities, waste management companies and MFMD manufacturers.

The project will explore the possibility to initiate a digital platform to collect, and calculate the amount of mercury from various health care facilities across different provinces to facilitate the monitoring of the progress of MCMDs replacement for proper reporting.

Contributions of GEF SIRENE project to UNDP CPD 2026-2030 and National Priorities 2024-2029:

The GEF SIRENE project is a comprehensive initiative aimed at supporting Indonesia in phasing out mercury from the healthcare sector, in line with the Minamata Convention and national priorities. The project will work closely with the Government of Indonesia and key stakeholders to strengthen policies and regulations that prohibit the use of

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mercury-containing medical devices (MCMDs) and to develop clear guidelines for the procurement and use of mercury-free alternatives.

To address existing mercury-containing devices, the project will establish a national system to track, collect, and safely store these items, ensuring their eventual disposal using Best Available Techniques (BAT) and Best Environmental Practices (BEP) to prevent mercury release. In parallel, it will create financial and operational mechanisms that enable hospitals and clinics to transition to mercury-free devices, while promoting local manufacturing and supply chains for sustainable alternatives.

Recognizing the growing challenge of electronic waste, the project will also promote circular practices for mercury-free electronic medical devices, encouraging recycling and reuse of components to prevent future e-waste buildup in the healthcare sector.

Through these interventions, the project contributes directly to UNDP's Country Programme Document (CPD) 2026–2030 Outcome 2, which envisions a lower-carbon, climate-resilient Indonesia advancing a just energy transition and ensuring the sustainable management of biodiversity and natural resources for the benefit and wellbeing of all. By eliminating mercury, the project reduces toxic emissions and supports sustainable resource management, while safe disposal and circular practices minimize environmental contamination and protect ecosystems and human health.

The project also aligns with Presidential Regulation Number 12 of 2025 concerning the RPJMN 2024-2029, National Priority 2 which stipulated "Strengthening national defense and security systems and promoting national self-reliance through food security, energy, water, sharia economy, digital economy, green economy, and blue economy" and also emphasise government priority in improving waste collection and procession, as well as residue processing. National Priority 2 sets out the target for advancing a circular economy ecosystem (green economy index and environment quality index) and fostering the development of environmentally sustainable products.

Triad of Development (*Trisula Pembangunan*) which serve as the overarching framework guiding Indonesia's development priorities, emphasizing three core pillars: poverty eradication; human capital development, and economic growth driven by industrial down streaming and value-added production.

. By phasin out mercury, the initiative promotes a cleaner environment and safeguards public health, contributing to cultural and social harmony and supporting the vision of a just and prosperous society.

Ultimately, the GEF SIRENE project will transform the health sector by creating safer hospitals and clinics and reducing occupational exposure to mercury. It will deliver environmental benefits by lowering mercury pollution in air, water, and soil, and generate economic and social gains through cost savings from efficient waste management and sustainable procurement practices.

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VI. PROJECT MANAGEMENT

Cost Efficiency and Effectiveness

The overall project strategy is to assist the Government of Indonesia to eliminate mercury in the distribution and supply chain of mercury containing medical devices from the health sector, establish systems and introduce technologies for mercury safe temporary storage and disposal and create mechanism for the sustainable and circular introduction of mercury free medical device.

Considering the extensive arrays of project interventions, in particular the number of national health facilities and the particular challenging geo-graphical locations on transportation and required temporary storage at various locations,, as well as the need to facilitate mercury-free medical device production, the proposed pilot project at laboratory scale on the stabilization and solidification technologies for mercury and sound management of mercury waste to achieve the reduction of 20 metric tons of mercury, and the large quantities of contaminated plastics, that will contribute to global environmental benefits, the GEF resource of the intervention should be considered as cost-effective. This is especially true with the successful technology to be developed in addressing mercury for safe temporary storage, that could be benefiting not only Indonesia, but the neighboring countries.

Project Management

The responsibility for the execution of the project under Support to national implementation modality is with the Implementing Partner (IP). The Implementing Partner for this project is the Ministry of Environment who has requested support from UNDP. UNDP, at the request of MoE, will work closely with other relevant stakeholders. A Project Management Unit (PMU) will be established for the overall coordination as well as resource management of this Project. PMU will be financially supported and structured to include the services of the Project Manager, the Project Assistant and will be located in Jakarta. In addition, four (4) Working Group Coordinators will be recruited to support the project, and will be responsible for the performance of the project interventions of the four regional areas.

The PMU will provide management services and is responsible for the overall day-to-day management of the project on behalf of the Implementing Partner and UNDP, including the mobilization of all project inputs, supervision over project consultants, and the sub-contractors. The project manager typically presents key deliverables and documents to the board for their review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk registers. While the PMU will perform the supportive role, the Project Manager is responsible for:

- Managing the overall conduct of the project
- Implementing activities by mobilizing goods and services
- Checking on progress and watch for plan deviations
- Ensuring that changes are controlled, and problems addressed
- Monitoring progress and risks
- Reporting on progress including measures to address challenges and opportunities.

The Project Manager should coordinate with the pertinent programme and operational units of the of MoE and UNDP Country Office on the follow up of disbursements against obligations and other matters in relation to project implementation and management. In addition to activities at national and provincial level, project activities will be implemented in the four (4) regional areas selected by the Government of Indonesia:

In order to engage with local stakeholders, communities and project beneficiaries, a Regional Facilitator will be appointed to ensure day-to-day follow-up at the regional area level. Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information: To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy42 and the GEF policy on public involvement.

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VII. PROJECT RESULTS FRAMEWORK

Contribution to the Sustainable Development Goal (s):

SDG 3: Good Health and Well-being

SDG 5: Gender Equality

SDG 9: Industry Innovation and Infrastructure

SDG 11: Sustainable Cities and Communities

SDG 12: Responsible Consumption and Production

SDG 13: Climate Action

SDG 17: Partnerships for the Goals

Intended Outcome as stated in the UNSDCF/Country [or Regional] Programme Results and Resource Framework:

UNDP CPD 2026-2030 Outcome 2: A lower carbon, climate resilient Indonesia succeeds advancing a just energy transition and the sustainable management of biodiversity and natural resources for the benefit and wellbeing of all.

Applicable Output(s) from the UNDP Strategic Plan: Natural resources protected and managed to enhance sustainable productivity and livelihoods **(**Signature Solution 4: Environment).

Project title and Quantum Project Number: Strengthening Indonesia's Reduction and Elimination in the Distribution and Supply Chain of Mercury from National Health (SIRENE)

Award ID: 1382844, Project ID: 01004369

Objective and Outcome Indicators		Data Source	Baseline	Mid-term Target	End of Project Target	Data Collection Methods	Risks/Assumptions
Project Objective:	**The Project will assist the Government of Indonesia to eliminate mercury in the distribution and supply chain of mercury containing medical devices (MCMDs) from the health sector, establish systems and introduce technologies for mercury safe disposal and create mechanism for the sustainable and circular introduction of mercury free medical devices (MFMD).**						
	Mandatory Indicator 1: **Objective Indicator 1:** # direct project beneficiaries disaggregated by gender (individual people) 100,000 (50,000 female, 50,000 male)	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	0	50,000 (25,000 female, 25,000 male)	100,000 (50,000 female, 50,000 male))	Training and workshop reports	Risks: Lack of interest of participants or unable to attract sufficient female health care workers Assumption: As majority of health care workers handling MCMDs are female, awareness-raising activities and efforts to identify and promotion participation
	Mandatory GEF Core Indicators 9.2	Baseline data from PIF and PPG phases, reports collected through desk studies,	Limited quantities of unused MCMDs has been packed and stored temporary at	10 metric tons of Mercury reduced	20 metric tons of Mercury reduced	Project progress report Project consultant report	Risks: Inaccurate inventories of MCMDs Assumption:

	Objective Indicator 2: 20 metric tons of mercury reduced	investigation, studies, interviews and site visits	various health care facilities			Site visits and monitoring report	Data from government reports has facilitated the calculation of quantities of MCMDs and mercury contents calculated based on unit of mercury contained in unit of MCMDs
	Objective Indicator 3: (a) 20 g TEQ/year of UPOPs emissions reduced; (b) 100 metric tons of POPs-containing plastic collected and disposed safely containing 5 tons of PBDEs emissions avoided with open burning (c) 10,000 metric tons of CO2e emissions avoided	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	Limited efforts in collection and sorting of contaminated plastics	(a) 10 g TEQ/year of UPOPs emissions reduced; (b) 50 metric tons of POPs-containing plastic collected and disposed safely containing 5 tons of PBDEs emissions avoided with open burning (c) 5,000 metric tons of CO2e emissions avoided	(a) 20 g TEQ/year of UPOPs emissions reduced; (b) 100 metric tons of POPs-containing plastic collected and disposed safely containing 5 tons of PBDEs emissions avoided with open burning (c) 10,000 metric tons of CO2e emissions avoided	Project progress report Project consultant report Site visits and monitoring report	Risks: Inaccurate data on current situation of contaminated plastic Assumption: During PPG phase, site visits and investigation have gathered some assurance of data
	Objective Indicator 4: 20,000 tons of recyclable plastic and metals collected and recycled	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	Limited efforts in collection, sorting and recycle of contaminated plastics	10,000 tons of recyclable plastic and metals collected and recycled;	20,000 tons of recyclable plastic and metals collected and recycled;	Project progress report Project consultant report Site visits and monitoring report	Risks: Inaccurate data on current situation of contaminated plastic Assumption: During PPG phase, site visits and investigation have gathered some assurance of data
Project component 1	**Policy and regulatory frameworks strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector**						
Project Outcome 1.1 Regulations/ policies developed or strengthened,	**Outcome Indicator 1.1** **At least five (5) policies and regulations reviewed**	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation,	Regulations/policies have been issued by 2 main Ministries which are Ministry of Environment and Ministry of Health.	Three (3) policies and regulations reviewed.	At least five (5) policies and regulations reviewed	Project progress report Project consultant report	Risks: Lengthy process for reading, review and enactment of policies, regulations and guidelines

proposed and/or operationalized to prohibit the use of MCMDs in health care facilities		studies, interviews and site visits.	Involving other Ministries and Institution is need it. The capacity of national institutions, government agencies and private sector partners is still low to assess, plan, implement, support and monitor sustainable for total phase out the use of mercury-containing medical devices in health care facilities. It will do so by initially assessing the capacity of these project partners, developing plans for strengthening their capacity and subsequently implementing these.			Site visits and monitoring report	Assumption: The project will closely monitor progress of proposal for the development, revision and/or enhancing of policies, regulations and guidelines, working with the responsible ministries
	Output 1.1.1 to achieve Outcome 1.1: Regulatory and policy frameworks proposed for total phase out the use of mercury-containing medical devices.						
	Output Indicator 1.1.1.1: # policies developed that address phase out mercury-containing medical devices.	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	No support for implementing Regulatory and policy frameworks for total phase out the use of mercury-containing medical devices among the ministries and institution.	Three (3) implementation action developed	At least five (5) implementation action developed.		There is lack of support for current Regulatory and policy frameworks for total phase out the use of mercury-containing medical devices.
	Output 1.1.2 to achieve Outcome 1.1: Gender-sensitive regulatory and policy framework concerning mercury collection, distribution, temporary storage, and disposal Developed/ strengthened.						
	Output indicator 1.1.2.1 : # technical guidance notes/guidelines issued	Baseline data from Ministry of Environment, Ministry of Health, and BRIN.	There is no gender-sensitive stated on the current regulation and policy framework	Two (2) policies and regulations developed or strengthened.	At least four (4) policies and regulations developed or strengthened		There is a lack of Gender-sensitive regulatory and policy framework concerning mercury collection, distribution,

	# of Policies drafted/submitted for approval # of Policies reviewed		concerning mercury collection, distribution, temporary storage, and disposal				temporary storage, and disposal Developed/ strengthened.
Project Outcome 1.2: Sensitive and inclusive Capacity Building activities carried out for government staff (both national and sub-national) to enhance policy enforcement and oversight.	**Outcome Indicator 1.2.a:** # Capacity building activities undertaken # of regional areas attended # participants	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	No gender-sensitive and inclusive Capacity Building activities carried out for government staff (both national and sub-national) to enhance policy enforcement and oversight.	Capacity building at two (2) regional areas conducted.	Capacity building at four (4) regional areas conducted.	Project progress report Project consultant report Site visits and monitoring report	There is a lack of capacity of all entities involved in/ responsible for MCMDS and MFMDS and their waste to ensure better coordination and exchanges of experiences and lessons-learned between national, regency and sub-district level staff.
	Outcome Indicator 1.2.b.: **Inventories of stock of MCMDs and Hg waste at National Health Care Facilities (HCFs) completed** to facilitate collection, distribution and transport for temporary storage	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	At present, accurate information and quantities of MCMDs and Hg waste at HCFs are incomplete	Inventory process on MCMDs and HG waste at HCFs is completed with known quantities and locations to enable withdrawal to safe temporary storage	Inventory completed and withdrawal to safe temporary storage	Project progress report Project consultant report Site visits and monitoring report	There is a lack of capacity of all entities involved in/ responsible for MCMDS and MFMDS and their waste to ensure better coordination and exchanges of experiences and lessons-learned between national, regency and sub-district level staff.
	Output 1.2.1 to achieve Outcome 1.2: Coordination and cooperation Mechanisms between central and local governments established and strengthened						
	Output indicator 1.2.1.1: # coordination mechanisms established and/or strengthened	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	No cooperation mechanisms between central and local governments.	Two (2) Cooperation mechanism to strengthen the phase-out of mercury containing medical devices (MCMDs) in the health sector is established.	Four (4) Cooperation mechanism to strengthen the phase-out of mercury containing medical devices (MCMDs) in the health sector is established.		The coordination among entities needs to be conducted and the capacity of entities for regional and local oversight of health care activities, and make the collection, distribution, temporary storage, disposal process easier and the issuing environmental licenses and other permits, simpler, clearer and more affordable so that they are accessible and well-functioning.

	Output 1.2.2 to achieve Outcome 1.2: Phase-out of use of MCMDs oversight and Hg elimination commitments enforced for health facilities						
	Output indicator 1.2.2.1: # Health Facilities that have commitment to phase-out the use of MCMDs.	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	No oversight and commitment on the phase-out of use of MCMDs and Hg elimination with health facilities across Indonesia.	Two (2) Commitments on enforcing of MCMDs oversight and Hg elimination for health sector facilities is signed	Four (4) Commitments on enforcing of MCMDs oversight and Hg elimination for health sector facilities is signed		There is no oversight and commitment on the phase-out of use of MCMDs and Hg elimination with health facilities across Indonesia.
	Output 1.2.3 to achieve Outcome 1.2: All levels of Governmental institutions in charge of the regulatory systems for mercury collection, distribution, and storage capacitated in new rules and regulations**:**						
	Output indicator 1.2.3.1: # government institutions at all levels are capacitated to implement mercury collection, distribution and storage.	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	No assess and change any capacity of national, provincial, regency, sub-district (if any) level policies, plans, regulations, standards and measures and changes of the regulatory systems for mercury collection, distribution, and storage.	The results (project outcomes 1.1 and 1.2) for increasing the capacity of all entities involved in/responsible for MCMDS and MFMDS and their waste in the two (2) project priority sites disseminated.	The results (project outcomes 1.1 and 1.2) for increasing the capacity of all entities involved in/responsible for MCMDS and MFMDS and their waste in the 4 project priority sites disseminated.		There is a lack of assess and change any capacity of national, provincial, regency, sub-district (if any) level policies, plans, regulations, standards and measures and changes of the regulatory systems for mercury collection, distribution, and storage.
	Output 1.2.4 to achieve Outcome 1.2: Inventories of stocks of Hg wastes and MCMDs are updated and assessed and real situation of mercury use, collection and storage in Health Care Facilities (HCF) are known						
.	Output indicator 1.2.4.1: Updated inventories of stocks of Hg wastes and MCMDs at all levels	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	The Government of Indonesia has initial assessment for the amount of MCMDs across Indonesia.	The method and mechanism on Inventories of stocks of Hg wastes and MCMDs are updated and assessed.	The inventory data established; Collection MCMDs established; The MCMDs storage.		The real amount of the amount of MCMDs across Indonesia is unknown. Lack of assessment on real situation of mercury used collection and storage in Health Care Facilities (HCF).
Project component 2	**Technical and institutional capacities of private sector stakeholders enhanced on MCMDs phase-out and environmentally sound mercury-containing medical waste management improved.**						

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Outcome 2.1 MCMDs and their wastes are collected, stabilized (solidified) and disposed of in environmentally sound manner, in accordance with national regulations, international guidelines and Best Environmental Practices (BEP) and based on Gender sensitive principles.	**Outcome Indicator 2.1.**: **# metric tons of mercury is collected, distributed and safety stored**	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	There are 10,180 (*Ministry of Health, 2024*) primary healthcare (puskesmas) across Indonesia. The average of the Puskesmas has 27 sphygmomanometers, each of sphygmomanometers with average content of 65 gram of mercury. Thus, 10,180 x 27 unit x 65 gram = 17.8 ton of mercury. This amount does not include the number of thermometer and sphygmomanometers from the state hospital at Provincial and Regency level and also 1,545 private hospital in Indonesia.	10 metric tons of mercury is collected, distributed and put in temporary storage	Total of 20 metric tons of mercury is collected, distributed, and safely stored Manufactures are enabled to convert production lines as per legally mandated national phase-out planning guidelines, and to soundly manage remaining mercury, stockpiled devices and/or contaminated areas on premises resulting in the phase-out of at least **20 metric tons of mercury**.	Project progress report Project consultant report Site visits and monitoring report	Risks: Inventory to locate Stock of unused or damaged MCMDs at the national and sub-national healthcare facilities may encountered lack of cooperation or resistance. Assumption: UNDP, MoE and MoH to liaise and work closely with responsible ministries and entities, healthcare facilities and conduct awareness raising activities
	Outputs 2.1.1 to achieve Outcome 2.1: Gender-sensitive technical guidance/ guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established						
	<u>Output indicator 2.1.1.1</u>**:** # technical guidance on mercury, MCMDs and their wastes for collection, distribution and temporary safe storage are developed and established	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	No MCMD's technical guidelines for collection, distribution and temporary storage. Facility unit has a limited experience on technical capacity in handling collected MCMDs, and face challenges to comply with regulatory framework for mercury transport and storage, also lacking capacity to safely transport	At least one (1) Technical guidance/guidelines for collecting developed. At least one (1) partnership mechanisms at the national level for collection or distribution or temporary storage established.	At least three (3) Technical guidance/guidelines for collecting, distributing and temporary storage. At least three (3) partnership mechanisms established at the national level for collection, distribution and temporary storage.		

			MCMDs from the health facility units to mercury storage.				
	Outputs 2.1.2 to achieve Outcome 2.1: Health facility management capacities to address mercury-free medical devises are strengthened through gender-sensitive capacity building.						
	Output indicator 2.1.2.1: # of training modules created/reviewed Output indicator 2.1.2.2: # Health Care Facilities (HCFs) capacities strengthened based on gender-sensitive capacity building. Output indicator 2.1.2.3 # Beneficiaries reached by training/trained Output indicator 2.1.2.4 # of regional areas attended	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	No national training modules yet for collecting or distributing or temporary storage or plastic recycling, and/or technical electromedical. There are 10.180 (Ministry of Health, 2024) Puskesmas Facility across Indonesia which require to be strengthened their capacity. In average each of Puskesmas has 42 of health workers (Syahdilla, 2023) which more than half of the beneficiary target which 100.000 can be achieved from this program. There is a limited capacity to fully enable a proper environmental sound healthcare waste management for MCMDs and mercury-contained wastes which is taking into consideration local gender and social	Two (2) national Training modules for collecting or distributing or temporary storage or plastic recycling, and/or technical electromedical developed.	Five (5) national Training modules for collecting, distributing, temporary storage, plastic recycling, and technical electromedical developed. 10.000 health facilities for Puskesmas level involved on the trainings. 50,000 people directly involving on the training at 4 regional areas (30,000 female and 20,000 male).		

			sensitivities and perspectives, to review and develop an integrated approach for healthcare waste management as a whole.				
	Outputs 2.1.3 to achieve Outcome 2.1: Pilot plant for mercury temporary storage from medical devices containing mercury established						
	Output indicator 2.1.3.1: # pilot plants for mercury temporary storage from medical devices containing mercury established.	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	No facility for temporary storage from medical devices containing yet. The implementation of mercury-based medical device waste management faces several obstacles and challenges, including there is no final treatment technology to manage mercury-containing medical device waste; no cooperation mechanism with waste treatment services related to stabilization and solidification technology; lack of formulate temporary and final storage options for stabilized and solidified mercury; lack of guidelines of mercury storage.	The design and technical specification of the pilot plant with consideration of gender-sensitive developed.	One (1) Pilot plant for mercury temporary storage from medical devices containing mercury established.		
	Output 2.1.4 to achieve Outcome 2.1: Gender and Social Inclusion (GESI) awareness programme on MCMDs replacement, collection and disposal to health facilities is created and implemented.						

	Output indicator 2.1.4.1: # Gender assessments conducted Output indicator 2.1.4.2: # of Gender Sensitive MCMDs management activities implemented Output indicator 2.1.4.3: % of project beneficiaries reached by this Outcome/Output.	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	No GESI awareness program on MCDMDs.	GESI assessment awareness program on MCMDs replacement, collection and disposal to health facilities for all components developed.	GESI assessment awareness program on MCMDs replacement, collection and disposal to health facilities for all components is shared implemented. At least 25 % from targeted beneficiary will be involved.		
Project component 3	**Circular models are developed and piloted to promote and sustain the large scale replacement to mercury-free alternatives for MCMDs.**						
Outcome 3.1 Technical guidelines developed on lifecycle management of mercury-free alternatives.	**Outcome Indicator 3.1.:** # technical guidelines developed and piloted	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	There are no technical guidelines available	At least 1 technical guideline proposed to be developed on lifecycle management of mercury-free alternatives of medical devices.	At least 3 technical guidelines[15] were developed and piloted on lifecycle management of mercury-free alternatives of medical devices	Project progress report Project consultant report Site visits and monitoring report	Risks: Lengthy process for reading, review and enactment of policies, regulations and technical guidelines. Assumption: The project will closely monitor progress of proposal for the development, revision and/or enhancing of policies, regulations and guidelines, working with the responsible ministries and relevant stakeholders.
	Output 3.1.1 to achieve Outcome 3.1: Circular models for mercury-free medical devices (MFMDs) to support MCMDs accelerated replacement assessed.						
	Output indicator 3.1.1.1: # validated circular economy models institutionalized and ready for scale-up	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	No circular models for Mercury-Free Medical Devices (MFMDs) are currently available	At least 1 circular economy models for MFMDs will be assessed for feasibility, cost-effectiveness, and	At least 2 validated circular economy models will be		

15 The project will develop 3 guidelines consist of three distinct circular phases: the manufacturer phase, which involves developing a design manual; the user phase, which entails creating protocols for healthcare providers to safely use, maintain, and monitor mercury-free devices; and the end-of-life phase, which focuses on developing End-of-Life Management Guidelines for collecting, recycling, and disposing of mercury-free devices, with an emphasis on maximizing material recovery.

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				scalability in target regions.[16]	institutionalized and ready for scale-up.[17]		
	Output 3.1.2 to achieve Outcome 3.1:: Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed						
	Output indicator 3.1.2.1: 100 healthcare facilities and 5 manufacturers adopted green and gender-sensitive procurement and technical guidelines and improving gender equity in healthcare practices	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	There are no green and gender-sensitive procurement and technical guidelines for circular management of MFMDs	At least 1 technical guideline proposed to be developed on lifecycle management of mercury-free alternatives of medical devices	100 healthcare facilities and 5 manufacturers adopted green and gender-sensitive procurement and technical guidelines and improving gender equity in healthcare practices		
Outcome 3.2 Mercury-free medical devices piloted in selected health care facilities, collection and recycling guidelines developed for end-of-life products and disposal technologies/strategies piloted taking into consideration gender and social inclusive approaches	**Outcome Indicator 3.2.1.** **100% of targeted healthcare facilities have institutionalized mercury-free medical devices (MFMDs),** with finalized collection/recycling guidelines adopted nationwide, gender- and socially inclusive disposal strategies implemented	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	MFMDs already existed in healthcare facilities, but there are no collection/recycling guidelines for end-of-life products, or the implementation of gender- and socially inclusive disposal strategies.	50% of targeted healthcare facilities will have expanded the use of mercury-free medical devices (MFMDs), with draft collection/recycling guidelines developed and gender-inclusive disposal strategies piloted in 3–5 sites	100% of targeted healthcare facilities will have institutionalized mercury-free medical devices (MFMDs), with finalized collection/recycling guidelines adopted nationwide, gender- and socially inclusive disposal strategies implemented across 20+ sites, and a measurable 70% reduction in mercury waste.	Project progress report Project consultant report Site visits and monitoring report	Risks: Resistance to MCMD replacement and/or transition to MFMDs Assumption: MoE, MoH and UNDP to conduct awareness raising activities to promote replacement and transformation to MFMDs
	Outcome Indicator 3.2.2.: **One (1) pilot at the laboratory scale for mercury stabilization and solidification is equipped and implemented**	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation,	There is no such laboratory conducing such services	Pilot laboratory selected, equipment procured and set up to commence mercury stabilization and solidification process	Laboratory fully functions and results and experience disseminated to replicate at reginal regional areas	Project progress report Project consultant report Site visits and monitoring report	Risks: Resistance to technology transformation Technology difficulties for the pilot

16 Key milestones: (i) Completion of a comparative analysis of circular models (e.g., take-back systems, leasing models, material recovery hubs) tailored to healthcare settings. (ii) Identification of 1–2 high-potential models prioritized for pilot testing, based on stakeholder consultations and technical assessments. (iii) Establishment of partnerships with 3–5 healthcare facilities and/or manufacturers to co-design pilot implementation plans.

17 Key milestones: (i) Full-scale pilots of 2 circular models (e.g., a take-back/recycling system for MFMDs) implemented in 10–15 healthcare facilities. (ii) Adoption of circular practices by 5–10 manufacturers/distributors (e.g., integration of take-back schemes into supply chains). (iii) See policy component to ensure policy alignment : National or regional guidelines updated to incentivize circular models (e.g., tax breaks for MFMD adoption, extended producer responsibility laws). (iv) Knowledge products : Final report documenting lessons learned, cost-benefit analyses, and replication roadmaps for other regions.

		studies, interviews and site visits					Assumption: BRIN to continue explore technology transfer and experience to facilitate success of pilot
	Outcome Indicator 3.2.3.: **Based on results of the pilot project, Hg stabilization and solidification strategies are upscaled at four (4) regional areas**	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	There is no regional facilities conducting such strategies	Four (4) regional areas selected and equipment procurement initiated	Four (4) regional areas fully established and equipment, training conducted to perform mercury stabilization and solidification	Project progress report Project consultant report Site visits and monitoring report	Risks: Technological difficulties in technology transfer Assumption: BRIN to continue explore technology transfer and experience to facilitate success of pilot
	Output 3.2.1 to achieve Outcome 3.2: Medical Devices manufacturers, distributors, and suppliers had incorporated circular economy principles on disposal of Hg-based and electronic-based devices in their CSRs and/or other relevant internal practices, Policies, or strategies						
.	Output indicator 3.2.1.1: # manufacturers, distributors and suppliers engaged in the project Output indicator 3.2.1.2: # Corporate Documents revised for circularity actions	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	There are no circular economy principles integrated into CSR, policies, or strategies for managing mercury (Hg)-based and electronic medical devices	At least 40% of targeted medical device manufacturers, distributors, and suppliers have initiated integration of circular economy principles into their CSR, policies, or strategies for Hg/electronic-based device disposal.	80% of targeted medical device manufacturers, distributors, and suppliers have institutionalized circular economy principles into their CSR, policies, and strategies for mercury (Hg)-based and electronic device disposal, resulting in measurable reductions in mercury pollution and enhanced social equity.[18]		
	Output 3.2.2 to achieve Outcome 3.2: One (1) pilot at the laboratory scale for mercury stabilization and solidification technology is implemented						
.	Output indicator 3.2.2.1: # pilot laboratory scale for mercury stabilization and	Baseline data from Ministry of Environment,	There is no Hg stabilization and solidification	1 pilot at the laboratory scale for mercury stabilization	1 pilot at the laboratory scale for mercury		

[18] This project will ensure 80% of targeted companies adopt circular economy policies for mercury (Hg) and electronic device disposal, Over 100 healthcare facilities will transition to mercury-free devices via circular procurement agreements, and gender equity benchmarks (e.g., 40% women in waste management leadership) will be met to ensure inclusive, sustainable systemic change aligned with global standards.

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	solidification technology implemented.	Ministry of Health and BRIN.	technology being implemented	and solidification technology are implemented	stabilization and solidification technology are implemented		
	Output 3.2.3 to achieve Outcome 3.2: Hg stabilization and solidification strategies and solutions upscaled to 4 (four) locations in partnership with Public-Private selected institutions						
	Output indicator 3.2.3.1: # Hg stabilization and solidification strategies and solutions upscaled Output indicator 3.2.3.2: # locations attended.	Baseline data from Ministry of Environment, Ministry of Health and BRIN.	There is no Hg stabilization and solidification strategies and solutions	2 locations ready for Hg stabilization and solidification strategies and solutions in partnership with Public-Private selected institutions	4 locations ready for Hg stabilization and solidification strategies and solutions in partnership with Public-Private selected institutions		
Outcome 3.3 Financing mechanisms to support replication and scale up of MCMDs replacement in collaboration with local fund providers/banks assessed.	**Outcome Indicator 3.3.:** **At least 200 targeted healthcare facilities, including 40% women-led establishments, across 5 provinces will gain access to affordable financing for** MFMDs through partnerships with at least one local bank in each location, which will have institutionalized gender-sensitive lending criteria	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	There is no financing mechanism to support replication and scale up of MCMDs replacement	At least 1 financing mechanism available in collaboration with local fund providers/banks	At least 200 of targeted healthcare facilities, including 40% women-led establishments, across 5 provinces will gain access to affordable financing for MFMDs through partnerships with at least 1 local bank in related locations that have institutionalized gender-sensitive lending criteria.	Project progress report Project consultant report Site visits and monitoring report	Risks: Resistance to technology transformation Assumption: MoE, MoH and UNDP to conduct awareness raising and Gender Equity and Social Inclusion (GESI) and explore financial mechanism for accessible financing
	Output 3.3.1 to achieve Outcome 3.3: Development of gender-sensitive financing mechanisms that explored in collaboration with local fund providers/banks and new/revamped finance solutions proposed.						
Project component 4	**Project results monitored, documented, and shared**						
Outcome 4.1: Monitoring and evaluation activities carried out as per GEF requirements.	**Outcome Indicator 4.1.:** Number of M&E activities conducted throughout project duration in compliance of GEF and UNDP requirements	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	0	15	30	Mid-Term Review, Final Project Report and Terminal Evaluation reports	**Risks:** • Low participation rate on training and public awareness activities • Failure to exercise timely and effective

	Outputs to achieve Outcome 4.1 4.1.1 Assessed and applied Social and Environmental Screening Procedure (SESP). 4.1.2 Gender Action Plan and awareness raising activities on collection, transport, storage and disposal of mercury and mercury waste. 4.1.3 Periodic monitoring, and reporting, Project Implementation Reports (PIR), Mid-Term Review and Terminal Evaluation						M&E activities due to capacity issue. **Assumptions:** Efficient M&E to facilitate achievement of project outcomes and objectives.
Outcome 4.2: Learning and knowledge sharing activities carried out and knowledge products developed and shared (including lessons-learned from the perspective of gender-equality and social inclusion implementation).	**Outcome Indicator 4.2.:** # of KM products geared towards Lessons-learned, documented and disseminated	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	*0*	*4*	*10*	Knowledge products, technical reports, resource documents, published materials	
	Outcome Indicator 4.3.: Number of training sessions and/or public awareness workshops conducted	Baseline data from PIF and PPG phases, reports collected through desk studies, investigation, studies, interviews and site visits	0	10	20	Training, public awareness and experience exchange reports	
Outputs to achieve Outcome 4.2	4.2.1 Lessons-learned and best practices for knowledge management are collected and shared at national and international levels						
	Output indicator 4.2.1: # lessons-learned and best practices collected. # shared knowledge products	Collected reports through desk studies, investigations, studies, interviews, site visits, video making, etc.	0	10	20	Training, public awareness, knowledge sharing, experience sharing reports, etc.	

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VIII. MONITORING AND EVALUATION (M&E) PLAN

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP (including guidance on GEF project revisions) and UNDP Evaluation Policy The UNDP Country Office is responsible for ensuring full compliance with all UNDP project M&E requirements including project monitoring, UNDP quality assurance requirements, quarterly risk management, and evaluation requirements.

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF Monitoring Policy and the GEF Evaluation Policy and other relevant GEF policies[19]. The M&E plan and budget included below will guide the GEF-specific M&E activities to be undertaken by this project.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed – including during the Project Inception Workshop - and will be detailed in the Inception Report.

M&E Oversight and monitoring responsibilities

Project Manager: The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP-NCE RTA of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

The Project Manager will develop annual work plans based on the Multi-Year Work Plan included in Annex 4, including annual output targets to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the Results Framework Indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. ESMP, Gender Action Plan, Stakeholder Engagement Plan etc.) occur on a regular basis.

Project Board: The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

Project Implementing Partner: The Implementing Partner is responsible for providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used and generated by the project supports national systems.

UNDP Country Office: The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including the annual GEF PIR, the independent mid-term review and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.

The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the updating of the UNDP gender marker on an annual basis based on gender mainstreaming

[19] See https://www.thegef.org/projects-operations/policies-guidelines

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progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.

The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF Independent Evaluation Office (IEO).

BPPS NCE: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP Bureau for Policy and Programme Support, Nature, Climate and Energy Regional Technical Advisor and the BPPS NCE Directorate as needed.

Minimum project monitoring and reporting requirements as required by the GEF:

Inception Workshop and Report: A project inception workshop will be held within 2 months from the First disbursement date, with the aim to:

a. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
b. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
c. Review the results framework and monitoring plan.
d. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
e. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework (where relevant) and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
f. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
g. Plan and schedule Project Board meetings and finalize the first-year annual work plan. Finalize the TOR of the Project Board.
h. Formally launch the Project.

GEF Project Implementation Report (PIR): The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. UNDP will undertake quality assurance of the PIR before submission to the GEF. The PIR submitted to the GEF will be shared with the Project Board. UNDP will conduct a quality review of the PIR, and this quality review and feedback will be used to inform the preparation of the subsequent annual PIR.

GEF Core Indicators: The GEF Core indicators included as Annex 15 will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the core indicators status. The updated monitoring data must be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent groundtruthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF.

Independent Mid-term Review (MTR): An independent mid-term review (MTR) will be completed by the mid-point of the project. The terms of reference, the MTR process and the final MTR report will follow the standard templates and MTR guidance for UNDP-supported GEF-financed projects available on the UNDP Evaluation Resource Center. The MTR must be submitted to the GEF by the mid-point of the project but no later than 48 months after CEO Endorsement. Provisions must be taken to complete and submit the MTR within the submission deadline. Therefore, the MTR process must start no later than 8 months before the expected date of submission of the MTR. The MTR will be 'independent, impartial and rigorous'. The evaluator(s) that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be reviewed.

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Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the MTR process. Additional quality assurance support is available from BPPS/NCE. The final MTR report will be publicly available in English and will be posted on the UNDP ERC by the MTR submission date included on cover page of this project document. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's submission to the GEF.

Terminal Evaluation (TE): An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and TE guidance for UNDP-supported GEF-financed projects available on the UNDP Evaluation Resource Center. TE must be submitted to the GEF no later than 6 months after the Completion Date. This is a hard deadline that, if not met, can only be extended through a formal extension request. To meet the submission deadline, final TE reports must be completed and submitted to BPPS NCE team no later than 2 months in advance of the deadline to allow sufficient time for internal review/clearance that is required prior to submission. Provisions must be taken to complete and submit the TE within the submission deadline. Therefore, TE must start no later than 8 months before the expected date of submission of the TE (or 11 months prior to the estimated operational closure date). The evaluation will be 'independent, impartial and rigorous'. The evaluator(s) that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from BPPS NCE. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The TE report will be publicly available in English on the UNDP ERC.

Per the GEF Terminal Evaluation requirements, for cancelled full-sized projects, Terminal Evaluations are required if the GEF grant expenditure exceeds more than US$ 2 million.

Final Report: The project's final GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

In accordance with UNDP's programming policies and procedures, the project will be monitored through the following monitoring and evaluation plans**.**

Monitoring Plan: The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored by the Project Management Unit annually, and will be reported in the GEF PIR every year, and will be evaluated periodically during project implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. Project risks, as outlined in the risk register, will be monitored quarterly

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Monitoring Plan							
	Results Monitoring	**Indicators**	**Targets**	**Description of indicators and targets**	**Frequency**	**Responsible for data collection**	**Means of verification**
Track results progress	**Project objective from the results framework**	**Outcome Indicator 1:** # direct project beneficiaries disaggregated by gender (individual people) 100,000 (50,000 female, 50,000 male)	100,000 direct project beneficiaries desegregated by gender (50,000 female, 50,000 male)	Direct project beneficiaries benefiting from or impacted by the project interventions for which the risks of exposure to mercury has been reduced	Annually (reported in Development Objective (DO) progress section of the GEF PIR), mid-term, closure	Project Manager Project consultants	Project progress report Project consultant report Training, capacity and awareness workshop report
		Outcome Indicator 2: 20 metric tons of mercury reduced	20 metric tons of mercury reduced	Quantities of mercury collected, distributed, stabilized and solidified from MCMDs and put in safe temporary storage	Annually (reported in Development Objective (DO) progress section of the GEF PIR), mid-term, closure	Project Manager Project consultants	Project progress report Project consultant report
		Objective Indicator 3: (a) 20 g TEQ/year of UPOPs emissions reduced; (b) 100 metric tons of POPs-containing plastic collected and disposed safely containing 5 tons of PBDEs emissions avoided with open burning (c) 10,000 metric tons of CO2e emissions avoided	20 g TEQ/year of UPOPs emissions reduced; 100 metric tons of POPs-containing plastic collected and disposed safely containing 5 tons of PBDEs emissions avoided with open burning	Quantities of UPOPs and new industrial POPs emissions reduced	Annually (reported in Development Objective (DO) progress section of the GEF PIR), mid-term, closure	Project Manager UNDP Country Office Project consultants	Project progress report Project consultant report
		Objective indicator 4: 20,000 tons of recyclable plastic and metals collected and recycled	20,000 tons of recyclable plastic and metals collected and recycled; 10,000 metric tons of CO2e emissions avoided	Quantities of contaminated plastic collected and recycled. CO@ emissions avoided	Annually (reported in Development Objective (DO) progress section of the GEF PIR), mid-term, closure	Project Manager UNDP Country Office Project consultants	Project progress report Project consultant report
	Project Outcome 1.1	**Outcome Indicator 1:**	At least five (5) policies and regulations reviewed	Quantity of policies and regulations reviewed to facilitate proposals for	Annually	Project Manager UNDP Country Office	Project progress report Project consultant report

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Monitoring Plan							
	Results Monitoring	**Indicators**	**Targets**	**Description of indicators and targets**	**Frequency**	**Responsible for data collection**	**Means of verification**
		At least five (5) policies and regulations reviewed		establishment and improved of regulatory framework		Project consultants	
	Project Outcome 1.2	**Outcome Indicator 2:** Capacity building at four (4) regional areas conducted	Capacity building at four (4) regional areas conducted	Strengthen capacity of national and sub-national capacity on sound management of mercury and waste	Annually	Project Manager UNDP Country Office Project consultants	Project progress report Project consultant report Training and capacity workshop report
		Outcome Indicator 3: **Inventories of stock of MCMDs and Hg waste at National Health Care Facilities (HCFs) completed** to facilitate collection, distribution and transport for temporary storage	**Inventories of stock of MCMDs and Hg waste at National Health Care Facilities (HCFs) completed**	Inventory on MCMDs and Hg waste at HFCs completed to enable Government to initiate actions on withdrawal and transport to safe temporary storage	Early stage of project implementation	Project Manager UNDP Country Office Project consultants	Project progress report Project consultant report Monitoring missions and site visits
	Project Outcome 2.1	**Outcome Indicator 4:** Total of 20 metric tons of mercury is collected, distributed and safety stored	Total of 20 metric tons of mercury is collected, distributed and safety stored	Quantity of mercury and waste collected from MCNDs at health care facilities	Annually (reported in Development Objective (DO) progress section of the GEF PIR), mid-term, closure	Project Manager UNDP Country Office Project consultants	Project progress report Project consultant report
	Project Outcome 3.1	**Outcome Indicator 5** At least three (3) technical guidelines developed and piloted	At least three (3) technical guidelines developed and piloted	Technical guidelines developed on lifecycle management of mercury-free alternatives	Annually	Project Manager UNDP Country Office Project consultants	Project progress report Project consultant report
	Project Outcome 3.2	**Outcome Indicator 6** 100% of targeted health care facilities have institutionalized mercury-free medical devices (MFMDs)	100% of targeted health care facilities have institutionalized mercury-free medical devices (MFMDs)	Number of health care facilities targeted and piloted on MCMDs replacement with MFMDs	Annually	Project Manager UNDP Country Office Project consultants	Project progress report Project consultant report
		Outcome Indicator 7	One pilot project at laboratory scale	One pilot project set up and equipment at a laboratory to	Annually	Project Manager	Project progress report

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Monitoring Plan							
	Results Monitoring	**Indicators**	**Targets**	**Description of indicators and targets**	**Frequency**	**Responsible for data collection**	**Means of verification**
		One (1) pilot at the laboratory scale for mercury stabilization and solidification is equipped and implemented	capacitated to perform mercury stabilization and solidification technology process	perform mercury stabilization and solidification technology		UNDP Country Office Project consultants	Project consultant report Monitoring missions and site visits
		Outcome Indicator 8 **Based on results of the pilot project, Hg stabilization and solidification strategies are upscaled at four (4) regional areas**	Mercury stabilization and solidification technology and strategies upscaled at four (4) selected regional areas	Four (4) regional set-ups able to perform mercury stabilization and solidification technology	Annually	Project Manager UNDP Country Office Project consultants	Project progress report Project consultant report Monitoring missions and site visits
	Project Outcome 3.3	**Outcome Indicator 9** **At least 200 targeted healthcare facilities, including 40% women-led establishments, across 5 provinces will gain access to affordable financing for** MFMDs through partnerships with at least one local bank in each location, which will have institutionalized gender-sensitive lending criteria	Affordable financing available to at least 2000 targeted healthcare facilities including at least 40% are women-led establishments	Healthcare facilities have access to affordable financing mechanism for MCMDs replacement with MFMDs	Annually	Project Manager UNDP Country Office Project consultants	Project progress report Project consultant report
	Project Outcome 4.1	**Outcome Indicator 10** Number of M&E activities conducted throughout project duration in compliance of GEF and UNDP requirements	30	M&E activities conducted	Annually	Project Manager UNDP Country Office Project consultants	Project progress report Project consultant report Monitoring and site visits
	Project Outcome 4.2	**Outcome Indicator 11** Lessons-learned and experience captured, documented and disseminated	10	Lessons-learned captured, document and disseminated to facilitate knowledge sharing	Annually	Project Manager UNDP Country Office	Project progress report Training and workshop report
		Outcome Indicator 12 Number of training sessions and/or public awareness workshops conducted	20	Awareness raising and capacity training sessions conducted	Annually	Project Manager UNDP Country Office	Project progress report Training and workshop report

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Monitoring Activity	Frequency/Timeframe	Expected Action	Partners (if joint)
Inception Workshop and Report	Inception Workshop within 2 months of the First Disbursement	Organization of Inception Workshop to validate project strategies, project activities, workplan, and implementation timeline	MoE, MoH, BRIN, UNDP
Track results progress (see above table for details)	Annually and at mid-point and closure	Monitor project progress, Slower than expected progress will be addressed by project management.	MoE, MoH, BRIN, UNDP
Monitor and Manage Risk	Quarterly	Risks are identified by project management and actions are taken to manage risk. The risk log is actively maintained to keep track of identified risks and actions taken.	MoE, MoH, BRIN, UNDP
Monitor of project safeguards management frameworks, environmental and social risks, gender action plans; and coordinating MCMDs phase-out plan and Hg Elimination	ongoing	Monitor project safeguards with regard to SESP and ESMF, Gender Action Plan, manage identified risks	MoE, MoH, BRIN, UNDP
Supervision Missions	Annually	Undertake supervision and recommend adaptative management strategies	MoE, MoH, BRIN, UNDP
Learning and Learning Missions	As needed	Relevant lessons are captured by the project team and used to inform management decisions.	MoE, MoH, BRIN, UNDP
Annual Project Quality Assurance	Annually	Areas of strength and weakness will be reviewed by project management and used to inform decisions to improve project performance.	MoE, MoH, BRIN, UNDP
Review and Make Course Corrections	At least annually	Performance data, risks, lessons and quality will be discussed by the project board and used to make course corrections.	MoE, MoH, BRIN, UNDP, PB/SC
Annual GEF Project Implementation Report (PIR)	Annually typically between June-September	Mandatory contribution by Project Team, CO and RTA. Strengths and weaknesses will be reviewed by project management and used to inform decisions to improve project performance	MoE, MoH, BRIN, UNDP
Project Review (Project Board)	At least annually)	Any quality concerns or slower than expected progress should be discussed by the project board and management actions agreed to address the issues identified.	Project Board

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Evaluation Plan

Evaluation Title	Partners (if joint)	Related Strategic Plan Output	UNSDCF/CPD Outcome	Planned Completion Date	Key Evaluation Stakeholders
Independent Mid-Term Review (MTR)	None	Natural resources protected and managed to enhance sustainable productivity and livelihoods **(**Signature Solution 4: Environment)	**UNDP CPD 2021-2025 Outcome 4:** Stakeholders adopt innovative and integrated development solutions to accelerate advancement towards the Sustainable Development Goals. **Indicative UNDP CPD 2026-2030 Outcome 2:** A lower carbon, climate resilient Indonesia succeeds advancing a just energy transition and the sustainable management of biodiversity and natural resources for the benefit and wellbeing of all.	15 July 2028	Implementing Partner, Project Beneficiaries, GEF Agency, PMU
Independent Terminal Evaluation (TE)	None	Natural resources protected and managed to enhance sustainable productivity and livelihoods **(**Signature Solution 4: Environment)	**UNDP CPD 2021-2025 Outcome 4:** Stakeholders adopt innovative and integrated development solutions to accelerate advancement towards the Sustainable Development Goals. **Indicative UNDP CPD 2026-2030 Outcome 2:** A lower carbon, climate resilient Indonesia succeeds advancing a just energy transition and the sustainable management of biodiversity and natural resources for the benefit and wellbeing of all.	By the TE submission date included on cover page of Project Document	Implementing Partner, Project Beneficiaries, GEF Agency, PMU

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Monitoring and Evaluation Budget for project execution:			
GEF M&E requirements to be undertaken by Project Management Unit (PMU)	**Primary Responsibility**	**Indicative costs (US$)**	**Timeline**
Inception Workshops	UNDP Country Office	30,000 ($6,000/workshop)	Within two months of project document signature, one national inception workshop and 4 regional inception workshops
Inception Workshop Report	Project Manager	None	Within two weeks of Inception Workshop
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	Quarterly, annually
Risk Management	• Project Manager • UNDP Country Office	None	Quarterly, annually
Monitoring of Indicators in Project Results Framework	• Project Manager • Working Group Coordinators Component 4	20,000 (4,000 per year)	Annually before PIR
GEF Project Implementation Report (PIR)	• Project Manager • UNDP Country Office • UNDP GEF Team	None	Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	• Project Manager • UNDP Country Office	7,700	On-going
Gender Action Plan	• Project Manager • UNDP Country Office • UNDP GEF Team • Gender Expert	15,000	On-going
Supervision missions	UNDP Country Office	None	Annually
Oversight missions	• UNDP GEF Team	None	Troubleshooting as needed
Learning Learned and Knowledge Sharing	• Project Manager • Working Group Coordinator Component 4	15,000	On-going
Independent Mid-term Review (MTR) and Management Response	UNDP Country Office and Project Team and UNDP-GEF Team	50,000	By the MTR submission date included on cover page of Project Document
Independent Terminal Evaluation (TE) including in UNDP evaluation plan, and Management Response	UNDP Country Office and Project Team and UNDP-GEF Team	50,000	By the TE submission date included on cover page of Project Document
Project Board Meetings	• Project Board • UNDP Country Office • Project Manager	10,000 (2,000/meeting)	At a minimum annually
TOTAL indicative COST		**197,700**	

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IX. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Section 1: General roles and responsibilities in the projects' governance mechanism

The **Implementing Partner (IP)** for this project is the Ministry of Environment (MoE or *KLH*).

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Overseeing the management of project risks as included in this project document and new risks that may emerge during project implementation.
- Procurement of goods and services, including human resources.
- Financial management, including overseeing financial expenditures against project budgets.
- Approving and signing the multiyear workplan.
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

Project stakeholders and target groups: This project will support the Government of Indonesia and key stakeholders in the healthcare sector in eliminating mercury from the distribution and supply chain of medical devices, directly working with 3,122 hospitals, 10,260 Primary Health Care (PHC) and more than 5,000 health care facilities located across Indonesia, in coordination with other ministries and agencies and relevant stakeholders, specially from the private sector

Collaboration between Ministries and Institution mechanism will be established by the project to jointly oversee the assessment and review of the policy, regulations, tools, action plans and guidelines required to improve the Regulatory Framework. In case of need to develop/update specific regulations/standards, and in coordination with appropriate private sector partners and other stakeholders such as civil society, the mechanism will provide the proper guidance to the project team on these activities.

It will also promote cooperation with relevant stakeholders to develop appropriate frameworks on green procurement standards and action plans to phase-in mercury-free medical devices at medical facilities, as well as to create mechanisms to support the long-term phase-out of mercury from the medical device production sector, and to cover any initial cost increases related to procurement of non-mercury devices by key medical facilities.

A circular economy approach that emphasizes reducing waste, reusing resources, and recycling materials, which aligns with the goal of transitioning to mercury-free medical devices, by engaging all stakeholders, including producers and importers, the government can ensure a sustainable and environmentally friendly supply chain for healthcare equipment, ultimately supporting public health and environmental protection.

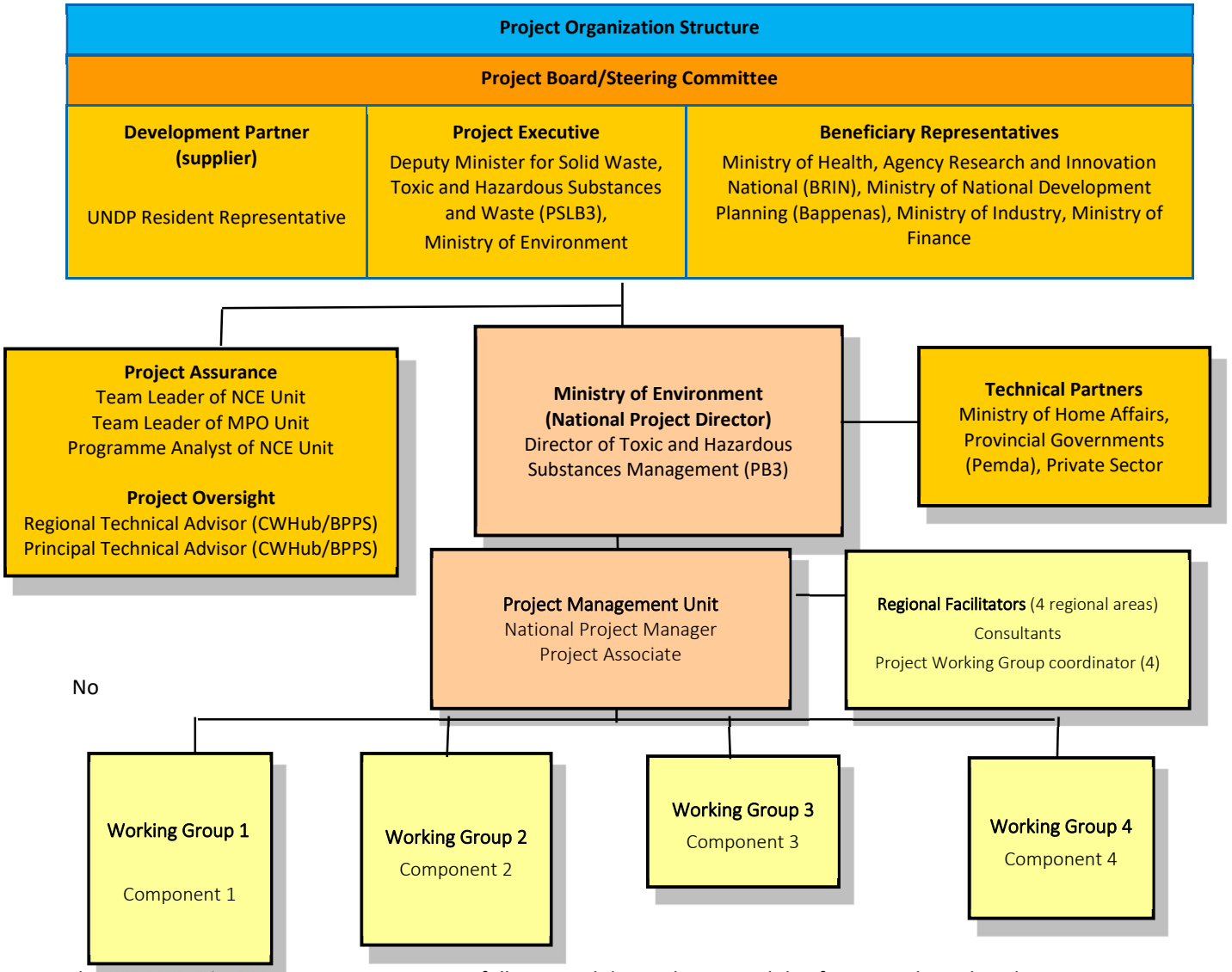
UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes overseeing project execution undertaken by the Implementing Partner to ensure that the project is being carried out in accordance with UNDP and GEF policies and procedures and the standards and provisions outlined in the Delegation of Authority (DOA) letter for this project. **The UNDP GEF Executive Coordinator, in consultation with UNDP Bureaus and the Implementing Partner, retains the right to revoke the project DOA, suspend or cancel this GEF project.** UNDP is responsible for the Project Assurance function in the project governance structure and presents to the Project Board and attends Project Board meetings as a non-voting member.

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Section 2: Project governance structure

The project organisation structure is as follows:

National Implementation Modality (NIM) for National Project



The UNDP Resident Representative assumes full responsibility and accountability for oversight and quality assurance of this Project and ensures its timely implementation in compliance with the GEF-specific requirements and UNDP's Programme and Operations Policies and Procedures (POPP), its Financial Regulations and Rules and Internal Control Framework. A representative of the UNDP Country Office will assume the assurance role and will present assurance findings to the Project Board, and therefore attends Project Board meetings as a non-voting member.

Section 3: Segregation of duties and firewalls vis-à-vis UNDP representation on the project board:

As noted in the Minimum Fiduciary Standards for GEF Partner Agencies, in cases where a GEF Partner Agency (i.e. UNDP) carries out both implementation oversight and execution of a project, the GEF Partner Agency (i.e. UNDP) must separate its project implementation oversight and execution duties, and describe in the relevant project document a: 1) Satisfactory institutional arrangement for the separation of implementation oversight and executing functions in different departments of the GEF Partner Agency; and 2) Clear lines of responsibility, reporting and

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accountability within the GEF Partner Agency between the project implementation oversight and execution functions. **In this case, UNDP is only performing an implementation oversight role in the project vis-à-vis our role in the project board and in the project assurance function and therefore a full separation of project implementation oversight and execution duties has been assured.**

Section 4: Roles and Responsibilities of the Project Organization Structure:

a) Project Board: All UNDP projects must be governed by a multi-stakeholder board or committee established to review performance based on monitoring and evaluation, and implementation issues to ensure quality delivery of results. The Project Board (also called the Project Steering Committee) is the most senior, dedicated oversight body for a project.

The two main (mandatory) roles of the project board are as follows:

1) **High-level oversight of the execution of the project by the Implementing Partner** (as explained in the "Provide Oversight" section of the POPP). This is the primary function of the project board and includes annual (and as-needed) assessments of any major risks to the project, and decisions/agreements on any management actions or remedial measures to address them effectively. The Project Board reviews evidence of project performance based on monitoring, evaluation and reporting, including progress reports, evaluations, risk logs and the combined delivery report. The Project Board is responsible for taking corrective action as needed to ensure the project achieves the desired results.

2) **Approval of strategic project execution decisions of the Implementing Partner** with a view to assess and manage risks, monitor and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution decisions of the Implementing Partner (as explained in the "Manage Change" section of the POPP).

Requirements to serve on the Project Board

- Agree to the Terms of Reference of the Board and the rules on protocols, quorum and minuting.
- Meet annually; at least once.
- Disclose any conflict of interest in performing the functions of a Project Board member and take all measures to avoid any real or perceived conflicts of interest. This disclosure must be documented and kept on record by UNDP.
- Discharge the functions of the Project Board in accordance with UNDP policies and procedures.
- Ensure highest levels of transparency and ensure Project Board meeting minutes are recorded and shared with project stakeholders.

Responsibilities of the Project Board

- ✓ Consensus decision making:
  - The project board provides overall guidance and direction to the project, ensuring it remains within any specified constraints, and providing overall oversight of the project implementation.
  - Review project performance based on monitoring, evaluation and reporting, including progress reports, risk logs and the combined delivery report;
  - The project board is responsible for making management decisions by consensus.
  - In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.
  - In case consensus cannot be reached within the Board, the UNDP representative on the board will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

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- ✓ Oversee project execution:
  - Agree on project manager's tolerances as required, within the parameters outlined in the project document, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded.
  - Appraise annual work plans prepared by the Implementing Partner for the Project; review combined delivery reports prior to certification by the implementing partner.
  - Address any high-level project issues as raised by the project manager and project assurance;
  - Advise on major and minor amendments to the project within the parameters set by UNDP and the donor and refer such proposed major and minor amendments to the UNDP BPPS Nature, Climate and Energy Executive Coordinator (and the GEF, as required by GEF policies);
  - Provide high-level direction and recommendations to the project management unit to ensure that the agreed deliverables are produced satisfactorily and according to plans.
  - Track and monitor co-financed activities and realisation of co-financing amounts of this project.
  - Approve the Inception Report, GEF annual project implementation reports, mid-term review and terminal evaluation reports.
  - Ensure commitment of human resources to support project implementation, arbitrating any issues within the project.
- ✓ Risk Management:
  - Provide guidance on evolving or materialized project risks and agree on possible mitigation and management actions to address specific risks.
  - Review and update the project risk register and associated management plans based on the information prepared by the Implementing Partner. This includes risks related that can be directly managed by this project, as well as contextual risks that may affect project delivery or continued UNDP compliance and reputation but are outside of the control of the project. For example, social and environmental risks associated with co-financed activities or activities taking place in the project's area of influence that have implications for the project.
  - Address project-level grievances.
- ✓ Coordination:
  - Ensure coordination between various donor and government-funded projects and programmes.
  - Ensure coordination with various government agencies and their participation in project activities.

Composition of the Project Board: The composition of the Project Board must include individuals assigned to the following three roles:

a. **Project Executive**: This is an individual who represents ownership of the project and chairs (or co-chairs) the Project Board. The Executive usually is the senior national counterpart for nationally implemented projects (typically from the same entity as the Implementing Partner), and it must be UNDP for projects that are direct implementation (DIM). In exceptional cases, two individuals from different entities can co-share this role and/or co-chair the Project Board. If the project executive co-chairs the project board with representatives of another category, it typically does so with a development partner representative. The Project Executive is the Deputy PSLB3 of MoE (KLH).

b. **Beneficiary Representative**: Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Civil society representative(s) will fulfil this role. The Beneficiary Representative role is held by a representative of the government or civil society. The Beneficiary Representative is: Ministry of Health (KEMENKES), National Research and Innovation Agency (BRIN), Ministry of Finance (KEMENKEU), Ministry of National Development Planning (BAPPENAS), Ministry of Industry (KEMENPERIN).

c. **Development Partner (Supplier):** is an individual or group representing the interests of the parties concerned which provide funding and/or technical expertise to the project (designing, developing, facilitating, procuring, implementing). The Development Partner's primary function within the Board is to provide guidance regarding the technical feasibility of the project. The Development Partner's role must have the authority to commit or

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acquire supplier resources required. If necessary, more than one person may be required for this role. Typically, the implementing partner, UNDP and/or donor(s) would be represented under this role. The Development Partner's is: The United Nations Development Programme (UNDP) Indonesia Resident Representative.

Project Assurance: Project assurance is the responsibility of each project board member; however, UNDP has a distinct assurance role for all UNDP projects in carrying out objective and independent project oversight and monitoring functions. UNDP performs quality assurance and supports the Project Board (and Project Management Unit) by carrying out objective and independent project oversight and monitoring functions, including compliance with the risk management and social and environmental standards of UNDP. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. Project assurance is totally independent of project execution.

A designated representative of UNDP playing the project assurance role is expected to attend all board meetings and support board processes as a non-voting representative. It should be noted that while in certain cases UNDP's project assurance role across the project may encompass activities happening at several levels (e.g. global, regional), at least one UNDP representative playing that function must, as part of their duties, specifically attend board meeting and provide board members with the required documentation required to perform their duties. The UNDP representative playing the main project assurance function is/are the **Team Leader of MPO Unit/Country Offic**e.

Project Management – Execution of the Project:

Project Director: The Director of Toxic and Hazardous Substances Management (PB3), Ministry of Environment will serve as the National Director of the Project. Among the responsibilities of the Implementation Partner there are: the planning and general management of the activities of the Project, the presentation of reports and accounting, the supervision of the other parties responsible for the implementation and the administration and audit of the use of project resources. Therefore, the **National Project Director** is responsible to the Project Board for:

a) The project's management and results, the achievement of its objectives, the use of its resources and the application of the rules and procedures.

b) The custody and proper use of the project inputs, and will provide, in accordance with the instructions in this document, the necessary advice on its use.

c) The presentation of financial reports and responsible for the custody and appropriate use of project funds.

d) The supervision of the responsible parties (if applicable).

The following activities are responsibility of the National Director of the Project and cannot be delegated in any case: a) Signature of the Project Document and its respective revisions, b) Signature/Conformity of the Combined Statement of Expenses (CDR) and Financial Reports (FACE), c) Performance the opening and management of the project's bank account (if applicable).

The National Project Director may designate a Coordinator who will be responsible for project management. The Coordinator will report to the National Director for the coordination, management, planning and supervision of the work teams and preparation of reports.

Project Management Unit (PMU), consisting of **National Project Manager** (NPM) and Project Associate (PA). The Project Manager (PM) is the senior most representative of the Project Management Unit (PMU) and is responsible for the overall day-to-day management of the project on behalf of the Implementing Partner, including the mobilization of all project inputs, supervision over project staff, responsible parties, consultants and sub-contractors. The project manager typically presents key deliverables and documents to the board for their review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk registers.

A designated representative of the PMU is expected to attend all board meetings.. The primary PMU representative attending board meetings **is the Project Manager**.

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X. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is **USD 41,899,883**. This is financed through a GEF Trust Fund grant of **USD 6,590,000** administered by UNDP, and additional support of **USD 35,309,883** . UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to UNDP bank account only.

Co-financing: The actual realization of project co-financing amounts will be monitored by the UNDP Country Office and the PMU on an annual basis in the GEF PIF and will be reported to the GEF during the mid-term review and terminal evaluation process as follows:

Co-financing source	Co-financing type	Name of Co-financier	Investment Mobilized	Co-financing amount
Recipient Country	In-kind	Ministry of Environment	Recurrent Expenditure	1,634,925
Recipient Country	In-kind	Ministry of Health	Recurrent Expenditure	1,807, 291
Recipient Country	Public Investment	National Research and innovation Agency (BRIN)	Investment Mobilized	666,667
Private Sector	Grant	Medical Devices Manufacturers, Importing Companies	Investment Mobilized	15,423,000
Private Sector	In-kind	Waste Management Companies	Recurrent Expenditure	14,778,000
GEF Agency	In-kind	UNDP	Recurrent Expenditure	1,000,000
Total				**35,309,883**

Budget Revision and Tolerance: As per UNDP POPP, the project board may agree with the project manager on a tolerance level for each detailed plan under the overall multi-year workplan. The agreed tolerance should be written in the project document or approved project board meeting minutes. It should normally not exceed 10 percent of the agreed annual budget at the activity level, but within the overall approved multi-year workplan at the activity level. Within the agreed tolerances, the project manager can operate without intervention from the project board. Restrictions apply as follows:

Should the following deviations occur, the Project Manager/IP through UNDP Country Office will seek the approval of the BPPS/NCE-VF team to ensure accurate reporting to the GEF. It is **strongly encouraged** to maintain the expenditures within the approved budget at the budgetary account and at the component level:

a) Budget reallocations must prove that the suggested changes in the budget will not lead to material changes in the results to be achieved by the project. A strong justification is required and will be approved on an exceptional basis. Budget re-allocations among the components (including PMC) of the approved Total Budget and Work Plans (TBWP) that represent a value greater than 10% of the total GEF grant.

b) Introduction of new outputs/activities (i.e. budget items) that were not part of the agreed project document and TBWP that represent a value greater than 5% of the total GEF grant. The new budget items must be eligible as per the GEF and UNDP policies.

c) Project management cost (PMC): budget under PMC component is capped and cannot be increased.

UNDP is not in a position to increase the total budget above the amount approved by the donor, therefore any over-expenditure would have to be absorbed from non-GEF resources by the Implementing Partner (GEF Executing Entity)

Project extensions: The UNDP-BPPS-NCE team Executive Coordinator must approve all requests for extension of the Project Completion Date and for other milestone extensions with hard deadlines. All extensions impose additional time and cost burdens at all levels and the GEF project budget cannot be increased beyond its originally approved amount. A single extension may be granted on an exceptional basis and subject to the conditions and maximum durations set out in the UNDP POPP. The project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs shall be covered by non-GEF resources; the additional UNDP oversight costs during the extension period must be covered by non-GEF resources, in accordance with UNDP's policy as set out in UNDP POPP.

For any extension request, UNDP CO and IP will consult and jointly present a clear plan indicating how and from which specific sources the additional oversight costs that will be incurred by UNDP will be covered during the

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extended period. The BPPS-NCE Executive Coordinator will consult the Regional Bureaux (RBX) and may reject the extension request if no (external co-financing by the IP or internal UNDP CO resources) can be identified.

All extension requests, along with all supporting documentation, shall be submitted by the IP to the UNDP CO in line with the requirements and within the deadlines set out in the UNDP SOPs and policies in UNDP POPP.

Audit: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop. If the Implementing Partner is an UN Agency, the project will be audited according to that Agencies applicable audit policies.

Transfer or disposal of assets: In consultation with the Implementing Partner and other parties of the project, UNDP is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project, however **must be done before the operational closure date**. In all cases of transfer, a transfer document must be prepared and kept on file[20]. The transfer should be done before Project Management Unit complete their assignments.

Completion Date: The project completion date is the date of Project Document Signature plus project duration. This date can only be extended through a formal extension request. Prior to completion date, all UNDP-financed inputs must be provided and related activities for the Project completed. No activities, except for the final clearance of the Terminal Evaluation Report and the corresponding management response and the end-of-project review Project Board Meeting should take place after the Completion Date.

Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

- **Operational Closure**: **Operational closure must happen within 9 months from project completion date.** Prior to operational closure, the Terminal Evaluation must have been submitted and the corresponding TE management response and the end-of-project review Project Board meeting must have been completed. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. Before Operational Closure, the project must have completed the transfer or disposal of any equipment that is still the property of UNDP.
- **Financial Closure: Financial closure must happen within 6 months of operational closure or after the date of cancellation.** The project will be financially closed when the following conditions have been met: a) the project is operationally completed or has been cancelled; b) the Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to BPPS/NCE for confirmation before the project will be financially closed in Quantum by the UNDP Country Office.

Cancellation and Suspension: All projects considering going through cancellation or suspension must follow UNDP and GEF requirements. Guidance can be found in the UNDP POPP (SOPs for management actions of Vertical Fund projects escalated to the Executive Coordinator and Guidance for GEF project revisions).

Refund to GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/NCE team Directorate in New York. No action is required by the UNDP Country Office on the actual refund from UNDP project to the GEF. Unspent project balance is not permitted to be transferred to any other projects.

[20] See https://popp.undp.org/ https://popp-prod.acquia.undp.org/policy-page/close-and-transition.

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XI. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Quantum Business Unit	*IDN10*		
Quantum Project ID:	TBD	Quantum Project Title:	Strengthening Indonesia's Reduction and Elimination in the Distribution and Supply Chain of Mercury from National Health (SIRENE)
Quantum Award ID:	TBD	Quantum Award Title:	Strengthening Indonesia's Reduction and Elimination in the Distribution and Supply Chain of Mercury from National Health (SIRENE)
UNDP-GEF PIMS No.	9660		
Implementing Partner	Ministry of Environment (MoE)		

Quantum Outcome (GEF Component)	Quantum Output and Activity (GEF Outcome)	Quantum Responsible Party (UNDP, IP, or Responsible Party)	Quantum Fund ID	Quantum Donor ID	Quantum Budgetary Account Code	Quantum Budget Account Description	Amount Year {2026} (USD)	Amount Year {2027} (USD)	Amount Year {2028} (USD)	Amount Year {2029} (USD)	Amount Year {2030} (USD)	Total (USD)	See Budget Note
Component 1: Policy and regulatory frameworks strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector	**Outcome 1.1:** Regulations/policies developed or strengthened, proposed and/or operationalized to prohibit the use of MCMDs in health care facilities	**MoE**	62000	010003	71300	Local Consultants	61,150	25,900	12,950			100,000	1
			62000	010003	71600	Travel	60,000	40,000				100,000	2
			62000	010003	75700	Training, Workshops and Conferences	36,000	36,000	18,000			90,000	3
		Total Outcome 1.1					**157,150**	**101,900**	**30,950**			**290,000**	
	Outcome 1.2: Sensitive and inclusive Capacity Building activities carried out for government staff (both national and sub-national) to enhance policy enforcement and oversight.	**MoE**	62000	010003	71300	Local Consultant	55,400	50,525	19,075			125,000	4
			62000	010003	71600	Travel	60,000	120,000	60,000			240,000	5
			62000	010003	72500	Supplies	3,000	5,000	5,000	2,000		15,000	6
			62000	010003	72800	Information Technology Equipmt	30,000					30,000	7
			62000	010003	71800	Contractual Services - Individual	5,000	5,000	5,000	5,000	5,000	25,000	8
			62000	010003	74500	Miscellaneous Expenses	5,000	5,000	5,000	5,000	5,000	25,000	9
			62000	010003	75700	Training, Workshops and Conferences	47,500	95,000	47,500			190,000	10
		Total Outcome 1.2					**205,900**	**280,525**	**141,575**	**12,000**	**10,000**	**650,000**	
Total Component 1							**363,050**	**382,425**	**172,525**	**12,000**	**10,000**	**940,000**	
Component 2: Technical and institutional capacities of private sector	**Outcome 2.1:** MCMDs and their wastes are collected, stabilized (solidified) and disposed of in	**MoE**	62000	010003	71300	Local Consultants	66,500	146,250	99,250	48,000		360,000	11
			62000	010003	71600	Travel	56,800	56,800	56,400			170,000	12
			62000	010003	72100	Contractual Services - Companies		80,000	10,000	10,000		100,000	13

stakeholders enhanced on MCMDs phase-out and environmentally sound mercury-containing medical waste management improved	environmentally sound manner, in accordance with national regulations, international guidelines and Best Environmental Practices (BEP) and based on Gender sensitive principles		62000	010003	72200	Equipment and Furniture		25,000	24,900			49,900	14
			62000	010003	72500	Supplies		10,000		10,000		20,000	15
			62000	010003	72800	Information Technology Equipment	20,000					20,000	16
			62000	010003	75700	Training, Workshops and Conferences	5,000	5,000	5,000	5,000	5,000	25,000	17
			62000	010003	75700	Training, Workshops and Conferences	106,250	106,250	106,250	106,250		425,000	18
		Total Outcome 2.1					**254,550**	**429,300**	**301,800**	**179,250**	**5,000**	**1,169,900**	
Total Component 2							**254,550**	**429,300**	**301,800**	**179,250**	**5,000**	**1,169,900**	
Component 3: Circular models are developed and piloted to promote and sustain the large scale replacement to mercury-free alternatives for MCMDs.	**Outcome 3.1:** Technical guidelines developed on lifecycle management of mercury-free alternatives	**MoE**	62000	010003	71300	Local Consultants		75,500	77,850			153,350	19
			62000	010003	71600	Travel		27,200	27,200	25,600		80,000	20
			62000	010003	72200	Equipment and Furniture		20,000				20,000	21
			62000	010003	75700	Training, Workshops and Conferences		28,000	28,000	28,000	26,000	110,000	22
		Total Outcome 3.1						**150,700**	**133,050**	**53,600**	**26,000**	**363,350**	
	Outcome 3.2: Mercury-free medical devices piloted in selected health care facilities, collection and recycling guidelines developed for end-of-life products and disposal technologies/strategies piloted taking into consideration gender and social inclusive approaches	**MoE**	62000	010003	71200	International Consultants		45,000	45,000	21,000	15,000	126,000	23
			62000	010003	71300	Local Consultants		55,000	69,800	79,450	44,400	248,650	24
			62000	010003	71600	Travel		180,000	180,000	170,000	170,000	700,000	25
			62000	010003	72100	Contractual Services - Companies		80,000	20,000	10,000		110,000	26
			62000	010003	72200	Equipment and Furniture		10,000				10,000	27
			62000	010003	72300	Materials and Goods		160,000	230,000	140,000	150,000	680,000	28
			62000	010003	72500	Supplies		5,000	5,000	5,000	5,000	20,000	29
			62000	010003	72100	Contractual Services - Companies	17,000	17,000	17,000	17,000	17,000	85,000	30
			62000	010003	74500	Miscellaneous Expenses		5,000	5,000	5,000	5,000	20,000	31
			62000	010003	72100	Contractual Services - Companies		200,000	200,000	200,000	200,000	800,000	32
			62000	010003	75700	Training, Workshops and Conferences		50,000	50,000	50,000	40,000	190,000	33
		Total Outcome 3.2					**17,000**	**807,000**	**821,800**	**697,450**	**646,400**	**2,989,650**	
	Outcome 3.3: Financing mechanisms to support replication and scale up of MCMDs replacement in collaboration with local fund providers/banks assessed	**MoE**	62000	010003	71300	Local Consultants		11,000	11,000	29,500	9,900	61,400	34
			62000	010003	71600	Travel			13,600	13,600	12,800	40,000	35
			62000	010003	72100	Contractual Services - Companies			31,690			31,690	36
			62000	010003	72500	Supplies		7,000	7,000	7,000	7,000	28,000	37
			62000	010003	72800	Information Technology Eqquipmt	10,000					10,000	38
			62000	010003	75700	Training, Workshops and Conferences		28,000	28,000	28,000	26,000	110,000	39
		Total Outcome 3.3					**10,000**	**46,000**	**91,290**	**78,100**	**55,700**	**281,090**	

Total Component 3							**27,000**	**1,003,700**	**1,046,140**	**829,150**	**728,100**	**3,634,090**	
Component 4: Project results monitored, documented, and shared	**Outcome 4.1:** Monitoring and evaluation activities carried out as per GEF requirements	**MoE**	62000	010003	71200	International Consultants			10,000			10,000	40
			62000	010003	71300	Local Consultants	8,820	8,820	8,820	12,520	8,820	47,800	41
			62000	010003	71600	Travel	10,500	10,500	10,500	10,500	10,000	52,000	42
			62000	010003	75700	Training, Workshops and Conferences		10,000	10,000	10,000	10,000	40,000	43
		Total Outcome 4.1					**19,320**	**29,320**	**39,320**	**33,020**	**28,820**	**149,800**	
	Outcome 4.2: Learning and knowledge sharing activities carried out and knowledge products developed and shared (including lessons-learned from the perspective of gender-equality and social inclusion implementation)	**MoE**	62000	010003	71200	International Consultants				10,000	10,000	20,000	44
			62000	010003	71300	Local Consultants				7,400	42,600	50,000	45
			62000	010003	71600	Travel	10,940	10,940	10,940	10,940	10,940	54,700	46
			62000	010003	72100	Contractual Services - Companies		10,000	10,000	10,000	10,000	40,000	47
			62000	010003	75700	Training, Workshops and Conferences		5,000	5,000	5,000	5,000	20,000	48
		Total Outcome 4.2					**10,940**	**25,940**	**25,940**	**43,340**	**78,540**	**184,700**	
Total Component 4							30,260	**55,260**	65,260	**76,360**	**107,360**	**334,500**	
Monitoring and Evaluation (M&E)	Monitoring and Evaluation (M&E)	**UNDP**	62000	010003	71200	International Consultants			35,000		35,000	70,000	49
			6200	010003	71300	Local Consultants	4,540	4,540	19,540	4,540	19,540	52,700	50
		MoE	62000	010003	71600	Travel	7,000	7,000	7,000	7,000	7,000	35,000	51
			62000	010003	75700	Training, Workshops and Conferences	32,000	2,000	2,000	2,000	2,000	40,000	52
		Total M&E					**43,540**	**13,540**	**63,540**	**13,540**	**63,540**	**197,700**	
							43,540	**91,324**	**151,324**	**101,324**	**144,688**	**532,200**	
Project Management Component	PMC	**MoE**	62000	010003	71800	Contractual Services - Impl. Partner	55,500	55,500	55,500	55,500	55,500	277,500	53
		UNDP	62000	010003	74100	Professional Services		9,100	9,100	9,100	9,010	36,310	54
	Total Project Management Cost						**55,500**	**64,600**	**64,600**	**64,600**	**64,510**	**313,810**	
Total Project Grant							**773,900**	**1,948,825**	**1,713,865**	**1,174,900**	**978,510**	**6,590,000**	

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Budget Notes

Budget Note No.	Budget Note (Description)
Component 1: Policy and regulatory frameworks strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector	
Outcome 1.1: Regulations/policies developed or strengthened, proposed and/or operationalized to prohibit the use of MCMDs in health care facilities	
1	a) One Working Group Coordinator (WGC1) for Component 1 for a total of 70 weeks at $1,100/week for years 1-3, 35 weeks charged to Outcome 1.1, and 35 weeks to Outcome 1.2, Sub-total $38,500; b) One Project Assistant for Working Group 1, for a total of 70 weeks at $750/week for years 1-3, 35 weeks charged to Outcome 1.1, and 35 weeks to Outcome 1.2, sub-total $26,250; c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks over 5 years, 13 weeks for year 1 at $1,100/week charged to Outcome 1.1, rounded up to $14,500; d) One Project Assistant for Working Group 4, for a total of 115 weeks, 13 weeks for year 1 at $750/week charged to Outcome 1.1, sub-total $9,750; e) Consultant for review, development and strengthening of policies, regulations and guidelines, 10 weeks at $1,100/week, subtotal $11,000. **Total $100,000**
2	Costs of travel of personnel from the national and sub-national government agencies, healthcare facilities and relevant entities to participate in five (5) two-day regional policies review and development workshops, 45 participants at each workshop, 3 workshops in year 1, and 2 workshops in year 2 at $20,000 per workshop, **total $100,000**
3	Conduct five (5) two-day regional policies review and development workshops with 45 participants at each workshops, plus audio/visual equipment rental and supplies at $18,000 per workshop, **total $90,00**
Outcome 1.2: Sensitive and inclusive Capacity Building activities carried out for government staff (both national and sub-national) to enhance policy enforcement and oversight.	
4	a) One Working Group Coordinator (WGC1) for Component 1 for a total of 70 weeks at $1,100/week for years 1-3, 35 weeks charged to Outcome 1.1, and 35 weeks to Outcome 1.2, Sub-total $38,500; b) One Project Assistant for Working Group 1 (WG1), total 70 weeks at $750/week for years 1-3, 35 weeks charged to Outcome 1.1, and 35 weeks to Outcome 1.2, sub-total $26,250; c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks, 20 weeks at $1,100/week for year 1 charged to Outcome 1.2, sub-total $22,000; d) One Project Assistant for Working Group 4, for a total of 115 weeks over 5 years, 20 weeks at $750/week charged to Outcome 1.2, sub-total $15,000; e) Consultant to conduct capacity building training of national and sub-national government staff to enhance policy enforcement and oversight, 11 weeks at $1,100/week, rounded up to $12,250; f) Consultant to develop method and mechanism to conduct inventory of Hg wastes and MCMDs, 10 weeks at $1,100/week, sub-total $11,000. **Total $125,000**
5	Costs of travel for personnel from national and sub-national government agencies, healthcare facilities and related entities to participate in four (4) regional workshops on revised and newly developed and updated policies, regulations and guidelines, one workshop each for years 1 and 3, 2 workshops year 2, with 150 participants at each three-day workshop, at $60,000 per workshop, **total $240,000**
6	Supplies for Working Groups and Regional Facilitators for years 1-4 of operation and for development of policies, regulations and guideline, **total 15,000**
7	IT equipment for PMU (NPM and PA), four (4) Working Groups (1 WGC and 1 PA for each Working Group) and four (4) Regional Facilitators for a total of 14 persons for a total $60,000. **$30,000 charged to Outcome 1.2 (Budget Note No. 7)**, $20,000 charged to Outcome 2.1 (Budget Note No. 16), and $10,000 charged to Outcome 3.3 (Budget Note 38)
8	Technical Expert (Individual Consultant) to oversee yearly project site level engagement activities to ensure the enforcement of best practices and replication of local regulations and standards, and the implementation of appropriate technical measures across sub-regencies and regencies.
9	Miscellaneous expenses to support review and establishment of policies, regulations and guidelines, the Working Groups and Regional Facilitators at $5,000 per year for 5 years, total $25,000
10	Conduct four (4) regional training workshops on revised and newly developed policies, regulations and guidelines, one workshop each for years 1 and 3, two workshops in year 2 with 150 participants for each workshop, at $47,500 per workshop, **total $190,000**
Component 2: Technical and institutional capacities of private sector stakeholders enhanced on MCMDs phase-out and environmentally sound mercury-containing medical waste management improved	
Outcome 2.1: MCMDs and their wastes are collected, stabilized (solidified) and disposed of in environmentally sound manner, in accordance with national regulations, international guidelines and Best Environmental Practices (BEP) and based on Gender sensitive principles	

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11	a) One Working Group Coordinator (WGC2) for Component 2 for a total of 80 weeks at $1,100/week , year 1=30 weeks, year 2=30 weeks, year 3=20 weeks, total $88,000; b) One Project Assistant for Working Group 2 for Component 2, total 80 weeks at $750/week, 30 weeks each for years 1 and 2 , and 20 weeks for year 3, total $60,000; c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks over 5 years. 17 weeks at $1,100/wee charged to Outcome 2.1, sub-total $18,700; d) One Project Assistant for Working Group 4 for Component 4 for a total of 115 weeks over 5 years. 17 weeks at $750/week charged to Outcome 2.1, sub-total $12,750; e) Consultant for the development of at least three (3) national technical guidance for collecting, distributing and temporary storage, and at least 5 national training modules on collecting, packaging, distributing and temporary storage 10 weeks at $1,100/week, sub-total $11,000; f) Consultant to develop best practices and standards on GESI and conduct assessment to ensure implementation, 10 weeks at $1,100/week, sub-total $11,000; g) Consultant to conduct training at four (4) project locations on collection, distribution, temporary storage and management of plastic waste and technical electromedical (Output 2.1.2). 7 weeks at $1,100/week, sub-total $7,700; h) Consultant to conduct training on pilot plant for up-scaling to the four project locations, 6 weeks at $1,100/week, rounded up to sub-total $6,850; i) Four (4) Regional Facilitators for 48 weeks each (16 weeks per year) for Years 2-4 at $750/week, sub-total $144,000. **Total $360,000**
12	Cost of travel for personnel of national and sub-national government agencies, healthcare facilities on implementation and monitoring of MCMDs inventory, collection, distribution and temporary storage, 8 trips per year for years 1 to 3, $7,100/trip for 18 participants at each trip, **rounded down to $170,000**
13	Subcontracts for a) Detail Engineering Design (DED) of temporary storage, b) Establishment of temporary storage, and c) Technical electromedical of MFMD, **total $100,000**
14	Equipment for conducting inventory, collection, packaging, distribution and temporary storage of an estimated 750,000 units of MCMDs and contaminated plastic at national healthcare facilities, **total $49,900**
15	Supplies and materials to support collection, packaging, distribution and temporary storage of MCMDs and contaminated plastic at healthcare facilities, **total $20,000**
16	IT equipment for PMU (NPM and PA), four (4) Working Groups (1 WGC and 1 PA for each Working Group) and four (4) Regional Facilitators for a total of 14 persons for a total $60,000. $30,000 charged to Outcome 1.2 (Budget Note No. 7), **$20,000 charged to Outcome 2.1 (Budget Note No. 16)**, and $10,000 charged to Outcome 3.3 (Budget Note 38)
17	Yearly Technical Assistance Activities at Project sites: annual capacity building/campaigns will be held in each project site to stretch local presence of project technical teams, facilitate exchange of experience and consultation, collect feedback/inputs from local stakeholders to improve project execution particularly focusing on the enforcement-related activities. (US $ 5,000 year x 5 years timeframe = US 25,000)
18	Conduct four (4) regional gender equity and social inclusion (GESI) capacity strengthening workshops for personnel of national and sub-national government agencies, healthcare facilities and relevant stakeholders, each 2-day training workshops will be attended by 500 participants at $106,250 per workshop, **total $425,000**
Component 3: Circular models are developed and piloted to promote and sustain the large scale replacement to mercury-free alternatives for MCMDs	
Outcome 3.1: Technical guidelines developed on lifecycle management of mercury-free alternatives	
19	a) One Working Group Coordinator (WGC3) for Component 3 for a total 114 weeks at $1,100/weeks for years 2-5. 30 weeks each for years 2-4, 24 weeks for year 5. 54 weeks charge to Outcome 3.1, 60 weeks charged to Outcome 3.2, sub-total 54 weeks at $59,400; b) One Project Assistant for Working Group 3 for a total 114 weeks at $750/weeks for years 2-5.. 30 weeks each for year 2-4, 24 weeks for year 5. 54 weeks charged to Outcome 3.1, 60 weeks charged to Outcome 3.2, sub-total for 60 weeks at $40,500; c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks over 5 years. 17 weeks at $1,100/week; sub-total $18,700; d) One Project Assistant for Working Group 4 for a total of 115 weeks over 5 years. 17 weeks at $750/week charged to Outcome 3.1, sub-total $12,750; e) Consultant to develop technical guidelines for circular economy of recycling/disposal strategy, 20 weeks at $1,100/week, sub-total $22,000. **Total $153,350**
20	Cost of travel to regional healthcare facilities and sub-national government agencies, 24 trips for years 2-4 at $3,400 per trip, **rounded down to $80,000**
21	Equipment to support guideline development and its pilot, **$20,000**
22	Conduct a total of 20 meetings/ technical sessions/training workshops years 2-4 at $5,600 per workshop, **rounded down to $110,000**
Outcome 3.2: Mercury-free medical devices piloted in selected health care facilities, collection and recycling guidelines developed for end-of-life products and disposal technologies/strategies piloted taking into consideration gender and social inclusive approaches	
23	International consultant to support stabilization and solidification , 36 weeks at $3,500/week, **total $126,000**
24	a) One Working Group Coordinator (WGC3) for Component 3 for a total 114 weeks at $1,100/weeks for years 2-5. 30 weeks each for years 2-4, 24 weeks for year 5. 54 weeks charge to Outcome 3.1, 60 weeks charged to Outcome 3.2, sub-total 60 weeks at $66,000;

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	b) One Project Assistant for Working Group 3 for a total of 114 weeks at $750/weeks for years 2-5 . 30 weeks each for years 2-4, 24 weeks for year 5, 54 weeks charge to Outcome 3.1, 60 weeks charged to Outcome 3.2, sub-total 60 weeks $45,000; c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks. 9 weeks at $1,100/week charged to Outcome 3.2, sub-total $9,900; d) One Project Assistant for Working Group 4 for a total of 115 weeks 9 weeks at $750/week charged to Outcome 3.2, sub-total $6,750; e) Consultant to develop Gender Sensitive guidelines and training materials and conduct training, 30 weeks at $1,100/week, sub-total $33,000; f) Consultant for MFMD pilot, 80 weeks over 4 years, 35 weeks for years 2 and 3, 10 weeks year, at $1,100/week, sub-total $88,000. **Total $248,650**
25	Costs of travel to support national healthcare facilities on the collection, packaging, distribution and temporary storage of MCMDs and contaminated plastic, 200 trips over 5 years at $3,500 per trip covering collection from sub-regencies to the 514 regencies in the 38 provinces, and from the 514 regencies to the four (4) regional project sites, **total $700,000**
26	Subcontract for implementation of mercury stabilization and solidification facility and replication, **total $110,000**
27	Equipment to support collection, distribution and temporary storage of MCMDs and plastics from healthcare facilities, **$10,000**
28	Materials and goods for safe temporary storage of estimated 750,000 pieces of MCMDs at four (4) regional project sites after collection and transported to the regional project sites, but before solidification, consists of cargo containers for MCMDs (2 at each of the 4 project sites =$40,000), appropriate containers for safe temporary storage of damaged MCMDs (10 each at each of the 4 project site, $40,000), and steel containers for storage and transport to final temporary storage site (25 each at the 4 regional project sites and the four (4) laboratories, $600,000) for final temporary storage, **total $680,000**
29	Supplies to support collection, distribution and temporary storage of MCMDs and contaminated plastic, **$20,000**
30	Engage qualified service provider (company) for the oversight of collection, distribution and temporary storage of MCMDs and contaminated plastics at healthcare facilities, including the establishment of proper MRV systems and final reporting to Project Board, as well on-site technical assistance during the collection, distribution, and temporary storage of MCMDs and contaminated plastics at healthcare facilities. total $85,000
31	Miscellaneous expenses to support collection, distribution and temporary storage of MCMDs and contaminated plastic at national and sub-national healthcare facilities, $5,000 per year for years 2-5, total $20,000
32	Contractual services-Company to provide services related to ensuring packaging and carry on of nation-wide collection and transport of MCMDs from the sub-regencies to the 514 regencies ($668,000) in the 38 provinces, and rom the 514 regencies to the four (4) regional project sites ($132,000). total $800,000
33	Conduct 34 meetings/ technical sessions/ training workshops at $5,600 per workshop years 2-5, **rounded down to $190,000**
Outcome 3.3: Financing mechanisms to support replication and scale up of MCMDs replacement in collaboration with local fund providers/banks assessed	
34	a) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks over 5 years, 10 weeks charged to Outcome 3.2 at $1,100/weeks, sub-total $11,000; b) One Project Assistant for Working Group 4 for a total of 115 weeks over 5 years, 10 weeks charged to Outcome 3.2 at $750/weeks, sub-total $7,500; c) Consultant to develop financing mechanism, 39 weeks at $1,100/week, rounded up to total $42,900. **Total $61,400**
35	Costs of travel to facilitate development and establishment regional financial mechanism, 12 trips at $3,400 per trip, **rounded down to $40,000**
36	Subcontract for establishing financial access, **total $31,690**
37	Supplies to support financial mechanism development and replication, $7,000 per year for years2-5, **total $28,000**
38	IT equipment for PMU (NPM and PA), four (4) Working Groups (1 WGC and 1 PA for each Working Group) and four (4) Regional Facilitators for a total of 14 persons for a total $60,000. $30,000 charged to Outcome 1.2 (Budget Note No. 7), $20,000 charged to Outcome 2.1 (Budget Note No. 16), and **$10,000 charged to Outcome 3.3 (Budget Note 38)**
39	Conduct 20 meetings/technical sessions/training workshops years 2-5 at $5,600 per workshop, **rounded down to $110,000**
Component 4: Project results monitored, documented, and shared	
Outcome 4.1: Monitoring and evaluation activities carried out as per GEF requirements	
40	International consultant to support environmental and social safeguard implementation and assessment, 20 working days at $500/day, **total $10,000**
41	a) Social and Environmental Safeguards Expert for 23 weeks at $1,100/week rounded down to $25,950. (Total 31 weeks over the 5 year, 24 weeks under Outcome 4.1, 7 weeks under M&E); b) Gender Expert (Total 30 weeks over 5 years. 16.5 weeks charged to Outcome 4.1, 13.5 weeks charged to M&E). 16.5 weeks sub-total $18,150;

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	c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks over 5 years. 2 weeks at $1,100/week charged to Outcome 4.1 , sub-total $2,200; d) Project Assistant for WG4, 2 weeks at $750/week, sub-total $1,500. **Total $47,800**
42	Cost of travel for safeguards, progress monitoring, 15 trips at 3 trips per year at $3,500/trip, **round down to $52,500**
43	Conduct 8 meeting/technical sessions/training workshops at $5,000 per workshop, **total $40,000**
Outcome 4.2: Learning and knowledge sharing activities carried out and knowledge products developed and shared (including lessons-learned from the perspective of gender-equality and social inclusion implementation)	
44	International consultant for awareness raising strategy and knowledge sharing, 40 working days at $500/day, **total $20,000**
45	a) One working Group Coordinator (WGC4) for a total of 115 weeks over 5 year. 27 weeks at $1,100/week charged to Outcome 4.2, sub-total $29,750. Total 115 weeks are covered by budgets allocated under Outcomes 1.1, 1.2, 2.1, 3.1, 3.2, 3.3, 4.1 and 4.2; b) One Project Assistant for Working Group 4 for a total of 115 weeks over 5 years. 27 weeks at $750/week charged to Outcome 4.2, sub-total $20,250. (Total of 115 weeks are covered with budgets allocated under Outcomes 1.1, 1.2, 2.1, 3.1, 3.2, 3.3, 4.1 and 4.2.) **Total $50,000**
46	Cost of travel for monitoring project progress, core indicators and M&E monitoring, 16 trips over 5 years at $3,400 per trip, **rounded up to $54,700**
47	Contract services for development of awareness raising plan and its implementation, **total $40,000**
48	Miscellaneous covering supplies, printing, publication at $5,000 per year for years 2-5, **total $20,000**
Project Monitoring and Evaluation (M&E)	
49	International consultant(s) to conduct MTR and TE at $35,000 each, **total $70,000**
50	a) Local consultant to conduct MTR and TE at $15,000 each; b) Social and Environmental Safeguards Expert for 7 weeks at $1,100/week = $7,700; and c) Gender Expert for 13.5 weeks at $1,100/week rounded up to $15,000, **Total $52,700**
51	M&E activities Travel at $7,000/year, **total $35,000**
52	One national and 4 regional Inception workshops at $6,000/workshop, sub-total $30,000; One Project Board meeting each year for 5 years at $2,000/year, sub-total $10,000. **Total $40,000**
Project Management Cost	
53	PMU personnel for 5 years project duration: a) One National Project Manager, 150 weeks at $1,350/week = $202,500; b) One Project Assistant, 100 weeks at $750/week = $75,000. **Total $277,500**
54	UNDP Annual audit costs at $9,010/year for Year 2, and 9,100/year for Years 3-5, **Total $36,310**

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XII. LEGAL CONTEXT

The project document shall be the instrument envisaged and defined in the Supplemental Provisions to the Project Document, attached hereto and forming an integral part hereof, as "the Project Document".

This project will be implemented by the Ministry of Environment ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

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XIII. RISK MANAGEMENT

1. Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

   a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;

   b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the United Nations Security Council Consolidated Sanctions List, and that no UNDP funds received pursuant to the Project Document are used for money laundering activities. The United Nations Security Council Consolidated Sanctions List can be accessed via https://www.un.org/securitycouncil/content/un-sc-consolidated-list.

4. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

   (a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").

   (b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment. SH may occur in the workplace or in connection with work. While typically involving a pattern of conduct, SH may take the form of a single incident. In assessing the reasonableness of expectations or perceptions, the perspective of the person who is the target of the conduct shall be considered.

5. a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:

   i. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;

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ii. Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;

iii. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof;

iv. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and

v. Promptly and confidentially, record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

6. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

7. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

8. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to regional areas, relevant personnel, information, and documentation.

9. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds.

10. In the implementation of the activities under this Project Document, UNDP places reasonable reliance upon the Implementing Partner for it to apply its laws, regulations and processes, and applicable international laws regarding anti money laundering and countering the financing of terrorism, to ensure consistency with the principles of then in force the UNDP Anti-Money Laundering and Countering the Financing of Terrorism Policy.

11. The Implementing Partner will ensure that its financial management, anti-corruption, anti-fraud and anti-money laundering and countering the financing of terrorism policies are in place and enforced for all funding received from or through UNDP.

12. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

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13. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.
14. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

    Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.
15. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud, corruption or other financial irregularity, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.

    Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud, corruption or other financial irregularity, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

    Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.
16. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.
17. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.
18. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, mutatis mutandis, in all sub-contracts or sub-agreements entered into further to this Project Document.

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XIV. MANDATORY ANNEXES

1. GEF Budget Template (available from BPPS NCE team)
2. GEF Execution Support Letter
3. Project Map and geospatial coordinates of the project area
4. Multiyear Workplan
5. Social and Environmental Screening Procedure (SESP)
6. UNDP Risk Register
7. Overview of technical consultancies/subcontracts
8. Stakeholder Engagement Plan
9. Environmental Social Management Framework (ESMF)
10. Gender Analysis and Gender Action Plan
11. Procurement Plan – for first year of implementation especially GEF focal area specific annexes (e.g. METT, GHG calculations, target landscape profile, feasibility study, other technical reports)
12. Signed LOA between UNDP and IP requesting UNDP Support Services (if required on exceptional basis and authorized by the GEF)
13. Letter of Financial Commitments
14. Terms of Reference for Project Board and Project Team
15. Response to comments of STAP, Germany and Switzerland
16. GEF and/or LDCF/SCCF Core indicators (see template below)
17. GEF Taxonomy (see template below)
18. Results of the Partners Capacity Assessment Tool (PCAT) and HACT Micro Assessment
19. UNDP Project Quality Assurance Report (to be completed in UNDP online corporate planning system)

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Annex 1: GEF Budget Template

Expenditure Category	Detailed Description	Component (USDeq.)								*Sub-Total*	*Monitoring and Evaluation*	*Project Management Cost (PMC)*	Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)
		Component 1		Component 2	Component 3			Component 4						
		Outcome 1.1	Outcome 1.2	Outcome 2.1	Outcome 3.1	Outcome 3.2	Outcome 3.3	Outcome 4.1	Outcome 4.2					
Equipment	IT equipment for PMU (NPM and PA), four (4) Working Groups (1 WGC and 1 PA for each Working Group) and four (4) Regional Facilitators for a total of 14 persons for a total $60,000. **$30,000 charged to Outcome 1.2 (Budget Note No. 7)**, $20,000 charged to Outcome 2.1 (Budget Note No. 16), and $10,000 charged to Outcome 3.3 (Budget Note 38)		30,000							***30,000***			**30,000**	**MoE**
Equipment	Equipment for conducting inventory, collection, packaging, distribution and temporary storage of an estimated 750,000 units of MCMDs and contaminated plastic at national healthcare facilities, **total $49,900**			49,900						***49,900***			**49,900**	**MoE**
Equipment	IT equipment for PMU (NPM and PA), four (4) Working Groups (1 WGC and 1 PA for each Working Group) and four (4) Regional Facilitators for a total of 14 persons for a total $60,000. $30,000 charged to Outcome 1.2 (Budget Note No. 7), **$20,000 charged to Outcome 2.1 (Budget Note No. 16)**, and $10,000 charged to Outcome 3.3 (Budget Note 38)			20,000						***20,000***			**20,000**	**MoE**
Equipment	Equipment to support guideline development and its pilot, **$20,000**				20,000					***20,000***			**20,000**	**MoE**
Equipment	Equipment to support collection, distribution and temporary storage of MCMDs and plastics from healthcare facilities, **$10,000**					10,000				***10,000***			**10,000**	**MoE**
Equipment	Materials and goods for safe temporary storage of estimated 750,000 pieces of MCMDs at four (4) regional project sites after collection and transported to the regional project sites, but before solidification, consists of cargo containers for MCMDs (2 at each of the 4 project sites =$40,000), appropriate containers for safe temporary storage of damaged MCMDs (10 each at each of the 4 project site, $40,000), and steel containers for storage and transport to final temporary storage site (25 each at the 4 regional project sites and the four (4) laboratories, $600,000) for final temporary storage, **total $680,000**					680,000				***680,000***			**680,000**	**MoE**
Equipment	IT equipment for PMU (NPM and PA), four (4) Working Groups (1 WGC and 1 PA for each Working Group) and four (4) Regional Facilitators for a total of 14 persons for a total $60,000. $30,000 charged to Outcome 1.2 (Budget Note No. 7), $20,000 charged to Outcome 2.1 (Budget Note No. 16), and **$10,000 charged to Outcome 3.3 (Budget Note 38)**						10,000			***10,000***			**10,000**	**MoE**

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Expenditure Category	Detailed Description	Component (USDeq.)								*Sub-Total*	*Monitoring and Evaluation*	*Project Management Cost (PMC)*	Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)
		Component 1		Component 2	Component 3			Component 4						
		Outcome 1.1	Outcome 1.2	Outcome 2.1	Outcome 3.1	Outcome 3.2	Outcome 3.3	Outcome 4.1	Outcome 4.2					
Contractual services-Individual	PMU personnel for 5 years project duration: a) One National Project Manager, 150 weeks at $1,350/week = $202,500; b) One Project Assistant, 100 weeks at $750/week = $75,000. **Total $277,500**									-		277,500	**277,500**	**MoE**
Contractual services-Company	Subcontracts for a) Detail Engineering Design (DED) of temporary storage, b) Establishment of temporary storage, and c) Technical electromedical of MFMD, **total $100,000**			100,000						***100,000***			**100,000**	**MoE**
Contractual services-Company	Subcontract for implementation of mercury stabilization and solidification facility and replication, **total $110,000**					110,000				***110,000***			**110,000**	**MoE**
Contractual services-Company	Subcontract for establishing financial access, total **$31,690**						31,690			***31,690***			**31,690**	**MoE**
Contractual services-Company	Contract services for development of awareness raising plan and its implementation, **total $40,000**								*40,000*	***40,000***			**40,000**	**MoE**
International Consultants	International consultant to support stabilization and solidification , 36 weeks at $3,500/week, **total $126,000**					126,000				***126,000***			**126,000**	**MoE**
International Consultants	International consultant to support environmental and social safeguard implementation and assessment, 20 working days at $500/day, **total $10,000**							10,000		***10,000***			**10,000**	**MoE**
International Consultants	International consultant for awareness raising strategy and knowledge sharing, 40 working days at $500/day, **total $20,000**								*20,000*	***20,000***			**20,000**	**MoE**
International Consultants	International consultant(s) to conduct MTR and TE at $35,000 each, **total $70,000**									-	70,000		**70,000**	**UNDP**
Local Consultants	a) One Working Group Coordinator (WGC1) for Component 1 for a total of 70 weeks at $1,100/week for years 1-3, 35 weeks charged to Outcome 1.1, and 35 weeks to Outcome 1.2, Sub-total $38,500; b) One Project Assistant for Working Group 1, for a total of 70 weeks at $750/week for years 1-3, 35 weeks charged to Outcome 1.1, and 35 weeks to Outcome 1.2, sub-total $26,250; c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks over 5 years, 13 weeks for year 1 at $1,100/week charged to Outcome 1.1, rounded up to $14,500; d) One Project Assistant for Working Group 4, for a total of 115 weeks, 13 weeks for year 1 at $750/week charged to Outcome 1.1, sub-total $9,750; e) Consultant for review, development and strengthening of policies, regulations and guidelines, 10 weeks at $1,100/week, subtotal $11,000. **Total $100,000**	100,000								***100,000***			**100,000**	**MoE**

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Expenditure Category	Detailed Description	Component (USDeq.)												
		Component 1		Component 2	Component 3			Component 4		*Sub-Total*	*Monitoring and Evaluation*	*Project Management Cost (PMC)*	Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)
		Outcome 1.1	Outcome 1.2	Outcome 2.1	Outcome 3.1	Outcome 3.2	Outcome 3.3	Outcome 4.1	Outcome 4.2					
Local Consultants	a) One Working Group Coordinator (WGC1) for Component 1 for a total of 70 weeks at $1,100/week for years 1-3, 35 weeks charged to Outcome 1.1, and 35 weeks to Outcome 1.2, Sub-total $38,500; b) One Project Assistant for Working Group 1 (WG1), total 70 weeks at $750/week for years 1-3, 35 weeks charged to Outcome 1.1, and 35 weeks to Outcome 1.2, sub-total $26,250; c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks, 20 weeks at $1,100/week for year 1 charged to Outcome 1.2, sub-total $22,000; d) One Project Assistant for Working Group 4, for a total of 115 weeks over 5 years, 20 weeks at $750/week charged to Outcome 1.2, sub-total $15,000; e) Consultant to conduct capacity building training of national and sub-national government staff to enhance policy enforcement and oversight, 11 weeks at $1,100/week, rounded up to $12,250; f) Consultant to develop method and mechanism to conduct inventory of Hg wastes and MCMDs, 10 weeks at $1,100/week, sub-total $11,000. **Total $125,000**		125,000							***125,000***			**125,000**	**MoE**
Local Consultants	a) One Working Group Coordinator (WGC2) for Component 2 for a total of 80 weeks at $1,100/week , year 1=30 weeks, year 2=30 weeks, year 3=20 weeks, total $88,000; b) One Project Assistant for Working Group 2 for Component 2, total 80 weeks at $750/week, 30 weeks each for years 1 and 2 , and 20 weeks for year 3, total $60,000; c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks over 5 years. 17 weeks at $1,100/wee charged to Outcome 2.1, sub-total $18,700; d) One Project Assistant for Working Group 4 for Component 4 for a total of 115 weeks over 5 years. 17 weeks at $750/week charged to Outcome 2.1, sub-total $12,750; e) Consultant for the development of at least three (3) national technical guidance for collecting, distributing and temporary storage, and at least 5 national training modules on collecting, packaging, distributing and temporary storage 10 weeks at $1,100/week, sub-total $11,000; f) Consultant to develop best practices and standards on GESI and conduct assessment to ensure implementation, 10 weeks at $1,100/week, sub-total $11,000; g) Consultant to conduct training at four (4) project locations on collection, distribution, temporary storage and management of plastic waste and technical electromedical (Output 2.1.2). 7 weeks at $1,100/week, sub-total $7,700; h) Consultant to conduct training on pilot plant for up-scaling to the four project locations, 6 weeks at $1,100/week, rounded up to sub-total $6,850; i) Four (4) Regional Facilitators for 48 weeks each (16 weeks per year) for Years 2-4 at $750/week, sub-total $144,000. **Total $360,000**			360,000						***360,000***			**360,000**	**MoE**

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Expenditure Category	Detailed Description	Component (USDeq.)								*Sub-Total*	*Monitoring and Evaluation*	*Project Management Cost (PMC)*	Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)
		Component 1		Component 2	Component 3			Component 4						
		Outcome 1.1	Outcome 1.2	Outcome 2.1	Outcome 3.1	Outcome 3.2	Outcome 3.3	Outcome 4.1	Outcome 4.2					
Local Consultants	a) One Working Group Coordinator (WGC3) for Component 3 for a total 114 weeks at $1,100/weeks for years 2-5. 30 weeks each for years 2-4, 24 weeks for year 5. 54 weeks charge to Outcome 3.1, 60 weeks charged to Outcome 3.2, sub-total 54 weeks at $59,400; b) One Project Assistant for Working Group 3 for a total 114 weeks at $750/weeks for years 2-5.. 30 weeks each for year 2-4, 24 weeks for year 5. 54 weeks charged to Outcome 3.1, 60 weeks charged to Outcome 3.2, sub-total for 60 weeks at $40,500; c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks over 5 years. 17 weeks at $1,100/week; sub-total $18,700; d) One Project Assistant for Working Group 4 for a total of 115 weeks over 5 years. 17 weeks at $750/week charged to Outcome 3.1, sub-total $12,750; e) Consultant to develop technical guidelines for circular economy of recycling/disposal strategy, 20 weeks at $1,100/week, sub-total $22,000. **Total $153,350**				153,350					***153,350***			**153,350**	**MoE**
Local Consultants	a) One Working Group Coordinator (WGC3) for Component 3 for a total 114 weeks at $1,100/weeks for years 2-5. 30 weeks each for years 2-4, 24 weeks for year 5. 54 weeks charge to Outcome 3.1, 60 weeks charged to Outcome 3.2, sub-total 60 weeks at $66,000; b) One Project Assistant for Working Group 3 for a total of 114 weeks at $750/weeks for years 2-5 . 30 weeks each for years 2-4, 24 weeks for year 5, 54 weeks charge to Outcome 3.1, 60 weeks charged to Outcome 3.2, sub-total 60 weeks $45,000; c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks. 9 weeks at $1,100/week charged to Outcome 3.2, sub-total $9,900; d) One Project Assistant for Working Group 4 for a total of 115 weeks 9 weeks at $750/week charged to Outcome 3.2, sub-total $6,750; e) Consultant to develop Gender Sensitive guidelines and training materials and conduct training, 30 weeks at $1,100/week, sub-total $33,000; f) Consultant for MFMD pilot, 80 weeks over 4 years, 35 weeks for years 2 and 3, 10 weeks year, at $1,100/week, sub-total $88,000. **Total $248,650**					248,650				***248,650***			**248,650**	**MoE**
Local Consultants	a) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks over 5 years, 10 weeks charged to Outcome 3.2 at $1,100/weeks, sub-total $11,000; b) One Project Assistant for Working Group 4 for a total of 115 weeks over 5 years, 10 weeks charged to Outcome 3.2 at $750/weeks, sub-total $7,500; c) Consultant to develop financing mechanism, 39 weeks at $1,100/week, rounded up to total $42,900. **Total $61,400**						61,400			***61,400***			**61,400**	**MoE**

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Expenditure Category	Detailed Description	Component (USDeq.)												
		Component 1		Component 2	Component 3			Component 4		*Sub-Total*	*Monitoring and Evaluation*	*Project Management Cost (PMC)*	Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)
		Outcome 1.1	Outcome 1.2	Outcome 2.1	Outcome 3.1	Outcome 3.2	Outcome 3.3	Outcome 4.1	Outcome 4.2					
Local Consultants	a) Social and Environmental Safeguards Expert for 23 weeks at $1,100/week rounded down to $25,950. (Total 31 weeks over the 5 year, 24 weeks under Outcome 4.1, 7 weeks under M&E); b) Gender Expert (Total 30 weeks over 5 years. 16.5 weeks charged to Outcome 4.1, 13.5 weeks charged to M&E). 16.5 weeks sub-total $18,150; c) One Working Group Coordinator (WGC4) for Component 4 for a total of 115 weeks over 5 years. 2 weeks at $1,100/week charged to Outcome 4.1 , sub-total $2,200; d) Project Assistant for WG4, 2 weeks at $750/week, sub-total $1,500. **Total $47,800**							47,800		***47,800***			**47,800**	**MoE**
Local Consultants	a) One working Group Coordinator (WGC4) for a total of 115 weeks over 5 year. 27 weeks at $1,100/week charged to Outcome 4.2, sub-total $29,750. Total 115 weeks are covered by budgets allocated under Outcomes 1.1, 1.2, 2.1, 3.1, 3.2, 3.3, 4.1 and 4.2; b) One Project Assistant for Working Group 4 for a total of 115 weeks over 5 years. 27 weeks at $750/week charged to Outcome 4.2, sub-total $20,250. (Total of 115 weeks are covered with budgets allocated under Outcomes 1.1, 1.2, 2.1, 3.1, 3.2, 3.3, 4.1 and 4.2.) **Total $50,000**								*50,000*	***50,000***			**50,000**	**MoE**
Local Consultants	a) Local consultant to conduct MTR and TE at $15,000 each; b) Social and Environmental Safeguards Expert for 7 weeks at $1,100/week = $7,700; and c) Gender Expert for 13.5 weeks at $1,100/week rounded up to $15,000, **Total $52,700**									-	52,700		**52,700**	**UNDP**
Training, Workshops, Meetings	Conduct five (5) two-day regional policies review and development workshops with 45 participants at each workshops, plus audio/visual equipment rental and supplies at $18,000 per workshop, **total $90,000**	90,000								***90,000***			**90,000**	**MoE**
Training, Workshops, Meetings	Conduct four (4) regional training workshops on revised and newly developed policies, regulations and guidelines, one workshop each for years 1 and 3, two workshops in year 2 with 150 participants for each workshop, at $47,500 per workshop, total **$190,000**		190,000							***190,000***			**190,000**	**MoE**
Training, Workshops, Meetings	Conduct four (4) regional gender equity and social inclusion (GESI) capacity strengthening workshops for personnel of national and sub-national government agencies, healthcare facilities and relevant stakeholders, each 2-day training workshops will be attended by 500 participants at $106,250 per workshop, total **$425,000**			425,000						***425,000***			**425,000**	**MoE**

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Expenditure Category	Detailed Description	Component (USDeq.)								Sub-Total	Monitoring and Evaluation	Project Management Cost (PMC)	Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)
		Component 1		Component 2	Component 3			Component 4						
		Outcome 1.1	Outcome 1.2	Outcome 2.1	Outcome 3.1	Outcome 3.2	Outcome 3.3	Outcome 4.1	Outcome 4.2					
Training, Workshops, Meetings	Conduct a total of 20 meetings/ technical sessions/training workshops years 2-4 at $5,600 per workshop, upto **$110,000**				110,000					***110,000***			**110,000**	**MoE**
Training, Workshops, Meetings	Conduct 34 meetings/ technical sessions/ training workshops at $5,600 per workshop years 2-5, upto **$190,000**					190,000				***190,000***			**190,000**	**MoE**
Training, Workshops, Meetings	Conduct 20 meetings/technical sessions/training workshops years 2-5 at $5,600 per workshop, **upto $110,000**						110,000			***110,000***			**110,000**	**MoE**
Training, Workshops, Meetings	Conduct 8 meeting/technical sessions/training workshops at $5,000 per workshop, **total $40,000**							40,000		***40,000***			**40,000**	**MoE**
Training, Workshops, Meetings	One national and 4 regional Inception workshops at $6,000/workshop, sub-total $30,000; One Project Board meeting each year for 5 years at $2,000/year, sub-total $10,000. **Total $40,000**									-	*40,000*		**40,000**	**MoE**
Travel	Costs of travel of personnel from the national and sub-national government agencies, healthcare facilities and relevant entities to participate in five (5) two-day regional policies review and development workshops, 45 participants at each workshop, 3 workshops in year 1, and 2 workshops in year 2 at $20,000 per workshop, **total $100,000**	100,000								***100,000***			**100,000**	**MoE**
Travel	Costs of travel for personnel from national and sub-national government agencies, healthcare facilities and related entities to participate in four (4) regional workshops on revised and newly developed and updated policies, regulations and guidelines, one workshop each for years 1 and 3, 2 workshops year 2, with 150 participants at each three-day workshop, at $60,000 per workshop, **total $240,000**		240,000							***240,000***			**240,000**	**MoE**
Travel	Cost of travel for personnel of national and sub-national government agencies, healthcare facilities on implementation and monitoring of MCMDs inventory, collection, distribution and temporary storage, 8 trips per year for years 1 to 3, $7,100/trip for 18 participants at each trip, rounded down to **$170,000**			170,000						***170,000***			**170,000**	**MoE**
Travel	Cost of travel to regional healthcare facilities and sub-national government agencies, 24 trips for years 2-4 at $3,400 per trip, upto **$80,000**				80,000					***80,000***			**80,000**	**MoE**
Travel	Costs of travel to support national healthcare facilities on the collection, packaging, distribution and temporary storage of MCMDs and contaminated plastic, 200 trips over 5 years at $3,500 per trip covering collection from sub-regencies to the 514 regencies in the 38 provinces, **and from the 514 regencies to the four (4) regional project sites, total $700,000**					700,000				***700,000***			**700,000**	**MoE**

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Expenditure Category	Detailed Description	Component (USDeq.)								*Sub-Total*	*Monitoring and Evaluation*	*Project Management Cost (PMC)*	Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)
		Component 1		Component 2	Component 3			Component 4						
		Outcome 1.1	Outcome 1.2	Outcome 2.1	Outcome 3.1	Outcome 3.2	Outcome 3.3	Outcome 4.1	Outcome 4.2					
Travel	Costs of travel to facilitate development and establishment regional financial mechanism, 12 trips at $3,400 per trip, upto **$40,000**						40,000			***40,000***			**40,000**	**MoE**
Travel	Cost of travel for safeguards, progress monitoring, 15 trips at 3 trips per year at $3,500/trip, **upto $52,500**							52,000		***52,000***			**52,000**	**MoE**
Travel	Cost of travel for monitoring project progress, core indicators and M&E monitoring, 16 trips over 5 years at $3,400 per trip, upto **$54,700**								*54,700*	***54,700***			**54,700**	**MoE**
Travel	M&E activities Travel at $7,000/year, **total $35,000**									-	35,000		**35,000**	**MoE**
Office Supplies	Supplies for Working Groups and Regional Facilitators for years 1-4 of operation and for development of policies, regulations and guideline, **total 15,000**		15,000							***15,000***			**15,000**	**MoE**
Office Supplies	Supplies and materials to support collection, packaging, distribution and temporary storage of MCMDs and contaminated plastic at healthcare facilities, **total $20,000**			20,000						***20,000***			**20,000**	**MoE**
Office Supplies	Supplies to support collection, distribution and temporary storage of MCMDs and contaminated plastic, **$20,000**					20,000				***20,000***			**20,000**	**MoE**
Office Supplies	Supplies to support financial mechanism development and replication, $7,000 per year for years2-5, **total $28,000**						28,000			***28,000***			**28,000**	**MoE**
Other Operating Costs	Rental and maintenance of premises for PMU, Working Groups and Regional Facilitators, at $5,000 per year for 5 years, **total $25,000**		25,000							***25,000***			**25,000**	**MoE**
Other Operating Costs	Miscellaneous expenses to support review and establishment of policies, regulations and guidelines, the Working Groups and Regional Facilitators at $5,000 per year for 5 years, **total $25,000**		25,000							***25,000***			**25,000**	**MoE**
Other Operating Costs	Rental and maintenance of premises for PMU, Working Groups and Regional Facilitators, at $5,000 per year, for 5 years, **total $25,000**			25,000						***25,000***			**25,000**	**MoE**
Other Operating Costs	Rental and maintenance of premises to support Working Groups, Regional Facilitators and Project Management Unit IPMU) for the collection, distribution and temporary storage of MCMDs and contaminated plastic at healthcare facilities at $17,000 per year, **total $85,000**					85,000				***85,000***			**85,000**	**MoE**
Other Operating Costs	Miscellaneous expenses to support collection, distribution and temporary storage of MCMDs and contaminated plastic at national and sub-national healthcare facilities, $5,000 per year for years 2-5, **total $20,000**					20,000				***20,000***			**20,000**	**MoE**

Expenditure Category	Detailed Description	Component (USDeq.)												
		Component 1		Component 2	Component 3			Component 4		*Sub-Total*	*Monitoring and Evaluation*	*Project Management Cost (PMC)*	Total (USDeq.)	Responsible Entity (Executing Entity receiving funds from the GEF Agency)
		Outcome 1.1	Outcome 1.2	Outcome 2.1	Outcome 3.1	Outcome 3.2	Outcome 3.3	Outcome 4.1	Outcome 4.2					
Other Operating Costs	Transportation costs for nation-wide collection and transport of MCMDs from the sub-regencies to the 514 regencies ($668,000) in the 38 provinces, and rom the 514 regencies to the four (4) regional project sites ($132,000), **total $800,000**					800,000				***800,000***			**800,000**	**MoE**
Other Operating Costs	Miscellaneous covering supplies, printing, publication at $5,000 per year for years 2-5, **total $20,000**								*20,000*	***20,000***			**20,000**	**MoE**
Other Operating Costs	UNDP Annual audit costs at $9,010/year for Year 2, and 9,100/year for Years 3-5, **Total $36,310**									-		*36,310*	**36,310**	**UNDP**
Grand Total		**290,000**	**650,000**	**1,169,900**	**363,350**	**2,989,650**	**281,090**	**149,800**	**184,700**	**6,078,490**	**197,700**	**313,810**	**6,590,000**	

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Annex 2: GEF execution support letter

Not applicable

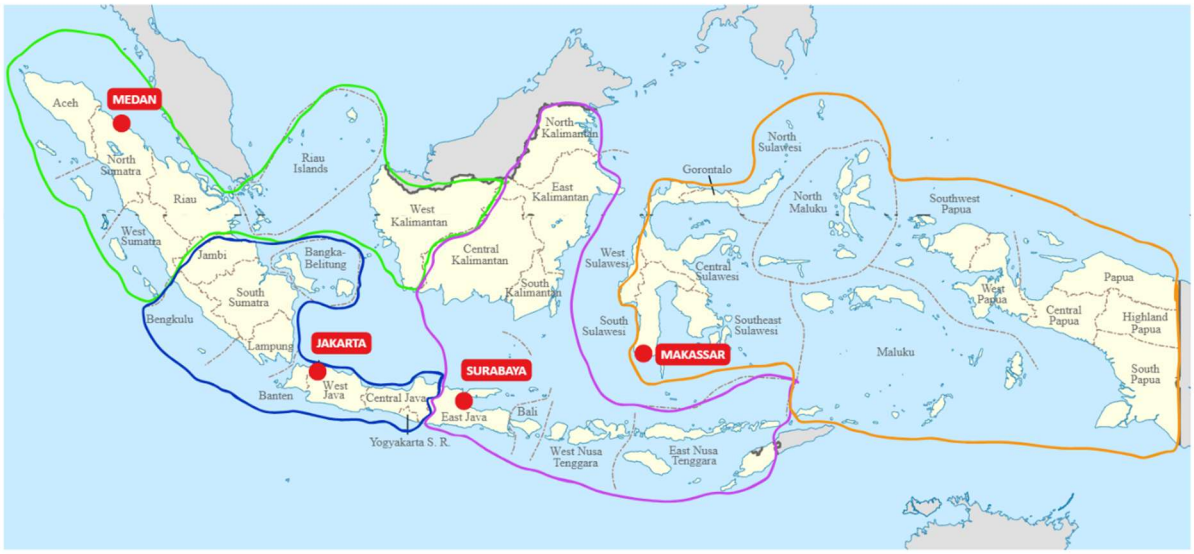
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Annex 3: Project map and Geospatial Coordinates of regional areas

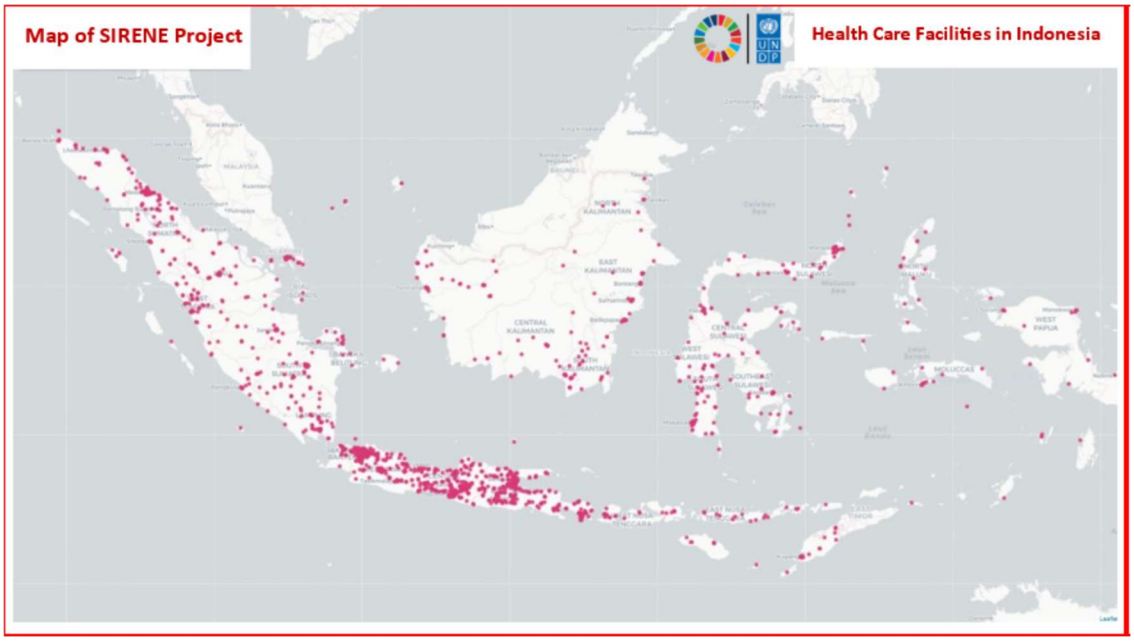
This project is managing the mercury collected from health care facilities and gold mining that no longer use mercury. Mercury management is carried out from the collection stage at the storage depot, transporting to the location of waste processing facilities, mercury processing itself. The mercury waste is processed in the stabilization equipment. Then, it is processed in the solidification equipment. After that, the solidified mercury is stored at temporary storage facilities.

The equipment will be placed by cluster in the four (4) priority regional areas, namely Sumatera (cover only Sumatera), Kalimantan (cover only Kalimantan), Sulawesi (cover Sulawesi, Maluku, and Papua), and Java (cover Java, Bali, and Nusa Tenggara).

The points of location as illustrate in the following figure



The SIRENE Project will have impacts on these following health care facilities in Indonesia:



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Annex 4: Multi Year Work Plan

	Outcomes	Outputs	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4	Q 1	Q 2	Q 3	Q 4
Component 1: Policy and regulatory frameworks strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector	**Outcome 1.1:** Regulations/ policies developed or strengthened, proposed and/or operationalized to prohibit the use of MCMDs in health care facilities.	**Output 1.1.1:** Regulatory and policy frameworks proposed for total phase out the use of mercury-containing medical devices.																				
		Output 1.1.2: Gender-sensitive regulatory and policy framework concerning mercury collection, distribution, temporary storage, and disposal developed/ strengthened..																				
	Outcome 1.2: Sensitive and inclusive Capacity Building activities carried out for government staff (both national and sub-national) to enhance policy enforcement and oversight.	**Output 1.2.1:** Coordination and cooperation mechanisms between central and local governments established and strengthened.																				
		Output 1.2.2: Phase-out of use of MCMDs oversight and Hg elimination commitments enforced for health facilities																				
		Output 1.2.3: All levels of Governmental institutions in charge of the regulatory systems for mercury collection, distribution, and storage capacitated in new rules and regulations																				
		Output 1.2.4: Inventories of stocks of Hg wastes and MCMDs are updated and assessed and real situation of mercury use, collection and storage in Health Care Facilities (HCF) are known.																				

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Component 2: Technical and institutional capacities of private sector stakeholders enhanced on MCMDs phase-out and environmentally sound mercury-containing medical waste management improved	**Outcome 2.1:** MCMDs and their wastes are collected, stabilized (solidified) and disposed of in environmentally sound manner, in accordance with national regulations, international guidelines and Best Environmental Practices (BEP) and based on Gender sensitive principles	**Output 2.1.1:** Technical guidance/ guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established																			
		Output 2.1.2: Health facility management capacities to adopt mercury-free medical devises are strengthened through gender-sensitive capacity building																			
		Output 2.1.3: Pilot plant for mercury temporary storage from medical devices containing mercury established																			
		Output 2.1.4: Gender and Social Inclusive (GESI) awareness programme on MCMDs replacement, collection and disposal to health facilities is created and implemented																			
Component 3: Circular models are developed and piloted to promote and sustain the large scale replacement to mercury-free alternatives for MCMDs	**Outcome 3.1:** Technical guidelines developed on lifecycle management of mercury-free alternatives	**Output 3.1:1:** Circular models for mercury-free medical devices (MFMDs) to support MCMDs accelerated replacement assessed																			
		Output 3.1.2: Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed																			
	Outcome 3.2: Mercury-free medical devices piloted in	**Output 3.2.1:** Medical Devices manufacturers, distributors, and suppliers had																			

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	selected health care facilities, collection and recycling guidelines developed for end-of-life products and disposal technologies/ strategies piloted taking into consideration gender and social inclusive approaches	incorporated circular economy principles on disposal of Hg-based and electronic-based devices in their CSRs and/or other relevant internal practices, Policies, or strategies.																				
		Output 3.2.2: One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented																				
		Output 3.2.3: Solidification strategies and solutions upscaled to 4 (four) locations in partnership with Public-Private selected institutions																				
	Outcome 3.3: Financing mechanisms to support replication and scale up of MCMDs replacement in collaboration with local fund providers/banks assessed	**Output 3.3.1:** Development of gender-sensitive financing mechanisms that explored in collaboration with local fund providers/banks and new/revamped finance solutions proposed.																				
Component 4: Project results monitored, documented, and shared	**Outcome 4.1:** Monitoring and evaluation activities carried out as per GEF requirements	**Output 4.1.1:** Assessed and applied Social and Environmental Screening Procedure (SESP																				
		Output 4.1.2: Gender Action Plan and awareness raising activities on collection, transport, storage and disposal of mercury and mercury waste.																				
		Output 4.1.3: Periodic monitoring, and reporting, Project Implementation Reports (PIR), Mid-Term Review and Terminal Evaluation.																				

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	Outcome 4.2: Learning and knowledge sharing activities carried out and knowledge products developed and shared (including lessons-learned from the perspective of gender-equality and social inclusion implementation	**Output 4.2.1:** Lessons-learned and best practices for knowledge management are collected and shared at national and international levels.																				

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Annex 5: UNDP Social and Environmental Screening Procedure (SESP)[21]

The completed template, which constitutes the Social and Environmental Screening Report, must be included as an annex to the Project Document at the design stage. Note: this template will be converted into an online tool. The online version will guide users through the process and will embed relevant guidance.

Project Information

Project Information	
1. Project Title	Strengthening Indonesia's Reduction and Elimination in the Distribution and Supply Chain of Mercury from National Health (SIRENE)
2. Project Number (i.e. Atlas project ID, PIMS+)	9660
3. Location (Global/Region/Country)	Indonesia
4. Project stage (Design or Implementation)	Design
5. Date	10.6..2025

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?

Briefly describe in the space below how the project mainstreams the human rights-based approach

This Project will support the government of Indonesia and relevant stakeholders in the healthcare sector to eliminate mercury in the distribution and supply chain of medical devices. The Project thus is directly contributing to the fulfillment of human rights-related obligations related to the protection of the health of the citizens stipulated in a number of international laws and treaties. The International Covenant on Economic, Social and Cultural Rights requires signatories to protect the highest attainable standard of health for its citizens. The right to health extends not only to timely and appropriate health care, but also to access to safe and potable water, an adequate supply of safe food, healthy occupational and environmental conditions, including through the prevention and reduction of the population's exposure to harmful substances such as harmful chemicals. Human rights-based approach has become central in the implementation of environmental pollution control international treaties such as he Basel, Rotterdam and Stockholm Conventions, as well as the Minamata Convention on Mercury. The Project will be an important contribution to the implementation of the Minamata convention in Indonesia, and therefore to the safeguarding of the people's right to safe and healthy environment.

Within the specific approaches of the project, the principles of human rights are also fully integrated including through:

- Supporting meaningful stakeholder participation and inclusion. Full and effective stakeholder engagement is promoted through capacity building/training to ensure the implemented actions are effective.
- Promoting accountability and rule of law (i.e. support implementation of existing mercury phasing-out legislation through closing enforcement and capacity gaps).
- Promoting respect for other relevant national and international human rights laws and conventions (e.g. CCPR - International Covenant on Civil and Political Rights (2006), the CEDAW - Convention on the Elimination of All Forms of Discrimination against Women (1984), and the CRC - Convention on the Rights of the Child (1990), CERD - International Convention on the Elimination of All Forms of Racial Discrimination (1999) where Indonesia is a party.

In the implementation of its activities the Project will adhere to international best practice where international or national human rights legislation does not provide sufficient guidance.

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment

[21] UNDP Social and Environmental Screening Template (v. July 2022)

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Mercury contamination in Indonesia's health sector poses a significant risk to both men and women, with disproportionate impacts on women in healthcare waste management, informal recycling, and patient care. The Project aims to eliminate mercury in the distribution and supply chain of medical devices, to ensure that both women and men equally benefit from mercury-free and safe work environments. This positive change will likely have larger effect on women, simply by virtue of their over-representation in the health care sector (patient care, medical waste handling), where the reduction of the risk of exposure to mercury is envisaged.

The project incorporates gender mainstreaming to promote equal participation, access to resources, and decision-making for men and women. The strategy includes:

- Ensuring women's participation in policy development and regulatory frameworks on hazardous waste management.
- Strengthening institutional capacities for gender-responsive mercury-free policies.
- Enhancing gender-disaggregated data collection on mercury exposure and its health impacts.
- Providing gender-sensitive capacity-building initiatives for health sector workers and waste management professionals.

Briefly describe in the space below how the project mainstreams sustainability and resilience

The Project primary objective is to reduce environmental pollution and contamination by the toxic mercury emissions. The Project will support the government of Indonesia and relevant stakeholders in the healthcare sector to eliminate mercury in the distribution and supply chain of medical devices through policies and regulations, establishing a system to track, collect and safely dispose of existing mercury-containing wastes through best available techniques and best available practices (BAT/BEP), and establishing a mechanism for the sustainable replacement of Mercury containing medical devices (MCMDs). The project will also support the circular practices of electronic medical devices that are free from mercury to prevent future buildup of e-waste from the healthcare sector.

This will directly reduce risk to ecosystems and human health by lowering of exposure to the toxic mercury and its harmful compounds, as well as the risk of its accumulation in the environment.

The Project capacity building and monitoring components will contribute to the increased resilience of the waste management in the medical sector and reduction of the risk of mismanagement and environmentally unsound hazardous waste handling practices. This will have positive effects beyond the medical sector and will complement other developments towards sustainable hazardous waste management.

Briefly describe in the space below how the project strengthens accountability to stakeholders

The Project support implementation of existing mercury phasing-out legislation through closing enforcement and capacity gaps, which are most pronounced in the geographically peripheral and otherwise disadvantaged communities. The Project focuses on reaching out and engaging with relevant stakeholders including the marginalized communities and to address their concerns and capacity gaps preventing them from phasing out and safely disposing of the MCMDs. The project nature will necessitate close interaction with those at risk of exposure to mercury through inappropriate disposal of obsolete devices, and mercury stockpiles and contaminated wastes. The raising of awareness, capacity building and guidance are envisaged also within the Action Plan for the Implementation of the Minamata Convention (2023), ensuring that risks to health of workers and communities alike will be managed in the long-term. A Stakeholder Engagement Plan has been prepared during the PPG to ensure a holistic approach that will involve all those affected by the project.

The Project implementation will be accompanied with grievance redress mechanism allowing for timely and meaningful addressing of stakeholders concerns and objections.

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Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Complete SESP Attachment 1 before responding to Question 2.*	**QUESTION 3: What is the level of significance of the potential social and environmental risks?** *Note: Respond to Questions 4 and 5below before proceeding to Question 5*			**QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High**
Risk Description (broken down by event, cause, impact)	***Impact and Likelihood (1-5)***	***Significance (Low, Moderate Substantial, High)***	***Comments (optional)***	***Description of assessment and management measures for risks rated as Moderate, Substantial or High***
Risk 1: Duty bearers, and other relevant stakeholders may fall short of capacities to meet their obligations in the Project upon the development of the new coordination and regulatory mechanisms. Event: Failure to collect, transport, and safely dispose Mercury containing medical devices (MCMDs) Cause: Lack of financial and human capacities of involved actors to adhere to the regulatory requirements and guidance. Impact: Increased risk of environmental contamination and public health impacts. Failure to reaching the objective of phasing out mercury in medical sector Principle: Leave No One Behind Human Rights; P.2 Relevant Project activities: The general lack of capacity of both duty bearers and rights holders applies to all activities. In particular activities under following outputs are susceptible to this risk:	I = 3 L = 4	Moderate	It is acknowledged that Indonesia already possess a significant regulatory framework consisted by by-laws, guidelines in relation to mercury management and use of mercury-based products prepared in connection with the implementation of the Minamata convention. However, it is the lack of financial and human capacities, namely in more peripheral regions that hinders the full implementation of the Mercury phasing out objective. That concerns both capacities at the level of individual health services operators, waste management operators, and environmental and public health authorities. Identification and addressing these gaps however is a central part of the Project rationale, i.e. the risk will be controlled throughout the systematic implementation of the Project activities.	**Assessment measures**: • Training needs assessment and develop a targeted training plan (guided by the SES) to ensure that the relevant officials receive adequate training to understand their new extended responsibilities arising from the improved Institutional and Regulatory Frameworks being developed by the project in terms of new legislation, guidelines and mandatory standards. • Training needs assessment will be integral part of the Project capacity building elements listed below, i.e. no additional dedicated targeted assessment measure is envisaged. Assessment measure/s owner/s: NPM **Management measures**: This is addressed through: • Project design, incorporated in Components 1 and 3 (capacity building activities constitute key elements of the Project) Following Project elements will address the risk: Activity 1.1.1: Establish an action plan to formulate proposals and training plan for the development and strengthening of regulatory and policy framework, and the strengthening of management and enforcement capacities

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Output 1.2.1: Coordination and cooperation mechanisms between central and local governments established and strengthened. 2.1.3: Pilot plant for temporary storage from medical devices containing mercury established. 3.2.2: One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented. 3.2.3: Hg stabilization and solidification strategies and solutions upscaled to four (4) locations in partnership with Public-Private selected institutions. Risk Owner: NPM				to facilitate the total phase-out of mercury-containing medical devices. At least five (5) action oriented implementation plans will be developed. Activities under the Output 1.2.3: All levels of Governmental institutions in charge of the regulatory systems for mercury collection, distribution, and storage capacitated in new rules and regulations Activities under the Output 2.1.1: Gender-sensitive technical guidance/guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established. Activities under Output 2.1.2: Health facility management capacities to adopt mercury-free medical devises are strengthened through gender-sensitive capacity building. (a) Similarly, the development of the capacities of private actors (i.e. hazardous waste operators) will be supported within the Project, namely through: Activities under the Output 3.1.2: Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed. Activity 3.2.1.2: CSR-Driven Education and Stakeholder Training for Sustainable MFMD Management. Activity 3.2.3.2: Operational implementation and capacity strengthening. Management measure/s owner/s: NPM
Risk 2 Inadequate participation of women in consultations, policy decision making and design of modalities for capacity building in uptake of non-mercury technologies and safe management and disposal of obsolete mercury devices **Event:** Lack of participation of women in design and decision-making on measures related to the MCMDs phase out and handling mercury contaminated wastes, as well as other relevant waste streams (e.g. e-waste from mercury-free substitutes).	I = 3 L = 4	Moderate	The Gender Analysis found a disproportionate number of women in the area of nursing in particular, and fair representation amongst the cleaning staff.	**Assessment measures**: Site-level environmental and social audits Assessment measure/s owner/s: NPM **Management measures**: This is addressed through: • Project design, incorporated in the activities listed below; and

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Cause: Women are disproportionally represented in low- and medium-level healthcare personnel, namely in caring and supporting professions (cleaning, maintenance) that directly work with MCMDs and are often in charge of their collection and disposal. However, women are also often under-represented in the management and executive positions responsible for design and implementation of safeguards and risk mitigation measures. **Impact:** Women might bear higher health risks from the exposure to mercury in workplace, and might lack of adequate capacity building support to acquire new skills required for work with the mercury-free substitute equipment and related waste streams. **Principle:** Gender Equality and Women's Empowerment ; P.10 **Relevant Project activities:** Activity 1.1.1: Establish an action plan to formulate proposals and training plan for the development and strengthening of regulatory and policy framework Activity 1.1.2: Review, develop and strengthen existing regulatory and policy framework concerning mercury collection, distribution, temporary storage, and disposal with a gender-sensitive and inclusive strategy. Activities under the Outcome 1.2: Gender-sensitive and inclusive Capacity Building activities carried out for government staff (both national and sub-national) to enhance policy enforcement and oversight. Activities under Output 2.1.1: Gender-sensitive technical guidance/guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe				• Additional risk mitigation tool: Gender Action Plan The **Gender Action Plan** addresses potential risks and includes dedicated measures to mainstream gender in all project components. I.e.: • Activity 1.1: Develop and enforce gender-sensitive policies and regulations on mercury phase-out. • Activity 1.2: Conduct gender-responsive capacity-building programs for policymakers, healthcare workers, and regulatory authorities. • Activity 1.3: Ensure women's participation in policy-making committees and regulatory frameworks. • Activity 2.1: Provide gender-sensitive training programs on mercury waste management and safe handling. • Activity 2.2: Conduct outreach programs targeting female healthcare workers and informal waste sector workers. • Activity 2.3: Develop safety guidelines that include gender-specific exposure risks and protection measures. • Activity 3.1: Promote the inclusion of women in decision-making roles in the procurement and disposal of mercury-containing medical devices. • Activity 3.2: Ensure women-led businesses and cooperatives are involved in sustainable mercury-free technology solutions. • Activity 3.3: Establish mentorship programs to support women in waste management and recycling industries. • Activity 4.1: Collect and analyze sex-disaggregated data on project impacts. • Activity 4.2: Integrate gender-sensitive indicators in project monitoring and evaluation. • Activity 4.3: Share best practices and lessons learned on gender-inclusive mercury management at national and international levels. Management measure owner/s: NPM

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storage are developed and established. Activities under Output 2.1.2: Health facility management capacities to adopt mercury-free medical devises are strengthened through gender-sensitive capacity building.Activities under Output 2.1.4: Gender and Social Inclusive (GESI) awareness programme on MCMDs replacement, collection and disposal to health facilities is created and implemented. Activities under Output 3.1.2: Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed. **Risk owner: NPM**				
Risk 3 Inadequate involvement of certain stakeholder groups, including those located in vulnerable or marginalized communities in the Project design and exclusion from the project benefits **Event:** Small health sector providers and local waste management operators are not engaged in, supportive of, and/or do not benefit from project activities. **Cause:** Lack of financial and human capacities of involved actors to be fully involved in project design and participate in the development of regulatory framework, lack of resources to co-finance implementation of project activities. **Impacts: S**ub-optimal distribution of project benefits; compliance costs may disproportionately burden already disadvantaged stakeholders which can hinder the progress in phasing out the MCMDs use and sound handling of the mercury wastes in peripheral and otherwise disadvantaged communities. **Principle:** Accountability; P.13, P.14	I = 3 L = 3	Moderate	Small and medium health facilities, as well as small and medium private suppliers of the substitute (mercury free) medical devices are in disadvantaged position in terms of access to the regulatory framework development process compared with the major actors (large public and private hospitals, large producers and distributors of medical equipment). Also the compliance costs are relatively bigger for the small and medium sized actors. Similarly, the hazardous waste operators capable of compliance with mercury-related regulations will acquire a competitive advantage and therefore it is desirable to ensure fair representation of stakeholders from the waste management sector in the Project activities related to the development of regulatory environment and related technical guidance.	**Assessment measures**: • Stakeholder analysis carried out within the Project preparation phase, will be updated during the Project inception. • Site-level environmental and social audits No additional dedicated Assessment tool is envisaged for this risk. Assessment measure/s owner/s: NPM **Management measures**: This is addressed through: (i) Additional risk mitigation tool: SEP Stakeholder engagement will be undertaken to ensure fair representation of small and medium sized medical facilties, and medical equipment suppliers, or other stakeholders otherwise be marginalized from participating in any supporting mechanisms A **Stakeholder Engagement Plan** (SEP) has been prepared to

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Relevant Project activities: Activity 1.1.1: Establish an action plan to formulate proposals and training plan for the development and strengthening of regulatory and policy framework Activity 1.1.2: Review, develop and strengthen existing regulatory and policy framework concerning mercury collection, distribution, temporary storage, and disposal with a gender-sensitive and inclusive strategy. Activity 1.2.2: Secure MCMDs phase-out commitments with 10,000 health facilities across Indonesia and enforce commitments made on MCMDs phase-out and Hg elimination Activities under Output 2.1.1: Gender-sensitive technical guidance/guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established. Activities under Output 2.1.2: Health facility management capacities to adopt mercury-free medical devices are strengthened through gender-sensitive capacity building. Activities under Output 2.1.4: Gender and Social Inclusive (GESI) awareness programme on MCMDs replacement, collection and disposal to health facilities is created and implemented. 2.1.3: Pilot plant for temporary storage from medical devices containing mercury established. 3.1.2: Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed. 3.2.1: Medical devices manufacturers, distributors, and suppliers had incorporated circular economy principles on disposal of Hg-				incorporate these engagement activities. In addition, the project will raise the awareness of enterprises on possible green finance instruments, and to facilitate their access to government and/or private banking investments, to support green procurement, application of mercury-free medical thermometers and sphygmomanometers, sound management of obsolete mercury containing devices, any related capacity building and awareness activities in medical facilities. The capacity building activities will also target mercury handling waste management operators,vand will include transfer of technology for safe mercury final disposal on a transparent and fair basis. For Project interventions entailing development of mercury temporary storage and waste processing sites the site-specific Environmental and Social audits determine, among other, a need for additional site-specific engagement measures, including scope of consultations with local communities and other interested stakeholders to minimize the risk of inadequate involvement and exclusion from the Project design and benefits. Management measure/s owner/s: NPM

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based and electronic-based devices in their CSRs and/or other relevant internal practices, Policies, or strategies. 3.2.2: One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented. 3.2.3: Hg stabilization and solidification strategies and solutions upscaled to four (4) locations in partnership with Public-Private selected institutions. 3.3.1: Development of gender-sensitive financing mechanisms that explored in collaboration with local fund providers/banks and new/revamped finance solutions proposed. Activities under Output 3.1.2: Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed **Risk owner**: NPM				
Risk 4: Risk of mercury contamination of the environment during collection, transport and storage of waste mercury-related equipment, devices and elemental mercury in the course of the Project **Event:** Accidental release to the environment of the mercury compounds or elemental mercury. **Cause:** Accident during handling, transport, or inadequate storage of mercury containing MCMDs, or elemental mercury. Natural disaster, potentially exacerbated by the climate change can be among the causes of such an accident. **Impact:** Local pollution and environmental contamination	I = 4 L = 2	Moderate	Transport, storage and disposal operations for any hazardous substance may pose potential human and ecosystem health risks, whether to workers or the wider community, to local environment, or transboundary ecosystems. Therefore, for any project which involves collection, handling, packaging, transport, destruction or disposal of waste, particularly hazardous chemicals waste, there is always a standing risk of release to the environment. However, in this particular sector, mercury is already fairly well controlled in processes, and mercury medical device manufacturing is not one of the main sources of mercury pollution. Instead for this project, the biggest contamination risks	**Assessment measures**: • Site-level environmental and social audits The audits will take into consideration among other issues also flood and other natural disaster risks when locating and assessing available storage facilities to minimize the risk of any natural disaster-caused contamination. Assessment measure/s owner/s: NPM **Management measures**: This is addressed through: • Partially by project design, incorporated in the activities listed below (with the application of Minamata Convention's Guidelines on the environmentally sound interim storage of mercury); • – Environmental and Social audits for project sites; and • Complemented by Targeted Management Plan - Spill Prevention and Management Plan

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Standard: Standard 8: Pollution Prevention and Resource Efficiency; 8.1, 8.2, 8.3, 8.4 **Relevant Project activities:** Activity 1.2.4: Develop method and mechanism to conduct the inventory; including schedule for collection and distribution on withdrawal of the MCMDs. Disseminate the mechanism to all health sector facilities across Indonesia (state or private health facility). Activities under Output 2.1.1: Gender-sensitive technical guidance/guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established. Activities under Output 2.1.3: Pilot plant for temporary storage from medical devices containing mercury established. Activity 3.1.1.1: Develop and assess a withdrawal scheme for mercury-containing medical devices (MCMDs). Activities under Output 3.2.2: One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented. Activities under Output 3.2.3: Hg stabilization and solidification strategies and solutions upscaled to four (4) locations in partnership with Public-Private selected institutions. **Risk owner: NPM**			arise from the poor handling and gathering when broken in the medical institutions before disposal of the obsolete devices. Therefore, working with players in the manufacturing and medical sector who already have some sensitivity to care for handling of mercury, therefore lowers the risk associated with the decommissioning aspect of the work. Also the mercury content in medical appliances is fairly small, and therefore in most cases, the volumes of handled mercury are not in quantities capable of large scale contamination with significant public health repercussions even in case of substantial accident or serious mismanagement.	The project does not envisage development of new built-for-purpose sites for mercury handling/storage, rather it will work with current waste management facilities to improve their systems and establish proper mechanism to avoid/mitigate risks associated with the introduction of a mercury waste stream in their operations. In this case, targeted risk assessment (Environmental and Social audits) will be conducted at each site (i.e. Laboratory that will implement the pilot solidification process, and temporary Hg storage locations) to determine the baseline conditions of these sites and expand the analysis to identify additional specific (including social) risks. The result of the Environmental and Social audits will generate the relevant site-specific **Targeted Risk Management Plans** (e.g Spill prevention and Management Plans) The **Project design/activities** will ensure that the interim storage facilities at the selected enterprises (under the Component 2) will comply with the "Minamata Convention's Guidelines on the environmentally sound interim storage of mercury" by confirming the following: - Site is appropriate and abides by local zoning requirements. - Facility is designed to facilitate the safe handling of containers. - Indoor air is vented outside, and where levels of mercury call for venting via activated carbon or other mercury capture systems, system is installed and operational. - Site is equipped with a fire protection system. - Emergency response plan in place and local fire department, where available, is sufficiently informed, trained, equipped and otherwise prepared to safely handle any fires at the facility. - Facility is constructed of non-combustible materials and non-combustible materials should be used for pallets, storage racks and other interior furnishings. - A drainage and collection system for discharged water exists enabling mercury monitoring from the site. - Floors of storage facilities are covered with mercury-resistant materials and have no cracks. - The facility is clearly marked with warning signs and secured to avoid theft and unauthorized access. Should any of these requirements not be met, then activities will

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				be undertaken to introduce them, including retrofitting of the storage facility. Referring to the above-mentioned guidelines, containers that store mercury will meet the following criteria: - They are not damaged by any materials previously stored in them or have contained materials that could adversely react with mercury or mercury compounds. - Their structural integrity is intact. - They are not excessively corroded. - They have a protective coating (paint) to prevent corrosion. - They are gas- and liquid-tight. - Labelled in line with the globally harmonized system of classification and labelling of chemicals. A **Spill Prevention and Management Plan** will be developed and implemented at all demonstration sites for safe handling and disposal of mercury-containing obsolete devices and safely cleanup of accidental mercury releases ensuring that: - Brooms are not used to clean up broken devices because they will spread the mercury. - A vacuum cleaner should only be used if it is specifically designed to collect mercury. - Contact with broken glass should be avoided. Furthermore the UNDP GEF Global Healthcare Waste Project: Guidance on Mercury Cleanup, Storage, and Transport oWaste from Healthcare Facilitiesf Mercury https://www.undp.org/sites/g/files/zskgke326/files/publications/Guidance%20on%20Cleanup%20Storage%20and%20Transport%20of%20Mercury%20from%20Health%20Care%20July%202010.pdfwill be used as a reference point for assessment and implementation of the additional availabnle mitigation measures. Management measure/s owner/s: Project Beneficiary (Private partner operating the facility)
Risk 5: Risk of mercury contamination of the environment during collection, transport and storage of waste mercury-related equipment, devices and elemental mercury in the course of the Project	I = 4 L = 2	Moderate	Transport, storage and disposal operations for any hazardous substance may pose potential human and ecosystem health risks, whether to workers or the wider community, to local environment, or transboundary ecosystems.	**Assessment measures**: • Site-level environmental and social audits The audits will take into consideration among other issues also flood and other natural disaster risks when locating and assessing available storage facilities to minimize the risk of any natural disaster-caused contamination.

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Event: Accidental release to the environment or direct exposure of the people to the mercury compounds or elemental mercury. **Cause:** Accident during handling, transport, or inadequate storage of mercury containing MCMDs, or elemental mercury. Natural disaster, potentially exacerbated by the climate change can be among the causes of such an accident. **Impact:** Public health impacts on local community **Standard:** Community Health, Safety and Security; 3.5 **Relevant Project activities:** Activity 1.2.4: Develop method and mechanism to conduct the inventory; including schedule for collection and distribution on withdrawal of the MCMDs. Disseminate the mechanism to all health sector facilities across Indonesia (state or private health facility). Activities under Output 2.1.1: Gender-sensitive technical guidance/guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established. Activities under Output 2.1.3: Pilot plant for temporary storage from medical devices containing mercury established. Activity 3.1.1.1: Develop and assess a withdrawal scheme for mercury-containing medical devices (MCMDs). Activities under Output 3.2.2: One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented.			Therefore, for any project which involves collection, handling, packaging, transport, destruction or disposal of waste, particularly hazardous chemicals waste, there is always a standing risk of release to the environment. However, in this particular sector, mercury is already fairly well controlled in processes, and mercury medical device manufacturing is not one of the main sources of mercury pollution. Instead for this project, the biggest contamination risks arise from the poor handling and gathering when broken in the medical institutions before disposal of the obsolete devices. Therefore, working with players in the manufacturing and medical sector who already have some sensitivity to care for handling of mercury, therefore lowers the risk associated with the decommissioning aspect of the work. Also the mercury content in medical appliances is fairly small, and therefore in most cases, the volumes of handled mercury are not in quantities capable of large scale contamination with significant public health repercussions even in case of substantial accident or serious mismanagement. As for the potential for a climate change exacerbation of the identified risk: The Project implementation timespan is relatively short, with aim to complete the phase out, collection and final safe disposal of the mercury originating from the health sector within several years,	Assessment measure/s owner/s: NPM **Management measures**: This is addressed through: • Partially by project design, incorporated in the activities listed below (with the application of Minamata Convention's Guidelines on the environmentally sound interim storage of mercury); • Environmental and Social audits for project sites; and • Complemented by Targeted Management Plan - Spill Prevention and Management Plan The project does not envisage development of new built-for-purpose sites for mercury handling/storage, rather it will work with current waste management facilities to improve their systems and establish proper mechanism to avoid/mitigate risks associated with the introduction of a mercury waste stream in their operations. In this case, targeted risk assessment (Environmental and Social audits) will be conducted at each site (i.e. Laboratory that will implement the pilot solidification process, and temporary Hg storage locations) to determine the baseline conditions of these sites and expand the analysis to identify additional specific (including social) risks. The result of the Environmental and Social audits will generate the relevant site-specific Targeted Risk Management Plans (e.g. Spill prevention and Management Plans) The **Project design/activities** will ensure that the interim storage facilities at the selected enterprises (under the Component 2) will comply with the "Minamata Convention's Guidelines on the environmentally sound interim storage of mercury" by confirming the following: - Site is appropriate and abides by local zoning requirements. - Facility is designed to facilitate the safe handling of containers. - Indoor air is vented outside, and where levels of mercury call for venting via activated carbon or other mercury capture systems, system is installed and operational. - Site is equipped with a fire protection system.

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Activities under Output 3.2.3: Hg stabilization and solidification strategies and solutions upscaled to four (4) locations in partnership with Public-Private selected institutions. **Risk owner: NPM**			after which no disaster-vulnerable stocks of mercury will be maintained. The collected mercury will be converted into inert material safely deposited with minimal risk of contamination of the surrounding environment. The Project-related handling and temporary storage of collected mercury containing material will make use of existing waste management infrastructure, i.e. no new construction of waste management facilities is envisaged under the Project. The selected locations and sites for Project activities will be assessed also for the vulnerability to natural disasters in the course of the envisaged activity- and site- level environmental audits.	- Emergency response plan in place and local fire department, where available, is sufficiently informed, trained, equipped and otherwise prepared to safely handle any fires at the facility. - Facility is constructed of non-combustible materials and non-combustible materials should be used for pallets, storage racks and other interior furnishings. - A drainage and collection system for discharged water exists enabling mercury monitoring from the site. - Floors of storage facilities are covered with mercury-resistant materials and have no cracks. - The facility is clearly marked with warning signs and secured to avoid theft and unauthorized access. Should any of these requirements not be met, then activities will be undertaken to introduce them, including retrofitting of the storage facility. Referring to the above-mentioned guidelines, containers that store mercury will meet the following criteria: - They are not damaged by any materials previously stored in them or have contained materials that could adversely react with mercury or mercury compounds. - Their structural integrity is intact. - They are not excessively corroded. - They have a protective coating (paint) to prevent corrosion. - They are gas- and liquid-tight. - Labelled in line with the globally harmonized system of classification and labelling of chemicals. A **Spill Prevention and Management Plan** will be developed and implemented at all demonstration sites for safe handling and disposal of mercury-containing obsolete devices and safely cleanup of accidental mercury releases ensuring that: - Brooms are not used to clean up broken devices because they will spread the mercury. - A vacuum cleaner should only be used if it is specifically designed to collect mercury. - Contact with broken glass should be avoided. Furthermore the UNDP GEF Global Healthcare Waste Project: Guidance on Mercury Cleanup, Storage, and Transport oWaste from Healthcare Facilitiesf Mercury (https://www.undp.org/sites/g/files/zskgke326/files/publications/Guidance%20on%20Cleanup%20Storage%20and%20Transport

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				%20of%20Mercury%20from%20Health%20Care%20July%202010.pdf) will be used as a reference point for assessment and implementation of the additional availabnle mitigation measures. Management measure/s owner/s: Project Beneficiary (Private partner operating the facility)
Risk 6: Risk of mercury contamination of the environment and worker exposure during collection, transport and storage of waste mercury-related equipment, devices and elemental mercury in the course of the Project **Event:** Accidental release to the environment and exposure of the people to the mercury compounds or elemental mercury. **Cause:** Accident during handling, transport, or inadequate storage of mercury containing MCMDs, or elemental mercury. Natural disaster, potentially exacerbated by the climate change can be among the causes of such an accident. **Impact:** Health and safety of the workers/staff compromised **Standard:** Labour and Working Conditions; 7.6 **Relevant Project activities:** Activity 1.2.4: Develop method and mechanism to conduct the inventory; including schedule for collection and distribution on withdrawal of the MCMDs. Disseminate the mechanism to all health sector facilities across Indonesia (state or private health facility).	I = 4 L = 2	Moderate	Transport, storage and disposal operations for any hazardous substance may pose potential human and ecosystem health risks, whether to workers or the wider community, to local environment, or transboundary ecosystems. Therefore, for any project which involves collection, handling, packaging, transport, destruction or disposal of waste, particularly hazardous chemicals waste, there is always a standing risk of release to the environment. However, in this particular sector, mercury is already fairly well controlled in processes, and mercury medical device manufacturing is not one of the main sources of mercury pollution. Instead for this project, the biggest contamination risks arise from the poor handling and gathering when broken in the medical institutions before disposal of the obsolete devices. Therefore, working with players in the manufacturing and medical sector who already have some sensitivity to care for handling of mercury, therefore lowers the risk associated with the decommissioning aspect of the work. Also the mercury content in medical appliances is fairly small, and therefore in most cases, the volumes of handled mercury are not in quantities capable of large scale contamination with	**Assessment measures**: • Site-level environmental and social audits The audits will take into consideration among other issues also flood and other natural disaster risks when locating and assessing available storage facilities to minimize the risk of any natural disaster-caused contamination. Assessment measure/s owner/s: NPM **Management measures**: This is addressed through: • Partially by project design, incorporated in the activities listed below (with the application of Minamata Convention's Guidelines on the environmentally sound interim storage of mercury); • Environmental and Social audits for project sites; and • Complemented by Targeted Management Plan - Spill Prevention and Management Plan The project does not envisage development of new built-for-purpose sites for mercury handling/storage, rather it will work with current waste management facilities to improve their systems and establish proper mechanism to avoid/mitigate risks associated with the introduction of a mercury waste stream in their operations. In this case, targeted risk assessment (Environmental and Social audits) will be conducted at each site (i.e. Laboratory that will implement the pilot solidification process, and temporary Hg storage locations) to determine the baseline conditions of these sites and expand the analysis to identify additional specific (including social) risks. The result of the Environmental and Social audits will generate the relevant site-specific Targeted Risk Management Plans (e.g. Spill prevention and Management Plans)

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Activities under Output 2.1.1: Gender-sensitive technical guidance/guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established. Activities under Output 2.1.3: Pilot plant for temporary storage from medical devices containing mercury established. Activity 3.1.1.1: Develop and assess a withdrawal scheme for mercury-containing medical devices (MCMDs). Activities under Output 3.2.2: One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented. Activities under Output 3.2.3: Hg stabilization and solidification strategies and solutions upscaled to four (4) locations in partnership with Public-Private selected institutions. **Risk owner: NPM**			significant public health repercussions even in case of substantial accident or serious mismanagement.	The **Project design/activities** will ensure that the interim storage facilities at the selected enterprises (under the Component 2) will comply with the "Minamata Convention's Guidelines on the environmentally sound interim storage of mercury" by confirming the following: - Site is appropriate and abides by local zoning requirements. - Facility is designed to facilitate the safe handling of containers. - Indoor air is vented outside, and where levels of mercury call for venting via activated carbon or other mercury capture systems, system is installed and operational. - Site is equipped with a fire protection system. - Emergency response plan in place and local fire department, where available, is sufficiently informed, trained, equipped and otherwise prepared to safely handle any fires at the facility. - Facility is constructed of non-combustible materials and non-combustible materials should be used for pallets, storage racks and other interior furnishings. - A drainage and collection system for discharged water exists enabling mercury monitoring from the site. - Floors of storage facilities are covered with mercury-resistant materials and have no cracks. - The facility is clearly marked with warning signs and secured to avoid theft and unauthorized access. Should any of these requirements not be met, then activities will be undertaken to introduce them, including retrofitting of the storage facility. Referring to the above-mentioned guidelines, containers that store mercury will meet the following criteria: - They are not damaged by any materials previously stored in them or have contained materials that could adversely react with mercury or mercury compounds. - Their structural integrity is intact. - They are not excessively corroded. - They have a protective coating (paint) to prevent corrosion. - They are gas- and liquid-tight. - Labelled in line with the globally harmonized system of classification and labelling of chemicals. A **Spill Prevention and Management Plan** will be developed and

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				implemented at all demonstration sites for safe handling and disposal of mercury-containing obsolete devices and safely cleanup of accidental mercury releases ensuring that: - Brooms are not used to clean up broken devices because they will spread the mercury. - A vacuum cleaner should only be used if it is specifically designed to collect mercury. - Contact with broken glass should be avoided. Furthermore the UNDP GEF Global Healthcare Waste Project: Guidance on Mercury Cleanup, Storage, and Transport oWaste from Healthcare Facilitiesf Mercury (https://www.undp.org/sites/g/files/zskgke326/files/publications/Guidance%20on%20Cleanup%20Storage%20and%20Transport%20of%20Mercury%20from%20Health%20Care%20July%202010.pdf) will be used as a reference point for assessment and implementation of the additional availabnle mitigation measures. Management measure/s owner/s: Project Beneficiary (Private partner operating the facility)
Risk 7: Impact on indigenous peoples communities **Event:** Compliance costs for health facilities and waste operators serving in remote areas may affect accessibility of their services for disadvantaged communities, including of customary peoples. The delay in phasing out the MCMDs also increases the probability that the MCMDs in use will be discarded unsafely, thus increasing health risk from mercury exposure of local peoples. **Cause:** Medical facilities serving to customary peoples communities will likely belong to the small or distant facilities for which the mercury phase out implementation costs will be relatively higher. Local communities might also be comparatively less aware of mercury related health hazards. **Impact:** Higher risk of non-compliance with safety standards for mercury handling, collection and transport. Higher mercury-related health risks for local community.	L=4 I=1	Low	The Project activities are envisaged for broad territorial scope that will involve also territories regarded as customary. However, in the Indonesian context vast proportion of inhabitants and communities, namely in regions distant from metropolitan areas can meet various criteria for identification indigenous peoples. The actual Project activities however are focused on medical care facilities, typically located in the urban areas and operating in standard legal context and therefore it is unlikely that customary peoples communities would be particularly affected by the Project. Rather given the Project´s focus on the remote and otherwise disadvantaged areas, it is likely that the customary communities will be in advantageous position to benefit from the Project capacity building	Stakeholder engagement plan and stakeholder consultations will involve customary peoples where/if relevant. No dedicated Indigenous Peoples Plan as per relevant UNDP Standard 6 is envisaged.

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Primary standard: Standard 6: Indigenous Peoples; 6.1 **Relevant Project components:** 1. Policy and regulatory frameworks strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector. 2. Technical and institutional capacities of private sector stakeholders enhanced on MCMDs phase-out and environmentally sound mercury-containing medical waste management improved. 3. Circular models are developed and piloted to promote and sustain the large scale replacement to mercury-free alternatives for MCMDs.			and other activities to support compliance with the mercury-related regulations.	
[add additional rows as needed]				

QUESTION 4: What is the overall project risk categorization?

Low Risk	☐	
Moderate Risk	X	
Substantial Risk	☐	
High Risk	☐	

QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply)

Question only required for Moderate, Substantial and High Risk projects

Is assessment required? (check if "yes")	☐			***Status? (completed, planned)***
if yes, indicate overall type and status		X	Targeted assessment(s) Gender analysis Stakeholder analysis Site-specific Environmental and Social Audits	 In progress In progress Planned

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			☐	ESIA (Environmental and Social Impact Assessment)	
			☐	SESA (Strategic Environmental and Social Assessment)	
	Are management plans required? (check if "yes)	☐			
	If yes, indicate overall type		☐	Targeted management plans Gender Action Plan Stakeholder Engagement Plan Spill Prevention Plan	 In progress In progress Planned

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			☐	ESMP (Environmental and Social Management Plan which may include range of targeted plans)	
			X	ESMF (Environmental and Social Management Framework)	In progress
	Based on identified risks, which Principles/Project-level Standards triggered?		**Comments (not required)**		
	Overarching Principle: Leave No One Behind				
	Human Rights	X			
	Gender Equality and Women's Empowerment	X			
	Accountability	X			
	1. Biodiversity Conservation and Sustainable Natural Resource Management	☐			
	2. Climate Change and Disaster Risks	☐			
	3. Community Health, Safety and Security	X			
	4. Cultural Heritage	☐			
	5. Displacement and Resettlement	☐			
	6. Indigenous Peoples	☐			
	7. Labour and Working Conditions	X			
	8. Pollution Prevention and Resource Efficiency	X			

Final Sign Off

Final Screening at the design-stage is not complete until the following signatures are included

Signature	***Signature & Date***	***Description***
QA Assessor Anton Sri Probiyantono Programme Manager	DocuSigned by: 7C095536EF694FC... 30-Mar-2026	UNDP staff member responsible for the project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver Sujala Pant Deputy Resident Representative	DocuSigned by: Sujala Pant 04186D9E3AB9435... 01-Apr-2026	UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC.
PAC Chair Sujala Pant Deputy Resident Representative	DocuSigned by: Sujala Pant 04186D9E3AB9435... 01-Apr-2026	UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

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SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks		
INSTRUCTIONS: The risk screening checklist will assist in answering Questions 2-6 of the Screening Template. Answers to the checklist questions help to (1) identify potential risks, (2) determine the overall risk categorization of the project, and (3) determine required level of assessment and management measures. Refer to the SES toolkit for further guidance on addressing screening questions.		
Overarching Principle: Leave No One Behind **Human Rights**		**Answer (Yes/No)**
P.1	Have local communities or individuals raised human rights concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	**No**
P.2	Is there a risk that duty-bearers (e.g. government agencies) do not have the capacity to meet their obligations in the project?	**Yes**
P.3	Is there a risk that rights-holders (e.g. project-affected persons) do not have the capacity to claim their rights?	**No**
Would the project potentially involve or lead to:		
P.4	adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	**No**
P.5	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups, including persons with disabilities? [16]	**No**
P.6	restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalized individuals or groups, including persons with disabilities?	**No**
P.7	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	**No**
Gender Equality and Women's Empowerment		
P.8	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g. during the stakeholder engagement process, grievance processes, public statements)?	**No**
Would the project potentially involve or lead to:		
P.9	adverse impacts on gender equality and/or the situation of women and girls?	**No**
P.10	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	**Yes**
P.11	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being*	**No**
P.12	exacerbation of risks of gender-based violence? *For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc*.	**No**

[16] Prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender and transsexual people.

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Sustainability and Resilience: Screening questions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below		
Accountability		
Would the project potentially involve or lead to:		
P.13	exclusion of any potentially affected stakeholders, in particular marginalized groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them?	**Yes**
P.14	grievances or objections from potentially affected stakeholders?	**Yes**
P.15	risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the project?	**No**
Project-Level Standards		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
Would the project potentially involve or lead to:		
1.1	adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes*	**No**
1.2	activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	**No**
1.3	changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	**No**
1.4	risks to endangered species (e.g. reduction, encroachment on habitat)?	**No**
1.5	exacerbation of illegal wildlife trade?	**No**
1.6	introduction of invasive alien species?	**No**
1.7	adverse impacts on soils?	**No**
1.8	harvesting of natural forests, plantation development, or reforestation?	**No**
1.9	significant agricultural production?	**No**
1.10	animal husbandry or harvesting of fish populations or other aquatic species?	**No**
1.11	significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction*	**No**
1.12	handling or utilization of genetically modified organisms/living modified organisms?[17]	**No**
1.13	utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)[18]	**No**
1.14	adverse transboundary or global environmental concerns?	**No**
Standard 2: Climate Change and Disaster Risks		
Would the project potentially involve or lead to:		

[17] See the Convention on Biological Diversity and its Cartagena Protocol on Biosafety.
[18] See the Convention on Biological Diversity and its Nagoya Protocol on access and benefit sharing from use of genetic resources.

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2.1	areas subject to hazards such as earthquakes, floods, landslides, severewinds, storm surges, tsunami or volcanic eruptions?	**Yes**
2.2	outputs and outcomes sensitive or vulnerable to potential impacts of climate change or disasters? *For example, through increased precipitation, drought, temperature, salinity, extreme events, earthquakes*	**Yes**
2.3	increases in vulnerability to climate change impacts or disaster risks now or in the future (also known as maladaptive or negative coping practices)? *For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding*	**No**
2.4	increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	**No**
Standard 3: Community Health, Safety and Security		
Would the project potentially involve or lead to:		
3.1	construction and/or infrastructure development (e.g. roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams)	**No**
3.2	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	**No**
3.3	harm or losses due to failure of structural elements of the project (e.g. collapse of buildings or infrastructure)?	**No**
3.4	risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	**No**
3.5	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	**Yes**
3.6	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)?	**No**
3.7	influx of project workers to project areas?	**No**
3.8	engagement of security personnel to protect facilities and property or to support project activities?	**No**
Standard 4: Cultural Heritage		
Would the project potentially involve or lead to:		
4.1	activities adjacent to or within a Cultural Heritage site?	**No**
4.2	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	**No**
4.3	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	**No**
4.4	alterations to landscapes and natural features with cultural significance?	**No**
4.5	utilization of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	**No**
Standard 5: Displacement and Resettlement		
Would the project potentially involve or lead to:		
5.1	temporary or permanent and full or partial physical displacement (including people without legally recognizable claims to land)?	**No**

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5.2	economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	**No**
5.3	risk of forced evictions?[19]	**No**
5.4	impacts on or changes to land tenure arrangements and/or community based property rights/customary rights to land, territories and/or resources?	**No**
Standard 6: Indigenous Peoples		
Would the project potentially involve or lead to:		
6.1	areas where indigenous peoples are present (including project area of influence)?	**Yes**
6.2	activities located on lands and territories claimed by indigenous peoples?	**No**
6.3	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? *If the answer to screening question 6.3 is "yes", then Standard 6 requirements apply, and the potential significance of risks related to impacts on indigenous peoples must be Moderate or above.* *	**No**
6.4	the absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	**No**
6.5	the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	**No**
6.6	forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? *Consider, and where appropriate ensure, consistency with the answers under Standard 5 above*	**No**
6.7	adverse impacts on the development priorities of indigenous peoples as defined by them?	**No**
6.8	risks to the physical and cultural survival of indigenous peoples?	**No**
6.9	impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? *Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.*	**No**
Standard 7: Labour and Working Conditions		
Would the project potentially involve or lead to: (note: applies to project and contractor workers)		
7.1	working conditions that do not meet national labour laws and international commitments?	**No**
7.2	working conditions that may deny freedom of association and collective bargaining?	**No**
7.3	use of child labour?	**No**
7.4	use of forced labour?	**No**
7.5	discriminatory working conditions and/or lack of equal opportunity?	**No**
7.6	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	**Yes**

[19] Forced eviction is defined here as the permanent or temporary removal against their will of individuals, families or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of

* Note: revised July 2022 modifying presumption of risk significance from Substantial or higher to Moderate or higher.

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legal or other protection. Forced evictions constitute gross violations of a range of internationally recognized human rights.

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Standard 8: Pollution Prevention and Resource Efficiency		
Would the project potentially involve or lead to:		
8.1	the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	**Yes**
8.2	the generation of waste (both hazardous and non-hazardous)?	**Yes**
8.3	the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	**Yes**
8.4	the use of chemicals or materials subject to international bans or phase-outs? *For example, DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention*	**Yes**
8.5	the application of pesticides that may have a negative effect on the environment or human health?	**No**
8.6	significant consumption of raw materials, energy, and/or water?	**No**

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Annex 6: UNDP Risk Register

Project Title: Strengthening Indonesia's Reduction and Elimination in the Distribution and Supply Chain of Mercury from National Health (SIRENE)	**Project Number:** 11546 (GEF)	**Date: 20-Jun-25**

#	Event	Cause	Impact(s)	Risk Category & Sub-category *(including Risk Appetite)*	Impact, Likelihood & Risk Level *(see Annex 3 Risk Matrix)*	Risk Valid From/To	Risk Owner *(individual accountable for managing the risk)*	Risk Treatment and Treatment Owner
1	Potential Climate Change Impacts	The project's engagement with collection and transport service providers to ensure safe storage and eventual disposal of MCMDs, mercury waste, and POPs-contaminated plastics may temporarily increase GHG emissions due to transportation activities.	Increased emissions of GHG	**1. SOCIAL AND ENVIRONMENTAL (1.5. Climate change and disaster risks) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **3 - Moderately likely** Impact: **2 - Minor** Risk level: **LOW (equates to a risk appetite of CAUTIOUS)**	From: 08-Jun-26 To: 30-Jun-28	National Project Director Project Manager	The project will establish mechanisms to optimize the use of transport modes and minimize GHG emissions. It will also promote the reductions in emissions – targeting 10,000 metric tons of CO2-e – by eliminating unsound waste and mercury disposal practices. Net emissions will be monitored throughout the project cycle.
2	Disruption affecting project implementation, timelines and team coordination.	The Government of Indonesia is prioritizing the reallocation of state budget, which may affect and influence project implementation.	Timely project execution activities, delays in decision making, uncertainty in engagement with stakeholders	**4. ORGANIZATIONAL (4.3. Implementation arrangements) - UNDP Risk Appetite: EXPLORATORY TO OPEN**	Likelihood: **4 - Highly likely** Impact: **3 - Intermediate** Risk level: **MODERATE (equates to a risk appetite of EXPLORATORY)**	From: 22-Jun-26 To: 31-Jan-31	National Project Director Project Manager	MoE and UNDP will hold biannual meetings to review the Ministry's organizational structure, anticipate potential changes that could affect the project, and develop adaptation or mitigation plans to assure seamless transition.

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3	A change in government has resulted in a shift of the National Directorate responsible for project execution	Indonesia is implementing a series of 5-year medium-term development plans, known as RPJMN (*Rencana Pembangunan Jangka Menengah Nasional* or Mid-term National Development Plan), which serve as the country's strategic framework and may significantly influence national development progress.	The next national elections are expected in 2029/2030, aligning with the project's completions cycle. A potential change in the ruling party and evolving expectations for the post-2025 follow up plan could significantly influence project execution and performance	**4. ORGANIZATIONAL (4.1. Governance) - UNDP Risk Appetite: EXPLORATORY TO OPEN**	Likelihood: **2 - Low likelihood** Impact: **3 - Intermediate** Risk level: **MODERATE (equates to a risk appetite of EXPLORATORY)**	From: 22-Jun-26 To: 31-Jan-31	National Project Director	• Conduct bi-annual meetings between the Ministry of Environment (MoE) and UNDP to review governance developments and assess implications for project execution. • Develop contingency and adaptation strategies to address any policy shifts or institutional changes that may affect project timelines or objectives. • Maintain close coordination with Implementing Partners (IPs) and relevant government agencies to ensure alignment with evolving national priorities under RPJMN. • Establish a system to identify and respond promptly to potential governance risks, ensuring seamless project continuity.
4	Limited availability of accessible Best Environmental Practices (BEP) and Best Available Techniques (BAT) for mercury disposal.	Technical complexity of specialized treatment methods. Regulatory gaps in adopting international standards. Insufficient knowledge sharing and dissemination of practices.	National capacities to solidify, storage and determine feasible disposal methodologies of Mercury that can put at risk the country's commitments to Minamata Convention	**3. OPERATIONAL (3.5. Partners' engagement) - UNDP Risk Appetite: EXPLORATORY TO OPEN**	Likelihood: **2 - Low likelihood** Impact: **3 - Intermediate** Risk level: **MODERATE (equates to a risk appetite of EXPLORATORY)**	From: 22-Jun-26 To: 31-Jan-31 Click or tap to enter a date.	National Project Director Project Manager	The project was designed to address these potential challenges and barriers. Component 2 specifically targets technological gaps by supporting the piloting and adoption of new Best Available Techniques (BAT) and Best Environmental Practices (BEP) in the country, with financial and technical assistance from the GEF. The National Research and Innovation Agency (BRIN) has committed to collaborate with the project in advancing mercury

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#	Event	Cause	Impact(s)	Risk Category & Sub-category *(including Risk Appetite)*	Impact, Likelihood & Risk Level *(see Annex 3 Risk Matrix)*	Risk Valid From/To	Risk Owner *(individual accountable for managing the risk)*	Risk Treatment and Treatment Owner
		High costs and infrastructure limitations for advanced technologies. Shortage of capacity and expertise to implement solutions. Fragmented information sources across multiple conventions and guidelines.						reduction efforts, including temporary storage solutions for mercury-containing medical devices and the development of treatment methods in line with the Minamata Convention.
5	Lack of Financial and Business Model	High compliance costs, limited economic incentives, absence of dedicated state budget allocation and financing mechanisms, weak integration with national budgets, and insufficient public-private partnerships.	Delayed implementation, non-compliance risks, continued mercury pollution, limited private sector engagement, and higher long-term costs. Indonesia has difficulty to ensure knowledge sharing and promote best practices effectively to achieve intended Global Environmental Benefits (GEB)	**2. FINANCIAL (2.4. Fluctuation in credit rate, market, currency) - UNDP Risk Appetite: MINIMAL TO CAUTIOUS**	Likelihood: **3 - Moderately likely** Impact: **3 - Intermediate** Risk level: **MODERATE (equates to a risk appetite of EXPLORATORY)**	From: 22-Jun-26 To: 31-Jan-31	National Project Director Project Manager	The project incorporates two initial business models to ensure financial sustainability: 1. Public sector approach: Support government in prioritizing budget allocations for replacing MCMDs with mercury-free alternatives through standard procurement programs for public healthcare facilities. 2. Private sector approach: Assist private stakeholders in identifying cost-effective BAT/BEP solutions and explore financial mechanisms to scale up mercury waste management infrastructure for medical devices nationwide.

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#	Event	Cause	Impact(s)	Risk Category & Sub-category *(including Risk Appetite)*	Impact, Likelihood & Risk Level *(see Annex 3 Risk Matrix)*	Risk Valid From/To	Risk Owner *(individual accountable for managing the risk)*	Risk Treatment and Treatment Owner
6	Implementing Partner (IP) or Executing Agency (EA) lacks sufficient operational and human resource capacity to effectively execute the project.	According to Law No. 1/2004 on State Treasury and Government Regulation No. 10/2011 on Procedures for Procurement of Foreign Loans and Grants, the fund cannot be transferred onward to another ministry or agency once it enters the ministry's treasury account. This is a significant constraint for multi-sectoral GEF projects which require cross-ministerial collaboration and flexible allocation of resources.	The transfer of funds to the IP and the implementation performance to analyse constraints in engaging with executing partners as per Regulatory limitations.	**4. ORGANIZATIONAL (4.2. Execution capacity) - UNDP Risk Appetite: EXPLORATORY TO OPEN**	Likelihood: **3 - Moderately likely** Impact: **4 - Extensive** Risk level: **MODERATE (equates to a risk appetite of EXPLORATORY)**	From: 22-Jun-26 To: 31-Jan-31	National Project Director	UNDP and MoE will monitor the transfer of funds to the IP and the implementation performance to analyse constraints in engaging with executing partners as per Regulatory limitations. In case the risk becomes an issue, a mitigation plan that could include having UNDP to provide limited executing services to allow transfer of funds to happen smoothly
7	Lack of Stakeholders Engagement	Stakeholders are not adequately informed about project objectives, benefits or progress. Lack of clarity on how stakeholders contribute to the project.	Capacity of project to engage with and obtain support to Policy-related work, technology testing, deployment of waste disposal strategy and fail to create effective performance.	**1. SOCIAL AND ENVIRONMENTAL (1.12. Stakeholder engagement) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **2 - Low likelihood** Impact: **3 - Intermediate** Risk level: **LOW (equates to a risk appetite of CAUTIOUS)**	From: 22-Jun-26 To: 31-Jan-31	National Project Director Project Manager	Relevant stakeholders were actively engaged during project design and have endorsed the project strategies. A Stakeholders Engagement Plan (SEP) has been developed to reflect the Government of Indonesia's strong commitment to collaboration. Stakeholder engagement activities are integrated across all

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#	Event	Cause	Impact(s)	Risk Category & Sub-category *(including Risk Appetite)*	Impact, Likelihood & Risk Level *(see Annex 3 Risk Matrix)*	Risk Valid From/To	Risk Owner *(individual accountable for managing the risk)*	Risk Treatment and Treatment Owner
		Stakeholders may not see tangible benefits or relevance to their interests. Government agencies, private sector or NGOs may prioritize other programs over the project.						project components to ensure continuous participation. The Project Manager will closely monitor engagement levels and update the SEP as needed to enable adaptive management and respond to emerging challenges.
8	Duty bearers and other relevant stakeholders may lack the capacity to meet their obligations under the Project following the introduction of new coordination and regulatory mechanisms.	insufficient training and awareness, limited institutional resources, complexity of new requirements, inadequate funding for capacity-building, and resistance to change.	Failure to achieve the objective of phasing out mercury in the medical sector could lead to increased environmental contamination and public health risks. It may also result in project delays, reduced compliance with standards, ineffective governance, and compromised delivery of intended outcomes.	**1. SOCIAL AND ENVIRONMENTAL (1.3. Grievances (Accountability to stakeholders)) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **2 - Low likelihood** Impact: **4 - Extensive** Risk level: **MODERATE (equates to a risk appetite of EXPLORATORY)**	From: 22-Jun-26 To: 31-Jan-31	Project Manager	Through Component 1, the NPM will facilitate the Ministry of Environment and Ministry of Health to support the training needs assessment and develop a targeted training plan (guided by the SES) to ensure that the relevant officials receive adequate training to understand their new extended responsibilities arising from the improved Institutional and Regulatory Frameworks being developed by the project in terms of new legislation, guidelines and mandatory standards.
9	Insufficient participation of women in consultations, policy decision-making, and the design of capacity-building modalities for adopting non-mercury	Women are disproportionally represented in low- and medium-level healthcare personnel, namely in caring and supporting professions (cleaning,	Women might bear higher health risks from the exposure to mercury in workplace, and might lack of adequate capacity building support to acquire new skills required for work with the mercury-free	**1. SOCIAL AND ENVIRONMENTAL (1.2. Gender equality and women's empowerment) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **3 - Moderately likely** Impact: **4 - Extensive** Risk level: **MODERATE (equates to a risk appetite of EXPLORATORY)**	From: 22-Jun-26 To: 31-Jan-31	Project Manager	The **Gender Action Plan** addresses potential risks and includes dedicated measures to mainstream gender in all project components, as described in the attached SESP and ESMF.

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#	Event	Cause	Impact(s)	Risk Category & Sub-category *(including Risk Appetite)*	Impact, Likelihood & Risk Level *(see Annex 3 Risk Matrix)*	Risk Valid From/To	Risk Owner *(individual accountable for managing the risk)*	Risk Treatment and Treatment Owner
	technologies and ensuring the safe management and disposal of obsolete mercury-containing devices.	maintenance) that directly work with MCMDs and are often in charge of their collection and disposal. However, women are also often under-represented in the management and executive positions responsible for design and implementation of safeguards and risk mitigation measures.	substitute equipment and related waste streams.					
10	Inadequate involvement of certain stakeholder groups, including those from vulnerable or marginalized communities, in project design and their exclusion from project benefits.	Lack of financial and human capacities of involved actors to participate in the development of regulatory framework, lack of resources to co-finance implementation of project activities.	Compliance costs may disproportionately burden already disadvantaged stakeholders. That in turn can hinder the progress in phasing out the MCMDs use and sound handling of the mercury wastes in peripheral and otherwise disadvantaged communities	**1. SOCIAL AND ENVIRONMENTAL (1.3. Grievances (Accountability to stakeholders)) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **3 - Moderately likely** Impact: **3 - Intermediate** Risk level: **MODERATE (equates to a risk appetite of EXPLORATORY)**	From: 22-Jun-26 To: 31-Jan-31	Project Manager	Stakeholder engagement will be undertaken to ensure fair representation of small and medium sized medical facilties, and medical equipment suppliers, or other stakeholders otherwise be marginalized from participating in any supporting mechanisms A **Stakeholder Engagement Plan** (SEP) has been prepared to incorporate these engagement activities, as described in the attached SESP and ESMF.

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#	Event	Cause	Impact(s)	Risk Category & Sub-category *(including Risk Appetite)*	Impact, Likelihood & Risk Level *(see Annex 3 Risk Matrix)*	Risk Valid From/To	Risk Owner *(individual accountable for managing the risk)*	Risk Treatment and Treatment Owner
11	Risk of mercury contamination of the environment and the exposure of worker/ communities during the collection, transportation, and storage of waste mercury-containing equipment, devices and elemental mercury throughout the Project.	Accident during handling, transport, or inadequate storage of mercury containing MCMDs, or elemental mercury	Health impacts on the involved staff and local environmental contamination	**1. SOCIAL AND ENVIRONMENTAL (1.11. Pollution prevention and resource efficiency) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **4 - Highly likely** Impact: **2 - Minor** Risk level: **MODERATE (equates to a risk appetite of EXPLORATORY)**	From: 22-Jun-26 To: 31-Jan-31	Project Manager	The Project will ensure that the interim storage facilities at the selected enterprises (under the Component 2) will comply with the "Minamata Convention's Guidelines on the environmentally sound interim storage of mercury. A Spill Prevention and Management Plan will be developed and implemented at all demonstration sites for safe handling and disposal of mercury-containing obsolete devices and safely cleanup of accidental mercury releases. Furthermore the UNDP GUIDANCE ON THE CLEANUP, TEMPORARY OR INTERMEDIATE STORAGE, AND TRANSPORT OF MERCURY WASTE FROM HEALTHCARE FACILITIES will be used as a reference point for assessment and implementation of the additional availabnle mitigation measures.
12	Risk of mercury pollution impacting temporary or final (permanent) storage facilities.	Natural disaster, potentially exacerbated by the climate change	Health impacts on the involved staff and local environmental contamination	**1. SOCIAL AND ENVIRONMENTAL (1.11. Pollution prevention and resource efficiency) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **3 - Moderately likely** Impact: **1 - Negligible** Risk level: **LOW (equates to a risk appetite of CAUTIOUS)**	From: 22-Jun-26 To: 31-Jan-31	Project Manager	The Project, through the environmental audit of the interim storage facilities, will take into consideration flood and other natural disaster risks when locating and assessing available storage facilities to minimize the risk of any natural disaster-caused contamination.

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#	Event	Cause	Impact(s)	Risk Category & Sub-category *(including Risk Appetite)*	Impact, Likelihood & Risk Level *(see Annex 3 Risk Matrix)*	Risk Valid From/To	Risk Owner *(individual accountable for managing the risk)*	Risk Treatment and Treatment Owner
13	Inadequate access to healthcare services for indigenous peoples.	Medical facilities serving to customary communities (Indigenous peoples) are likely to be small or located in remote areas, making mercury phase-out implementation relatively more costly. Additionally, local communities may have limited awareness of mercury-related health hazards.	Higher risk of non-compliance with safety standards for mercury handling, collection and transport. Higher mercury-related health risks for local community	**1. SOCIAL AND ENVIRONMENTAL (1.9. Indigenous peoples) - UNDP Risk Appetite: CAUTIOUS**	Likelihood: **4 - Highly likely** Impact: **1 - Negligible** Risk level: **LOW (equates to a risk appetite of CAUTIOUS)**	From: 22-Jun-26 To: 31-Jan-31	Project Manager	Stakeholder engagement plan and stakeholder consultations will involve customary peoples where/if relevant. No dedicated Indigenous Peoples Plan as per relevant UNDP Standard 6 is envisaged.

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Annex 7: Overview of Technical Consultancies/Subcontracts

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management / Monitoring & Evaluation		
Local / National contracting		
Project Manager (NPSA 8-10) Rate: $1,350/week	150 weeks over 5 years	The Project Manager (PM) will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. See Annexes 4 and 14 for details.
Project Assistant (NPSA 4-6) Rate: $750/week	150 weeks over 5 years	The Project Assistant (PA) will assist the Project Manager (PM) in day-to-day management and oversight of project activities. See Annex 14 for details.
Working Group Coordinator 1 (NPSA 7-8) Rate: $1100/week	70 weeks over first 2.5 years	The Working Group Coordinator 1 reports to the Project Manager. Working Group Coordinator 1 (WGC 1) will be is responsible for the implementation of all project activities assigned to national consultants within Component 1 (See Annexes 4 and 14 for details): • Outcomes: 1.1. Regulations/ policies strengthened, proposed and/or operationalized to prohibit the use of MCMDs • Output 1.1.1. Regulatory and policy frameworks proposed for total phase out the use of mercury-containing medical devices • Output 1.1.2. Gender-sensitive regulatory and policy framework concerning mercury collection, distribution, temporary storage, and disposal Developed/ strengthened. • Outcomes: 1.2. Gender-sensitive and inclusive Capacity Building activities carried out for government staff (both national and sub-national) to enhance policy enforcement and oversight. • Output 1.2.1. Coordination and cooperation Mechanisms between central and local governments established and strengthened. • Output 1.2.2. Phase-out of use of MCMDs oversight and Hg elimination commitments enforced for health facilities. • Output 1.2.3. All levels of Governmental institutions in charge in new rules and regulations. • Output 1.2.4. Inventories of stocks of Hg wastes and MCMDs are updated and assessed and real situation of mercury use, collection and storage in Health Care Facilities (HCF) are known.
Working Group Coordinator 2 (NPSA 7-8) Rate: $1100/week	80 weeks over first 2.5 years	The Working Group Coordinator 2 reports to the Project Manager. Working Group Coordinator 2 (WGC 2) will be is responsible for the implementation of all project activities assigned to national consultants within Component 2 (See Annexes 4 and 16 for details): • Outcomes: 2.1. MCMDs and their wastes are collected, stabilized (solidified) and disposed of in environmentally sound manner, in accordance with national regulations, international guidelines and Best Environmental Practices (BEP) and Best Available Technology (BAT) based on Gender sensitive principles. • Outputs: 2.1.1. Gender-sensitive technical guidance/ guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established.

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Consultant	Time Input	Tasks, Inputs and Outputs
		• Outputs: 2.1.2. Health facility management capacities to address mercury-free medical devises are strengthened through gender-sensitive capacity building. • Outputs:2.1.3. Pilot plant for mercury temporary storage from medical devices containing mercury established. • Outputs:2.1.4. Gender and Social Inclusive (GESI) awareness program on MCMDs replacement, collection and disposal to health facilities is created and implemented.
Working Group Coordinator 3 (NPSA 7-8) Rate: $1100/week	114 weeks years 2-5	The Working Group Coordinator 3 reports to the Project Manager. Working Group Coordinator 3 (WGC 3) will be is responsible for the implementation of all project activities assigned to national consultants within Component 3 (See Annexes 4 and 14 for details): • Outcomes: 3.1. Technical guidelines developed on lifecycle management of mercury-free alternatives. • Output: 3.1.1. Circular models for mercury-free medical devices (MFMDs) to support MCMDs accelerated replacement assessed. • Output: 3.1.2. Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed. • Outcomes: 3.2. Mercury-free medical devices piloted in selected health care facilities, collection and recycling guidelines developed for end-of-life products and disposal technologies/strategies piloted taking into consideration gender and social inclusive approaches. • Output: 3.2.1. Medical Devices manufacturers, distributors, and suppliers had incorporated circular economy principles on disposal of Hg-based and electronic-based devices in their CSRs and/or other relevant internal practices, Policies, or strategies. • Output: 3.2.2. One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented. • Output: 3.2.3. Hg stabilization and solidification strategies and solutions upscaled to 4 (four) locations in partnership with Public-Private selected institutions. • Outcomes: 3.3. Financing mechanisms to support replication and scale up of MCMDs replacement in collaboration with local fund providers/banks assessed. • Output: 3.3.1. Development of gender-sensitive financing mechanisms that explored in collaboration with local fund providers/banks and new/revamped finance solutions proposed.
Working Group Coordinator 4 (NPSA 7-8) Rate: $1100/week	115 weeks over 5 years	The Working Group Coordinator 4 reports to the Project Manager. Working Group Coordinator 4 (WGC 4) will be is responsible for the implementation of all project activities assigned to national consultants within Component 4 (See Annexes 4 and 14 for details): • Outcomes: 4.1. Monitoring and evaluation activities carried out as per GEF requirements. • Output: 4.1.1. Assessed and applied Social and Environmental Screening Procedure (SESP). • Output: 4.1.2. Gender Action Plan and awareness raising activities on collection, transport, storage and disposal of mercury and mercury waste.

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Consultant	Time Input	Tasks, Inputs and Outputs
		• Output: 4.1.3. Periodic monitoring, and reporting, Project Implementation Reports (PIR), Mid-Term Review and Terminal Evaluation. • Outcomes: 4.2. Learning and knowledge sharing activities carried out and knowledge products developed and shared (including lessons-learned from the perspective of gender-equality and social inclusion implementation). • Output: 4.2.1. Lessons-learned and best practices for knowledge management are collected and shared at national and international levels.
Four (4) Project Assistants, one each for Working Group 1-4 $750/week	WG1 (70 weeks), WG2 (80 weeks), WG3 (114 weeks) and W4 (115 weeks) Total 379 weeks for 4 PAs	The Project Assistant (PA) will assist the Working Group Coordinator (WGC) in day-to-day management , coordination and oversight of project activities implemented under each respective component of 1 to 4.
Four (4) Regional Facilitators (NPSA 5-6) Rate: $750/week	48 weeks for each Regional Facilitator for years 2-4, total 192 weeks	The Regional Facilitators will report to the Project Manager and relevant Working Group Coordinators. To ensure day-to-day follow-up at the regional areas level, the project will engage four (4) Regional Facilitators whose responsibility will be to liaise with local government entities (provincial, regency, district & village level) and project beneficiaries in the project priority site where they are stationed on all aspects related to the project (See Annexes 4 and 14 for details). The Project Regional Facilitators will provide assistance to four (4) Working Group Coordinators in the achievement of the following 4 Components and their outcomes and outputs.
Gender Expert (NPSA 7-8) Rate: $1100/week	30 weeks over 5 years	The gender expert will report to the Project Manager and relevant Working Group Coordinators. The gender expert will be responsible for the implementation of all project activities (component 1, 2, 3 and 4) which requires gender perspective also to national consultants within Component 1, 2, 3 and 4
Social and Environmental Safeguards Expert (NPSA 7-8) Rate $1,100/week)	30 weeks over 5 years	• Monitor progress in development/implementation of the project ESMP/ESMF ensuring that UNDPs SES policy is fully met and the reporting requirements are fulfilled; • Oversee/develop/coordinate implementation of all safeguard related plans; • Ensure social and environmental grievances are managed effectively and transparently; • Review the SESP annually, and update and revise corresponding risk log; mitigation/management plans as necessary; • Ensure full disclosure with concerned stakeholders;

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Consultant	Time Input	Tasks, Inputs and Outputs
		• Ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation; • Work with the M&E officer to ensure reporting, monitoring and evaluation fully address the safeguard issues of the project
International / Regional and global contracting		
International Consultant to stabilization and solidification Rate: $3,500/week	36 weeks, years 2-5	The International Stabilization and solidification Expert will be responsible to support Contractual Services Implementation of mercury stabilization and solidification facility of output 3.2.2 and 3.2.3.
For Technical Assistance		
Outcome 1		
Local / National contracting		
Description of Contractual Services	**Total Amount (US$)**	**Responsible for:**
Consultant for the development of policies, regulations and guidelines. $1,100/week	10 weeks , years 1 and 2	The consultant will be responsible for at least 5 policies, regulations and guidelines revised and/or developed while mainstreaming gender dimensions to strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector which is targeting: ▪ Output 1.1.1 Reviewed Regulatory and policy frameworks proposed for total phase out the use of mercury-containing medical devices and developed implementation action. ▪ Output 1.1.2 Reviewed Gender-sensitive regulatory and policy framework concerning mercury **collection**, **distribution**, **temporary storage**, and **disposal** developed/ strengthened and developed implementation action.
Consultant for capacity building training of government staff (both national and sub-national) to enhance policy enforcement and oversight $1,100/week	10 weeks, years 1 and 2	The consultant will be repsonsible for: • Output 1.2.1 Developed training module and provided training to government staff members both national and sub-national level at 4 regional areas which including Gender-sensitive and inclusivity. • Output 1.2.3 Disseminated of all results (project outcomes 1.1 and 1.2) for increasing the capacity of all entities involved in/responsible for MCMDS and MFMDS and their waste in the 4 project priority sites
Outcome 2		

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Consultant	Time Input	Tasks, Inputs and Outputs
Consultant for the development guidance and training module for collecting, distributing and temporary storage $1,100/week	10 weeks, years 1 and 2	The consultant will be responsible for: Develop technical guidance for collecting, distributing and temporary storage of MCMDs and their waste and developed mechanism partnership with Private Sector (Output 2.1.1) Develop training module for collecting, distributing and temporary storage of MCMDs and their waste-managing plastic produced from MCMDs, MFMDs and others equipment from health facility (Output 2.1.2)
Consultant to develop best practices and standards on GESI and conduct assessments $1,100/week	10 weeks	The consultant will be responsible for: Output 2.1.4 Assessed GESI awareness program on MCMDs replacement, collection and disposal to health facilities for all components and also related to Output 4.1.2.
Contractual Services for DED of temporary storage	US$ 100,000	The contractural services will be responsible for: Develop Detail Engineering Design (DED) and technical s for container for collecting, distribution and temporary storageof mercury for pilot plant (Output 2.1.3)
Contractual Services for establishment temporary storage		The contractual service will be repsonsible to implement the DED: Containers distributed to health facility and one (1) Pilot plant for mercury temporary storage from medical devices containing mercury established (Output 2.1.3).
Contractual Service for Technical Electromedical of MFMDs		The contractual service will be responsible for: Output 2.1.2 Developing Training of Trainer (ToT) module for technical electromedical of MFMDs, plastic produced from MSMDs, MFMDs and other equipment and conducted ToT to health facility at 4 regional areas.
Outcome 3		
Consultant for the development technical guidelines for circular economy of recycling/disposal strategy	20 weeks	The consultant will be responsible for: Output 3.1.1 Circular models for mercury-free medical devices (MFMDs) to support MCMDs accelerated replacement assessed. Output 3.1.2 Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed Output 3.2.1 Medical Devices manufacturers, distributors, and suppliers had incorporated circular economy principles on disposal of Hg-based and electronic-based devices in their CSRs and/or other relevant internal practices, Policies, or strategies.

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Consultant	Time Input	Tasks, Inputs and Outputs
$1,100/week		
Consultant to develop financial mechanism $1,100/week	39 weeks	The consultant will be responsible for: Output 3.3.1 Development of gender-sensitive financing mechanisms that explored in collaboration with local fund providers/banks and new/revamped finance solutions proposed (also related to Output 2.1.4, Output 3.1.2 and Output 4.1.2)
Contractual Services Implementation of mercury stabilization and solidification facility training plants	US$ 110,000	The contractual service is responsible for: ▪ Output 3.2.2 One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented including the DED and technical specification. ▪ Output 3.2.3 Hg stabilization and solidification strategies and solutions upscaled to 4 (four) locations in partnership with Public-Private selected institutions.
Subcontract to establish and facilitate financial access	US$ 31,690	The Contractual is responsible for: Output 3.3.1 Development of gender-sensivtive financing mechanisms that explored in collaboration with local funmd providers/banks and new/revamped finance-solutions proposed
Outcome 4		
Contractual Services for development of awareness raising plan and its implementation	US$ 40,000	The contractual service will be responsible for: ▪ Output 4.1.1 Assessed and applied Social and Environmental Screening Procedure (SESP). ▪ Output 4.1.2 Gender Action Plan and awareness raising activities on collection, transport, storage and disposal of mercury and mercury waste and also related to Output 2.1.4.

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Annex 8: Stakeholder Engagement Plan

Executive Summary

This Stakeholder Engagement Plan provides strategic guidance on the mechanisms for stakeholder engagement during project implementation, which may be further elaborated at project inception. The Stakeholder Engagement Plan is designed to ensure inclusive, effective, and efficient engagement of the key stakeholders throughout the lifecycle of the GEF-financed, UNDP-supported project "Strengthening Indonesia's Reduction and Elimination in the Distribution and Supply Chain of Mercury from National Health (SIRENE)".

During the PPG process, based on the Project Identification Form (PIF), a stakeholder analysis was conducted to identify key stakeholders, assess their interests in the project and define their roles and responsibilities in the project implementation. After the analysis, further actions were taken to identify and assess the project key stakeholders through consulting and discussing with UNDP, the Ministry of Environment (MoE), Ministry of Health (MoH), Agency Research and Innovation National (BRIN), Association Producent of Medical Devices (ASPAKI), PT. Wastec International for medical waste management, the other members of the project preparation team, and survey of the demonstration enterprises and medical facilities. Based on the consultations and survey, the Stakeholder Engagement Plan for the project implementation, monitoring, and evaluation has been developed. The key points are:

- Dissemination of the proposed project activities to the stakeholders, especially relevant female in an appropriate and accessible manner;
- The project related trainings will target toward especially women;
- Setting up grievance redress mechanisms;
- Setting up project information request procedure for the broader public;
- Integration of implementation situation of the Stakeholders Engagement Plan into the project annual report; and
- Consultation with the key stakeholders for the project mid-term review and terminal evaluation, and making the evaluation reports accessible to the stakeholders.

The Project Manager will be responsible for facilitating and monitoring implementation of this Stakeholder Engagement Plan, with the demonstration production enterprises and demonstration medical facilities' coordination of their implementation. The monitoring results will be included in the annual Project Implementation Report.

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Abbreviations and Acronyms

AWP	Annual Work Plan
ASPAKI	Association of Producent Medical Devices
BRIN	National Research and Innovation Agency
EA	Executing Agency
GEF	Global Environment Facility
IA	Implementing Agency
M&E	Monitoring and evaluation
MoE	Ministry of Environment
MoH	Ministry of Health
MTR	Midterm Review
NPD	National Project Director
PIF	Project Identification Form
PIMS	Project Information Management System
PIR	Project Implementation Review
PIU	Project Implementation Unit
PMU	Project Management Unit
PPG	Project Preparation Grant (for GEF)
PSC	Project Steering Committee
RTA	Regional Technical Advisor
TBD	To Be Determined
UNDP	United Nations Development Programme
UNDP CO	UNDP Country Office
USD	United States Dollar

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1. Introduction

1. Effective stakeholder engagement is critical to success of GEF-financed projects. Stakeholder engagement improves project performance and impact by enhancing recipient country ownership of, and accountability for, project outcomes; addressing the social and economic needs of affected people; building partnerships among project Executing Agencies (EA) and stakeholders; and making use of skills, experiences and knowledge particularly from enterprises especially the private sector, medical facilities, communities and local groups, ethnic minority peoples, male and female residents, as well as the project design team, in the design, implementation, monitoring and evaluation of project activities.

Objectives of the stakeholder engagement plan

2. This Stakeholder Engagement Plan (SEP) is designed to ensure inclusive, effective, and efficient engagement of key stakeholders throughout the lifecycle of the GEF-supported project of Strengthening Indonesia's Reduction and Elimination in the Distribution and Supply Chain of Mercury from National Health (the project).

Scope of the plan

3. Stakeholder means an individual or group that has an interest in the outcome of the GEF-financed Medical mercury-phase out project activities or is likely to be affected by the project. Key stakeholders are those who have strong interest in, and/or influence over production phase-out of mercury-containing medical thermometers and sphygmomanometers and application of mercury-free alternatives in medical facilities, as well as the responsible national and provincial government agencies.

4. **Stakeholder Engagement** means a process of disclosure of the project information to, consultation with the stakeholders, and the stakeholders' participation in the project development, implementation, monitoring, evaluation and learning throughout the project cycle, addressing grievances, and on-going reporting to the stakeholders.

5. Project activities refer to the activities financially and/or technically supported by the project, including GEF funds and the counterpart funds, and which are related to production phase-out of mercury-containing medical thermometers and sphygmomanometers and application of mercury-free alternatives in medical facilities in Indonesia.

6. **Project impacts** include positive and negative impacts. **Project affected people** cover those who will be directly affected, positively or negatively, by the project activities. The affected people may live in or on the edge of a regional areas, or live in the areas of the project influence/impacts.

Methodology and methods

7. During the project preparation stage, based on the Project Information Form (PIF), the key stakeholders were tentatively identified first; followed by discussions with the UNDP, MoE who is the project executing agency (EA), and the other project preparation grant (PPG) team members for further confirmation of the key stakeholders; then by questionnaire-surveying of seven enterprises who are producing mercury-containing medical thermometers and three enterprises who are producing sphygmomanometers to understand the effective way to phase out mercury-containing production, and seventeen medical facilities in different geographical locations, that is, three municipality/autonomous region/province (hereafter provinces collectively) to understand their potentials to apply mercury-free alternatives in 2019. The process of identification and engagement of the key stakeholders and their core roles, responsibilities and interests was an iterative process during the preparation phase. It will be an on-going and adaptation management process throughout the project cycle of life. More key stakeholders will be included whenever identified during the project implementation, monitoring and evaluation. The Stakeholder Engagement Plan developed would be adjusted and improved whenever and wherever necessary.

Alignment with relevant policies

8. This plan was developed in accordance with the GEF 2020 Strategy, the GEF policy on stakeholder engagement (2017), GEF Guideline on the Implementation of the Policy on Stakeholder Engagement (2018), GEF principles

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and guidelines on engagement with indigenous peoples (2012), GEF Policy on Gender Equality (2017), and UNDP Social and Environmental Standards (2019).

2. Stakeholder Analysis

9. The stakeholder analysis aims to identify the key stakeholders related to the project and assess their roles, responsibilities for, interests in production phase-out of mercury-containing medical thermometers and sphygmomanometers, interests in application of mercury-free alternatives, and in management of the phase-out and application in Indonesia. Major barriers for female staff and female residents to engagement in the project are also assessed. The key stakeholders and their roles are summarized in Table 8-1

Table 8-1: Summary of Key Stakeholder Analysis

Key Stakeholders	Mandate Relevant to the project	Roles in the project
National level administrative authorities		
Ministry of Environment (MoE)	• National Focal Point for the Minamata Convention; • Responsible Ministry for managing and coordinating implementation of National action Plan on mercury reduction and elimination in Indonesia • As the executing agency of the project, MoE is responsible for the project design, advise and supervise the project implementation.	• Issue hazardous waste management technical approval for hazardous waste collection activity at national scale; • Receive hazardous waste collection from collectors at national scale according to the technical approval; • Receive report on hazardous waste collection facility construction at national scale for hazardous waste collectors who are still constructing their facility; • Issue Letter of Operational Feasibility for hazardous waste collection activity at national scale for hazardous waste collectors who are still constructing their facility; • Issue recommendation for hazardous waste transportation; • Issue hazardous waste management technical approval for hazardous waste treatment activity and Letter of Operational Feasibility; • Issue hazardous waste management technical approval for hazardous waste disposal activity and Letter of Operational Feasibility; • Send notification to competent authority of export destination country and transit country based on notification request; • Issue hazardous wastes export recommendation. • Develop guidelines for management of mercury-containing medical devices management from healthcare facilities; • Provide technical guidelines for handling mercury-containing medical devices from healthcare facilities and for storage depot;
Ministry of Health (MoH)	• Responsible Ministry for implementing National action Plan on mercury reduction and elimination in Indonesia	• Formulate policy or regulation for substitution of mercury-containing medical devices in healthcare facilities; • Conduct data collection, processing and analysis; • Coordinate with ministries/institutions and local governments; • Develop inventory of mercury use in products and processes in mercury-containing medical devices; • Develop counselling and awareness raising programme to medical personnel on substitution

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Key Stakeholders	Mandate Relevant to the project	Roles in the project
		of mercury-containing medical devices and mercury exposure risks in healthcare facilities; • Conduct awareness raising to medical personnel on health risks and handling of mercury; • Supervise domestic distribution of mercury-containing medical devices; • Implement Permenkes 41/2019 • Raise awareness and provide capacity building to healthcare facilities on exposure impact of mercury and substitution of mercury-containing medical devices; • Withdraw mercury-containing medical devices from temporary storage at healthcare facilities in coordination with MoE; • Guide and supervise the implementation of elimination and withdrawal of mercury-containing medical devices from healthcare facilities through awareness raising, education, monitoring, education, human resources capacity building and/or giving award; • Giving administrative sanctions in form of written warning to healthcare facilities not conduction obligation of phasing-out of mercury-containing medical devices.
National Research and Innovation Agency (BRIN)		• Designing for elemental mercury storage and mercury-based medical devices. • designing a warehouse for storing mercury medical devices. • Extending monitoring system to monitor the actual number of mercury-containing medical devices (SIPAMER). • Extending the SIPAMER system allows all medical devices to be labeled with a QR code to monitor the location of mercury-containing medical devices during the mercury-based medical device waste management process. • Developing technology for mercury recovery, stabilization and solidification process. • Recommendation for the final disposal of solidified mercury.
BAPPENAS		Advise and supervise the project development relate to management of mercury-polluted production sites and disposal of broken and unbroken mercury-containing equipment
Ministry of Finance	MoF manages administrative rule of MCMDs and/or MFMDS procured by state budget.	Asset demolition before it collected.
Ministry of Home Affairs	Responsible for mandating all the government agencies participation on project	To coordinate all agencies in the province, regency and district levels.

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Key Stakeholders	Mandate Relevant to the project	Roles in the project
United Nations Development Programme (UNDP)	UNDP works in about 170 countries and territories, helping to achieve the eradication of poverty, and the reduction of inequalities and exclusion. UNDP helps countries to develop policies, leadership skills, partnering abilities, institutional capabilities and build resilience in order to sustain development results.	UNDP is GEF Implementing Agency for the project, and is therefore responsible for oversight and monitoring project implementation and ensuring adherence to UNDP and GEF policies and procedures.
State Administration for Procurement	Responsible for comprehensive management of Procurement. Develop regulations and policies on procurement MCMDs and MFMDs	Join the project inter-Ministerial Committee to jointly develop and implement the necessary policy, regulations, action plans, tools and guidelines, relevant to procure and phase out of mercury-free thermometer and sphygmomanometer.
World Health Organization (WHO)	WHO's international technical expertise and evidence-based policy advice helps the Government to attain more equitable health outcomes, and supports progress towards the achievement of global health norms and standards, as well as the Sustainable Development Goals.	The exchange and training of international experience on phase-out of mercury containing medical devices and the application of mercury-free medical devices.
Provincial and/or local level administrative authorities		
Provincial and/or local Health Agencies	Carry out management of medical facilities and supervise the implementation	Supervise the demonstration and expansion medical facilities to apply mercury-free medical devices, and dispose broken and unbroken mercury-containing medical devices.
Provincial and/or local environmental Agencies	Carry out management of waste management and environmental protection and supervise the implementation	Supervise the demonstration enterprises and medical institutions to implement the policies and regulations, and the phase-out of mercury-containing medical devices and also waste produced from MCMDS and MFMDs.
The project demonstration enterprises		
Demonstration mercury-containing medical thermometer and sphygmomanometer manufacturing enterprises	Produce medical devices commercially	Pilot the production phase-out and demonstration for the others
Demonstration medical facilities	Treat diseases related to people including using thermometers and sphygmomanometers to do the treatment	Pilot application of mercury-free alternatives and demonstrate effective and efficient ways for replication across Indonesia.
Expansion demonstration medical facilities	Treat diseases related to people including using medical devices to do the treatment	Expanded demonstration to promote application of mercury-free alternative medical devices
Demonstration waste management	Recycle medical waste	Pilot the waste management and demonstration for the others
Other stakeholders		

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Key Stakeholders	Mandate Relevant to the project	Roles in the project
Public and/or private banks	Provide loan commercially	Provide supporting guidance and fair opportunity to the demonstration enterprises and other financially viable small and medium size producers to access available green finance instruments, for phasing out of production of mercury-containing medical devices, and/or to the demonstration medical facilities and also medical waste management.
Academic institutes, colleges, universities, and/or relevant individuals	Universities and research organizations focus on teaching, research and conservation knowledge development and policy recommendations	Conduct field surveys, monitoring, data collection and database development for the project Provided technical expertise on the phase-out of mercury-containing devices production and the application of mercury-free medical devices and also medical waste management.
CSOs	Have their focuses and special interests on medical waste management.	Potential to provide technical expertise and bring in international experience, networking and platform for communication. Possible co-implementers for some activities such as training, communication and public awareness under projects.
Local communities	Living surrounding the demonstration medical waste facilities; Communities of project publicity on application of mercury-free thermometers and sphygmomanometers	Participate in design of disposal scheme of obsolete mercury-containing medical devices in the medical facilities and also medical waste management. Targets of the project publicity on application of mercury-free thermometers and sphygmomanometers and also medical waste management.
Ethnic minorities	In the above communities, some ethnic minorities might live	Full and effective participation and engagement in consultations and activities to secure their free, prior and informed consent (FPIC) where their rights, lands, territories, resources, traditional livelihoods may be affected.

Sources: the PIF, consultations with the EA and other PPG team members, etc.

10. There might be a few barriers to female production workers, female medical staff and female residents' engagement in the project. Main barriers to the demonstration enterprises' displaced female workers' engagement might be the women workers' engagement in trainings on production of mercury-free thermometers and mercury-free sphygmomanometers and/or the women workers' skills to be reemployed; and (ii) the female nurses' engagement in the trainings on scientifical use of mercury-free medical devices due to their time availability. The barriers and the measure are stated in Table 8-2

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Table 8-2: Barriers to Women's Engagement and the Measures

Female group	Barrier types	Barriers to Engagement	Proposed engagement Measures
Women workers displaced related to the project of the demonstration enterprises	Participation	It is often that women have less participation opportunity than men. This tradition may limit the displaced women's participation in trainings on production of mercury-free medical devices or trainings on other skills for reemployment	It is proposed in the project Gender Mainstreaming Action Plan that the demonstration enterprises to train the displaced women workers on production of mercury-free medical devises or on other skills for reemployment
	Reemployment	Women's labour participation rate in Indonesia is higher than that of men, which means that women have relatively much opportunity to be employed. However replacement of MCMDs becoming MFMDs is more technical and mechanical concern (accuracy) to be handle by women. may limit the displaced women workers' reemployment	It is proposed in the project Gender Mainstream Action Plan that the demonstration enterprises will undertake measures to avoid or reduce redundancies. Where no viable alternatives are identified, a Restructuring Plan will be developed and implemented to reduce and mitigate adverse impacts of retrenchment on workers
Female nurses of the demonstration and the expansion medical facilities at county level and the above	Available Time	Besides working for medical institutions, usually female nurses also undertake more unpaid housework than their counterpart men colleagues, which may make the female nurses with less available time than the male ones to participate in the project trainings.	The PMO and/or the responsible people will coordinate the demonstration medical facilities to make the female clinicians and female nurses available to participate in the project trainings, such as considering the time spent on the project related trainings as working time.
Female nurses of the demonstration and expansion medical facilities at township and village levels	Participation	As mentioned above, women usually have less participation opportunities than their men colleagues, which may limit female nurses' participation in the trainings on application of mercury-free thermometers and sphygmomanometers.	It is proposed in the project Gender Mainstreaming Action Plan that the medical facilities will ensure the female nurses' equal participation in the project trainings on application of mercury-free thermometers and sphygmomanometers.

Sources: consultations with the EAs and other PPG team members.

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3. Stakeholder Engagement Plan

11. Based on the stakeholder analysis, stakeholders were consulted and surveyed during the project preparation, which were shown in Table. Stakeholder Engagement Plan for the project implementation, monitoring and evaluation has also been developed based on the analysis and survey which is presented in Table 8-4: Stakeholder Engagement during Project Implementation

Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
1. Before the project implementation						
Dissemination of the project document on websites	Public access to the project information outreach of the project	Any interested individual and organization, male and female.	GEF agency (UNDP), GEF partner (MoE).	Disclosed on websites of the UNDP, and MoE	Before the project implementation	The PPG budget
Dissemination of the project information to the relevant communities in an appropriate and understandable manner, for example, noticeboard, community representative meetings	Key communities fully informed with the project information	Relevant women and men work in this sector of waste and obsolete mercury-containing medical thermometers and sphygmomanometers and medical waste management	The demonstration enterprises	The relevant communities	Before the project implementation	The PPG budget
Validation Workshop for consultation and interaction	Secure comments on and confirmation of project objectives, outcomes, outputs and activities	Personnel from governmental departments, demonstration manufacturers, medical facilities and interested individuals from communities with close proximity to mercury-containing medical device manufacturing sites and also medical waste management.	GEF agency (UNDP). GEF partner (MoE) PPG Team	Offline	Before finalization of project document and CEO Endorsement Request	The PPG budget
2. Engagement in project implementation						
Competitive bidding for the demonstration enterprises	Select the most suitable enterprises	All the enterprises interested in the demonstration	PMU	Bidding information disclosed online	In the PPG phase and the beginning of the project	The project budget

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
					implementation	
Recommend and select the demonstration medical facilities according to the selection criteria and the local situation	Select the most suitable medical facilities	All the medical facilities interested in the demonstration	PMU and the local government in demonstration areas (including the management department of environment and/or health)	Selected demonstration areas	In the beginning of the project implementation	The project budget
Inception workshop Bi-annual work plan making and/or update	Reach an agreement on the project detailed arrangement	All the key stakeholders	UNDP, MoE, the PMU	TBD	Project Inception Period	The project budget
For Component 1: Policy and regulatory frameworks strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector.						
Outcome: 1.1. Regulations/ policies strengthened, proposed and/or operationalized to prohibit the use of MCMDs in health care facilities. **Outputs**: 1.1.1. Regulatory and policy frameworks proposed for total phase out the use of mercury-containing medical devices. 1.1.2. Gender-sensitive regulatory and policy framework concerning mercury collection, distribution, temporary storage, and disposal Developed/ strengthened. **Outcome: 1.2.** Gender-sensitive and inclusive Capacity Building activities carried out for government staff (both national and sub-national) to enhance policy enforcement and oversight. **Outputs**: 1.2.1. Coordination and cooperation Mechanisms between central and local governments established and strengthened. 1.2.2. Phase-out of use of MCMDs oversight and Hg elimination commitments enforced for health facilities. 1.2.3. All levels of Governmental institutions in charge of the regulatory systems for mercury collection, distribution, and storage capacitated in new rules and regulations. 1.2.4. Inventories of stocks of Hg wastes and MCMDs are updated and assessed and real situation of mercury use, collection and storage in Health Care Facilities (HCF) are known.						
Consultation workshops, interviews, and/or surveys	Develop policy and regulatory frameworks, quality control standards, monitoring and management systems, and capacity-building programs for phase out	The project inter-ministerial Committee, The demonstration enterprises: men and women participants	UNDP, MoE, the PMU	TBD	During the project implementation	The project budget

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
Consultation workshops, interviews, and/or surveys	Develop policy and regulatory frameworks, green procurement standards and action plans for mercury-free medical device application	The project inter-ministerial Committee, The demonstration medical facilities: men and women participants, Potential expansion medical facilitates: men and women participants	UNDP, MoE, the PMU	TBD	During the project implementation	The project budget
Consultation workshops, interviews, and/or surveys	Develop a Green Finance Framework to facilitate the manufacturing enterprises, including SMEs, to phase out mercury-containing medical production and for the medical facilities to apply mercury-free medical devices	The project inter-ministerial Committee, The demonstration enterprises: men and women participants, The demonstration medical facilities Any potential finance agencies	UNDP, MoE, the PMU	TBD	During the project implementation	The project budget
For Component 2. Technical and institutional capacities of private sector stakeholders enhanced on MCMDs phase-out and environmentally sound mercury-containing medical waste management improved.						
Outcome: 2.1. MCMDs and their wastes are collected, stabilized (solidified) and disposed of in environmentally sound manner, in accordance with national regulations, international guidelines and Best Environmental Practices (BEP) and based on Gender sensitive principles. **Outputs**: 2.1.1. Gender-sensitive technical guidance/ guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established. 2.1.2. Health facility management capacities to address mercury-free medical devises are strengthened through gender-sensitive capacity building. 2.1.3. Pilot plant for mercury temporary storage from medical devices containing mercury established. 2.1.4. Gender and Social Inclusive (GESI) awareness programme on MCMDs replacement, collection and disposal to health facilities is created and implemented.						
Demonstration of mercury-containing collection and distribution phase-out	Mercury-containing medical thermometer and sphygmomanometer collection and distribution phased out	The project demonstration enterprises with women and men participants	The PMU, the demonstration enterprises	Location of the enterprises	During the project implementation	The project budget

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
Demonstration of application of temporary storage	Mercury-free thermometers and sphygmomanometers temporary storage demonstrated	The selected medical facilities who will demonstrate application temporary storage of mercury-free thermometers and sphygmomanometers	The PMU, the demonstration medical facilities	Location of the enterprises	During the project implementation	The project budget
Expanded application of temporary storage	Mercury-free thermometers and sphygmomanometers application expanded	Potential medical enterprises who have willingness to temporary storage	The PMU, the demonstration medical facilities, and the expansion medical facilities	Location of the enterprises	During the project implementation	The project budget
For Component 3. Circular models are developed and piloted to promote and sustain the large scale replacement to mercury-free alternatives for MCMDs.						
Outcome 3.1. Technical guidelines developed on lifecycle management of mercury-free alternatives. **Outputs**: 3.1.1. Circular models for mercury-free medical devices (MFMDs) to support MCMDs accelerated replacement assessed. 3.1.2. Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed. **Outcome 3.2.** Mercury-free medical devices piloted in selected health care facilities, collection and recycling guidelines developed for end-of-life products and disposal technologies/strategies piloted taking into consideration gender and social inclusive approaches. **Outputs**: 3.2.1. Medical Devices manufacturers, distributors, and suppliers had incorporated circular economy principles on disposal of Hg-based and electronic-based devices in their CSRs and/or other relevant internal practices, Policies, or strategies. 3.2.2. One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented. 3.2.3. Hg stabilization and solidification strategies and solutions upscaled to 4 (four) locations in partnership with Public-Private selected institutions. **Outcome 3.3.** Financing mechanisms to support replication and scale up of MCMDs replacement in collaboration with local fund providers/banks assessed. **Output**: 3.3.1. Development of gender-sensitive financing mechanisms that explored in collaboration with local fund providers/banks and new/revamped finance solutions proposed.						
Information collection	Develop inventory of mercury contaminated sites at enterprises producing mercury-containing medical	All enterprises who are producing mercury-containing medical thermometers and sphygmomanometers	MoE and PMU	TBD	During the project implementation	The project budget

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
	thermometers and sphygmomanometers					
Workshops, interviews, and/or survey	Develop long-term guidance and tools for the sound management of residual mercury stocks and obsolete mercury containing devices, and the remediation of contaminated sites on production sites	Demonstration enterprises	MoE and PMU	TBD	During the project implementation	The project budget
Workshops, interviews, and/or survey	Develop long-term guidance and tools for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers in medical facilities	Demonstration medical facilities, Medical facilities with expansion application of the mercury-free medical devices	MoE and PMU	TBD	During the project implementation	
For component 4: Project results monitored, documented, and shared.						
Outcome: 4.1. Monitoring and evaluation activities carried out as per GEF requirements **Output** 4.1.1. Assessed and applied Social and Environmental Screening Procedure (SESP). 4.1.2. Gender Action Plan and awareness raising activities on collection, transport, storage and disposal of mercury and mercury waste. 4.1.3. Periodic monitoring, and reporting, Project Implementation Reports (PIR), Mid-Term Review and Terminal Evaluation. **Outcome: 4.2.** Learning and knowledge sharing activities carried out and knowledge products developed and shared (including lessons-learned from the perspective of gender-equality and social inclusion implementation). **Output** 4.2.1. Lessons-learned and best practices for knowledge management are collected and shared at national and international levels.						
Workshop, online communication, etc.	Increase stakeholders' awareness and share	Demonstration enterprises: men and women staff	PMU Communication staff and/or specialist	Website, media, and other ways	During the project implementation	Project budget

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
	knowledge and experience to replicate phase out of mercury-containing medical devices at other non-demonstration enterprises, and promote wide application of mercury-free medical devices at other medical facilities					
Workshop, online communication etc.	Increase stakeholders' awareness and knowledge to promote wide application of mercury-free medical devices at other medical facilities	Demonstration medical facilities: men and women staff, Expended medical facilities: men and women staff, Other relevant enterprises and medical facilities: men and women, Public population	PMU Communication staff and/or specialist	Website, media, and other ways	During the project implementation	Project budget
3. Participation in project monitoring						
The overall monitoring • Monitoring the project progress	Smooth implementation of project activities to achieve project objectives	The demonstration enterprises, the demonstration medical facilities, the medical facilities involved in expansion application of the mercury-free medical devices	PMU	Sites of the project activities located	During project implementation	Project budget for M&E
• Consultation with women and men in the demonstration agencies	Gender equality in the project monitoring	Project direct beneficiaries and implementers:	PMU, monitoring staff	Suitable places and/or channels	During project implementation	Project budget for Component 2

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
				identified during the monitoring		
• Consultation with academic and research institutions, relevant governments, and other stakeholders	Experiences and suggestions from the stakeholders obtained for effective implementation of the project	Relevant academic, Research institutions etc.	PMU, monitoring staff	Suitable places and/or channels identified during the monitoring	Ditto During project implementation	Project budget for M&E
4. Mid-term review and terminal evaluation						
Consultation with relevant stakeholders	Evaluation done effectively and adaptive management instituted	Key project stakeholders	PMU, Independent evaluation consultants	Suitable places and/or channels identified during the evaluation	During the evaluations	Project budget for M&E
Dissemination of the approved review / evaluation reports to broad public	Make information accessible to broad public	Any interested individual and organization	GEF, UNDP, MoE and PMU	Disclosed on websites of the GEF, UNDP, MoE	4 weeks after the evaluation reports finalized	Project budget for M&E
5. Information request procedure for broad public						
Publicizing contact details for information requests from public	Project non-confidential information accessible to public.	Any individual and organization interested in the project	PMU, relevant project agencies	Disclosed on websites of the project and/or MoE	Immediately after inception workshop	Project budget for communications
Public request information to the contacts by email or by written document	If necessary, institution/individual request needed information	individual and organization requested project information	PMU, relevant project agencies	Emails or written documents to relevant project office / PAs	Any time during the project implementation	Project budget for communications
The Project's reply to the information requests	The requests were replied	individual and organization requested project information, relevant project agencies	PMU, relevant project agencies	same way replying to the request	Within 2 weeks after received the request	Project budget for communications
6. Grievance redress mechanism						
Step 1: affected people submit grievance if any to the contacts of	express grievance	People or organizations submitted grievance	Relevant demonstration agency	Written grievance	Any time during the project implementation	Project budget for M&E

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
demonstration enterprises or medical facilities						
Step 2: demonstration agencies address the grievance	Address grievance	People or organizations submitted grievance	PMU, relevant demonstration agency	Suitable ways	Two weeks after received the complaint	Project budget for M&E
Step 3: if dissatisfied, the affected people submit his/her grievance to the project PMU	Address grievance	People submitted grievance	PMU	Suitable ways	Two weeks after received the complaint	Project budget for M&E
Step 4: if still dissatisfied, the affected people can appeal to relevant administrative authorities	Address grievance	People submitted grievance	PMU The administrative authorities	Suitable ways		

12.

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Stakeholder engagement during the project preparation

13. The PPG team started working on the project, several online meetings conducted on identifying key stakeholders, their roles, interests, and responsibilities, were conducted led by UNDP; questionnaires were discussed, improved, and finalized; one mercury-containing sphygmomanometer production enterprises was surveyed, and four medical facilities (national, regency and district level)were surveyed during the PPG stage. (Table 8-3)

Table 8-3: Stakeholder engagement in the project preparation (PPG) phase

Means of Engagement	Objectives	Stakeholders engaged	Time	Major results
First run survey of the production enterprises using questionnaire, survey outline, key informant interview. The surveyed enterprise is private. The enterprise is top 5 sphygmomanometers producer which about 75% of the MFMDs sphygmomanometers is for exporting	Collect information on production of mercury-free sphygmomanometers in Indonesia, management situation of MFMDs	Abadi Nusa (ABN) Group of Companies at Padalarang – West Java	17 February 2025	Situation of the enterprises: productivity of MFMDs management. Willingness, readiness and capacity to apply mercury-free devices, women and men medical staff, etc.
Meeting of PPG members with UNPD	- Make familiar with the PIF emphasized gender - Achieve common and deep understanding of the project, the outcomes, objectives, the institutional arrangement, etc. - Further identify key stakeholders	- UNDP - PPG team leader consultant - PPG Technical and institutional capacities of private sector stakeholders specialist - PPG Gender specialist - PPG Circular Models Specialist - PPG Social and Environmental Safeguard Specialist	January - February, 2025	- Clear understanding of the project - identification of the key stakeholders
Meeting of PPG members	Methods and tools developed for consultation of the key stakeholder	- PPG team leader consultant - PPG Technical and institutional capacities of private sector stakeholders specialist - PPG Gender specialist - PPG Circular Models Specialist - PPG Social and Environmental Safeguard Specialist	January-February, 2025	Finalization of issue and concern for surveying relevant medical facilities Sampling and survey methods agreed
Meeting of exchange experience on promote mercury-free products in medical institutions	Interchange experience on promoting replacement mercury-containing devices in hospital	Experts in medical apparatus and instruments from different hospital that has taken some actions to promote mercury-free products - PPG project design team	11 February 2025	Some lesson learned on promoting replacement mercury-containing devices in hospital which make for project design.

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Means of Engagement	Objectives	Stakeholders engaged	Time	Major results
Progress meeting of PPG project	- Achieve common and deep understanding of the Project Document (draft), including the outcomes, objectives, the institutional arrangement, etc. - Understanding the requirement of SESP - Further thought to promote and popularize mercury-free products through training	- UNDP - PPG team leader consultant - PPG Technical and institutional capacities of private sector stakeholders specialist - PPG Gender specialist - PPG Circular Models Specialist - PPG Social and Environmental Safeguard Specialist	25 March 2025	The initial consensus reached on the Project Document
Validation Workshop Meeting	- Achieve consensus on the designed activities and risk management of the Project Document by key stakeholders.	- UNDP - MoE - MoH - BRIN - PPG team leader consultant - PPG Technical and institutional capacities of private sector stakeholders specialist - PPG Gender specialist - PPG Circular Models Specialist - PPG Social and Environmental Safeguard Specialist	April 14 and 15 2025	The key stakeholders reach a consensus on Project Document.

Stakeholder engagement during the project implementation

14. Based on the above-mentioned consultations, and GEF policy on stakeholder engagement, the following Stakeholder Engagement Plan for the project implementation phase has been developed. Table 8-4 Stakeholder Engagement during Project Implementation.

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Table 8-4: Stakeholder Engagement during Project Implementation

Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
7. Before the project implementation						
Dissemination of the project document on websites	Public access to the project information outreach of the project	Any interested individual and organization, male and female.	GEF agency (UNDP), GEF partner (MoE).	Disclosed on websites of the UNDP, and MoE	Before the project implementation	The PPG budget
Dissemination of the project information to the relevant communities in an appropriate and understandable manner, for example, noticeboard, community representative meetings	Key communities fully informed with the project information	Relevant women and men work in this sector of waste and obsolete mercury-containing medical thermometers and sphygmomanometers and medical waste management	The demonstration enterprises	The relevant communities	Before the project implementation	The PPG budget
Validation Workshop for consultation and interaction	Secure comments on and confirmation of project objectives, outcomes, outputs and activities	Personnel from governmental departments, demonstration manufacturers, medical facilities and interested individuals from communities with close proximity to mercury-containing medical device manufacturing sites and also medical waste management.	GEF agency (UNDP). GEF partner (MoE) PPG Team	Offline	Before finalization of project document and CEO Endorsement Request	The PPG budget
8. Engagement in project implementation						
Competitive bidding for the demonstration enterprises	Select the most suitable enterprises	All the enterprises interested in the demonstration	PMU	Bidding information disclosed online	In the PPG phase and the beginning of the project implementation	The project budget
Recommend and select the demonstration medical facilities according to the	Select the most suitable medical facilities	All the medical facilities interested in the demonstration	PMU and the local government in demonstration areas	Selected demonstration areas	In the beginning of the project implementation	The project budget

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
selection criteria and the local situation			(including the management department of environment and/or health)			
Inception workshop Bi-annual work plan making and/or update	Reach an agreement on the project detailed arrangement	All the key stakeholders	UNDP, MoE, the PMU	TBD	Project Inception Period	The project budget
For Component 1: Policy and regulatory frameworks strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector.						
Outcome: 1.1. Regulations/ policies strengthened, proposed and/or operationalized to prohibit the use of MCMDs in health care facilities. **Outputs**: 1.1.3. Regulatory and policy frameworks proposed for total phase out the use of mercury-containing medical devices. 1.1.4. Gender-sensitive regulatory and policy framework concerning mercury collection, distribution, temporary storage, and disposal Developed/ strengthened. **Outcome: 1.2**. Gender-sensitive and inclusive Capacity Building activities carried out for government staff (both national and sub-national) to enhance policy enforcement and oversight. **Outputs**: 1.2.5. Coordination and cooperation Mechanisms between central and local governments established and strengthened. 1.2.6. Phase-out of use of MCMDs oversight and Hg elimination commitments enforced for health facilities. 1.2.7. All levels of Governmental institutions in charge of the regulatory systems for mercury collection, distribution, and storage capacitated in new rules and regulations. 1.2.8. Inventories of stocks of Hg wastes and MCMDs are updated and assessed and real situation of mercury use, collection and storage in Health Care Facilities (HCF) are known.						
Consultation workshops, interviews, and/or surveys	Develop policy and regulatory frameworks, quality control standards, monitoring and management systems, and capacity-building programs for phase out	The project inter-ministerial Committee, The demonstration enterprises: men and women participants	UNDP, MoE, the PMU	TBD	During the project implementation	The project budget
Consultation workshops, interviews, and/or surveys	Develop policy and regulatory frameworks, green procurement	The project inter-ministerial Committee,	UNDP, MoE, the PMU	TBD	During the project implementation	The project budget

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
	standards and action plans for mercury-free medical device application	The demonstration medical facilities: men and women participants, Potential expansion medical facilitates: men and women participants				
Consultation workshops, interviews, and/or surveys	Develop a Green Finance Framework to facilitate the manufacturing enterprises, including SMEs, to phase out mercury-containing medical production and for the medical facilities to apply mercury-free medical devices	The project inter-ministerial Committee, The demonstration enterprises: men and women participants, The demonstration medical facilities Any potential finance agencies	UNDP, MoE, the PMU	TBD	During the project implementation	The project budget
For Component 2. Technical and institutional capacities of private sector stakeholders enhanced on MCMDs phase-out and environmentally sound mercury-containing medical waste management improved.						
Outcome: 2.1. MCMDs and their wastes are collected, stabilized (solidified) and disposed of in environmentally sound manner, in accordance with national regulations, international guidelines and Best Environmental Practices (BEP) and based on Gender sensitive principles. **Outputs**: 2.1.1. Gender-sensitive technical guidance/ guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established. 2.1.2. Health facility management capacities to address mercury-free medical devises are strengthened through gender-sensitive capacity building. 2.1.3. Pilot plant for mercury temporary storage from medical devices containing mercury established. 2.1.4. Gender and Social Inclusive (GESI) awareness programme on MCMDs replacement, collection and disposal to health facilities is created and implemented.						
Demonstration of mercury-containing collection and distribution phase-out	Mercury-containing medical thermometer and sphygmomanometer collection and distribution phased out	The project demonstration enterprises with women and men participants	The PMU, the demonstration enterprises	Location of the enterprises	During the project implementation	The project budget

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
Demonstration of application of temporary storage	Mercury-free thermometers and sphygmomanometers temporary storage demonstrated	The selected medical facilities who will demonstrate application temporary storage of mercury-free thermometers and sphygmomanometers	The PMU, the demonstration medical facilities	Location of the enterprises	During the project implementation	The project budget
Expanded application of temporary storage	Mercury-free thermometers and sphygmomanometers application expanded	Potential medical enterprises who have willingness to temporary storage	The PMU, the demonstration medical facilities, and the expansion medical facilities	Location of the enterprises	During the project implementation	The project budget
For Component 3. Circular models are developed and piloted to promote and sustain the large scale replacement to mercury-free alternatives for MCMDs.						
Outcome 3.1. Technical guidelines developed on lifecycle management of mercury-free alternatives. **Outputs**: 3.1.1. Circular models for mercury-free medical devices (MFMDs) to support MCMDs accelerated replacement assessed. 3.1.2. Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed. **Outcome 3.2**. Mercury-free medical devices piloted in selected health care facilities, collection and recycling guidelines developed for end-of-life products and disposal technologies/strategies piloted taking into consideration gender and social inclusive approaches. **Outputs**: 3.2.1. Medical Devices manufacturers, distributors, and suppliers had incorporated circular economy principles on disposal of Hg-based and electronic-based devices in their CSRs and/or other relevant internal practices, Policies, or strategies. 3.2.2. One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented. 3.2.4. Hg stabilization and solidification strategies and solutions upscaled to 4 (four) locations in partnership with Public-Private selected institutions. **Outcome 3.3**. Financing mechanisms to support replication and scale up of MCMDs replacement in collaboration with local fund providers/banks assessed. **Output**: 3.3.2. Development of gender-sensitive financing mechanisms that explored in collaboration with local fund providers/banks and new/revamped finance solutions proposed.						
Information collection	Develop inventory of mercury contaminated sites at enterprises producing mercury-containing medical	All enterprises who are producing mercury-containing medical thermometers and sphygmomanometers	MoE and PMU	TBD	During the project implementation	The project budget

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
	thermometers and sphygmomanometers					
Workshops, interviews, and/or survey	Develop long-term guidance and tools for the sound management of residual mercury stocks and obsolete mercury containing devices, and the remediation of contaminated sites on production sites	Demonstration enterprises	MoE and PMU	TBD	During the project implementation	The project budget
Workshops, interviews, and/or survey	Develop long-term guidance and tools for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers in medical facilities	Demonstration medical facilities, Medical facilities with expansion application of the mercury-free medical devices	MoE and PMU	TBD	During the project implementation	
For component 4: Project results monitored, documented, and shared.						
Outcome: 4.1. Monitoring and evaluation activities carried out as per GEF requirements **Output** 4.1.4. Assessed and applied Social and Environmental Screening Procedure (SESP). 4.1.5. Gender Action Plan and awareness raising activities on collection, transport, storage and disposal of mercury and mercury waste. 4.1.6. Periodic monitoring, and reporting, Project Implementation Reports (PIR), Mid-Term Review and Terminal Evaluation. **Outcome: 4.2**. Learning and knowledge sharing activities carried out and knowledge products developed and shared (including lessons-learned from the perspective of gender-equality and social inclusion implementation). **Output** 4.2.1. Lessons-learned and best practices for knowledge management are collected and shared at national and international levels.						
Workshop, online communication, etc.	Increase stakeholders' awareness and share	Demonstration enterprises: men and women staff	PMU Communication staff and/or specialist	Website, media, and other ways	During the project implementation	Project budget

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
	knowledge and experience to replicate phase out of mercury-containing medical devices at other non-demonstration enterprises, and promote wide application of mercury-free medical devices at other medical facilities					
Workshop, online communication etc.	Increase stakeholders' awareness and knowledge to promote wide application of mercury-free medical devices at other medical facilities	Demonstration medical facilities: men and women staff, Expended medical facilities: men and women staff, Other relevant enterprises and medical facilities: men and women, Public population	PMU Communication staff and/or specialist	Website, media, and other ways	During the project implementation	Project budget
9. Participation in project monitoring						
The overall monitoring • Monitoring the project progress	Smooth implementation of project activities to achieve project objectives	The demonstration enterprises, the demonstration medical facilities, the medical facilities involved in expansion application of the mercury-free medical devices	PMU	Sites of the project activities located	During project implementation	Project budget for M&E
• Consultation with women and men in the demonstration agencies	Gender equality in the project monitoring	Project direct beneficiaries and implementers:	PMU, monitoring staff	Suitable places and/or channels	During project implementation	Project budget for Component 2

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
				identified during the monitoring		
• Consultation with academic and research institutions, relevant governments, and other stakeholders	Experiences and suggestions from the stakeholders obtained for effective implementation of the project	Relevant academic, Research institutions etc.	PMU, monitoring staff	Suitable places and/or channels identified during the monitoring	Ditto During project implementation	Project budget for M&E
10. Mid-term review and terminal evaluation						
Consultation with relevant stakeholders	Evaluation done effectively and adaptive management instituted	Key project stakeholders	PMU, Independent evaluation consultants	Suitable places and/or channels identified during the evaluation	During the evaluations	Project budget for M&E
Dissemination of the approved review / evaluation reports to broad public	Make information accessible to broad public	Any interested individual and organization	GEF, UNDP, MoE and PMU	Disclosed on websites of the GEF, UNDP, MoE	4 weeks after the evaluation reports finalized	Project budget for M&E
11. Information request procedure for broad public						
Publicizing contact details for information requests from public	Project non-confidential information accessible to public.	Any individual and organization interested in the project	PMU, relevant project agencies	Disclosed on websites of the project and/or MoE	Immediately after inception workshop	Project budget for communications
Public request information to the contacts by email or by written document	If necessary, institution/individual request needed information	individual and organization requested project information	PMU, relevant project agencies	Emails or written documents to relevant project office / PAs	Any time during the project implementation	Project budget for communications
The Project's reply to the information requests	The requests were replied	individual and organization requested project information, relevant project agencies	PMU, relevant project agencies	same way replying to the request	Within 2 weeks after received the request	Project budget for communications
12. Grievance redress mechanism						
Step 1: affected people submit grievance if any to the contacts of	express grievance	People or organizations submitted grievance	Relevant demonstration agency	Written grievance	Any time during the project implementation	Project budget for M&E

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Engagement methods	Objectives	Key Stakeholders being engaged	Main responsible agencies	Location	Time	Resources
demonstration enterprises or medical facilities						
Step 2: demonstration agencies address the grievance	Address grievance	People or organizations submitted grievance	PMU, relevant demonstration agency	Suitable ways	Two weeks after received the complaint	Project budget for M&E
Step 3: if dissatisfied, the affected people submit his/her grievance to the project PMU	Address grievance	People submitted grievance	PMU	Suitable ways	Two weeks after received the complaint	Project budget for M&E
Step 4: if still dissatisfied, the affected people can appeal to relevant administrative authorities	Address grievance	People submitted grievance	PMU The administrative authorities	Suitable ways		

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Annex 9: Environnemental Social Management Framework (ESMF)

Refer to attached standalone document

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Annex 10: Gender Analysis and Gender Action Plan

Project: Strengthening Indonesia's Reduction and Elimination in the Distribution and Supply Chain of Mercury from National Health (SIRENE)

Introduction

This Gender Action Plan (GAP) is developed based on the UNDP Guidance on Gender and Chemicals for the project document for the "Strengthening Indonesia's Reduction and Elimination in the Distribution and Supply Chain of Mercury from National Health (SIRENE)" project. It aims to ensure gender mainstreaming in all aspects of the project, promoting gender equality and social inclusion while addressing mercury contamination in Indonesia's healthcare sector.

Project Context and Rationale

Mercury contamination in Indonesia's health sector poses a significant risk to both men and women, with disproportionate impacts on women in healthcare waste management, informal recycling, and patient care. Gender mainstreaming in this project ensures that both women and men equally benefit from mercury-free policies, capacity-building initiatives, and safe work environments.

Project Overview

This project will assist the Government of Indonesia to eliminate mercury in the distribution and supply chain of mercury containing medical devices (MCMDs) from the health sector, establish systems and introduce technologies for mercury safe disposal and create mechanism for the sustainable and circular introduction of mercury free medical devices (MFMD).

There are four main components to the project which include gender mainstream:

- Component 1: Policy and regulatory frameworks strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector
- Component 2: Technical and institutional capacities of private sector stakeholders enhanced on MCMDs phase-out and environmentally sound mercury-containing medical waste management improved.
- Component 3: Circular models are developed and piloted to promote and sustain the large scale replacement to mercury-free alternatives for MCMDs.
- Component 4: Project results monitored, documented, and shared

Gender Mainstreaming Strategy

The project incorporates gender mainstreaming to promote equal participation, access to resources, and decision-making for men and women. The strategy includes:

- Ensuring women's participation in policy development and regulatory frameworks on hazardous waste management.
- Strengthening institutional capacities for gender-responsive mercury-free policies.
- Enhancing gender-disaggregated data collection on mercury exposure and its health impacts.
- Providing gender-sensitive capacity-building initiatives for health sector workers and waste management professionals.

This gender mainstreaming strategy aims at contributing towards achieving the Sustainable Development Goal (SDG) 5, Gender Equality, especially Target 5.5 which is to ensure that all women can participate fully and have equal opportunities for leadership at all levels of decision-making in political, economic and public life. Target 5.6. Point 1, undertake reforms to give women equal rights to economic resources as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national regulation.

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Key Gender Considerations in Mercury Management

- **Exposure and Health Risks:** Women in healthcare and waste management are disproportionately exposed to mercury due to their occupational roles. Addressing these risks requires targeted interventions.
- **Gender Roles in Waste Management:** Women often bear the burden of informal waste collection and disposal, necessitating tailored training and protective measures.
- **Decision-Making Gaps:** Women remain underrepresented in regulatory and policy-making bodies for chemical and waste management. The project will promote their participation in governance mechanisms.

Methodology

The methodology utilized for this gender analysis and mainstreaming action plan is in accordance with the UNDP Guidance Document: Gender and Chemicals, Mainstreaming Gender into UNDP-GEF projects and chemical and waste, and Guidance to Advance Gender Equality in GEF Projects and Programs and UNDP Gender Equality Strategy.

Gender Analysis

Gender Context in Indonesia

In Indonesia, gender equality is explicitly guaranteed by the Constitution and has been further promoted through the ratification of the International Convention on the Elimination of All Forms of Discrimination against Women (CEDAW).

Presidential Instruction No. 9/2000 on Gender Mainstreaming in National Development states that national development should promote gender equality in the family, society, and nation. In 2008, the Ministry of Home Affairs issued Regulation No.15/2008 on Guidelines for Implementing Gender Mainstreaming in the Regions. In 2009, the Ministry of National Development/National Development Planning Agency (BAPPENAS) issued Decree No. KEP.3O/M.PPN/HK/03/2009 establishing a Steering Committee and Technical Team for gender-responsive planning and budgeting. In addition, Regulation No. 119/2009 issued by the Ministry of Finance appointed seven ministries and agencies (ministries of finance, health, education, public works, women and children and BAPPENAS) as pilot institutions for gender-responsive planning and budgeting (GRPB).

The Government of Indonesia ratified the UN Covenant on Civil and Political Rights and committed to the Beijing Platform of Action, both of which provide guidance on removing barriers preventing women from fully participating in public life. Indonesia also signed the International Covenant on Economic, Social, and Cultural Rights and the International Covenant on Civil and Political Rights (ICCPR) in 2006.

The National Gender Mainstreaming Policy enacted in 2000 (through The Presidential Instruction Number 9 the Year 2000) is preserved in the National Long-term Development Plan (RPJPN) 2005-2025 and the final bill of RPJPN 2025-2045 which confirms the Indonesian government's commitment to gender equality with specific laws in place and aligning the National Development Agenda with 17 Sustainable Development Goal (SDG) #5 Gender Equality.

Measures have been taken to implement the Government's zero-tolerance policy for gender-based violence. These include the Law on Domestic Violence in 2004, the Victim Protection Law in 2006, the Law on Anti-Trafficking in 2007, and the Law on Sexual Violence Crime in 2022. Recently, UNDP Indonesia worked with the government to prevent Gender Based Violence (GBV)/Violence Against Women (VAW) through piloting the development of hospital-based and movable containers for integrated services for GBV survivors, in addition to additional SOPs for GBV services in the context of COVID-19 pandemic in targeted areas where incidents of GBV were raising.

Institutional Framework

The State Ministry for Women's Empowerment and Child Protection (SMWC) was established in 1978 as Indonesia's national machinery for gender equality and women's empowerment. The SMWC is responsible for ensuring gender mainstreaming and women's empowerment in government policies and programs at the national and local levels through policy formulation. It also coordinates the implementation process of gender-responsive budgets at the national, regional and sub-national levels and gender working groups have been established in all ministries at all levels of governance. The ministry carries out its functions through six directorates: secretariat, gender

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mainstreaming, and improvement of women's quality of life, women's protection, child protection, and empowerment of community organizations.

The National Commission on Violence Against Women (Komnas Perempuan) was created in 1998 to advise the executive and the legislature on eliminating violence against women. Komnas Perempuan has carried out its mandate through advocacy, policy and legal drafting and networking. It has monitored the government's performance on gender equality issues while acting as an intermediary between the government and women's rights organizations.

The Human Development Index and Gender Development Index

As of 2024, Indonesia's population has grown to approximately 284.37 million, with a population density of about 156.5 people per km². The sex ratio remains balanced, with a slight male majority[22]. (approximately 49.66 percent of the population in Indonesia were females). The distribution of males to females in the country was almost the same as in the population as a whole, and has been stable throughout the past decade.

Indonesia's Human Development Index (HDI)[23] has continued to increase in recent years. In the 2023/2024 Human Development Report, Indonesia's Human Development Index (HDI) improved to 0.713, positioning the country at 112th out of 193 nations. This reflects ongoing progress in health, education, and income.[24]

Regarding gender equality, the Global Gender Gap Report 2024 indicates that Indonesia has closed approximately 70% of its overall gender gap. Notably, the country has made significant strides in economic participation and opportunity for women. However, challenges persist in labor force participation rates and income disparities between genders.[25]

In recent developments, Indonesia achieved a record-low poverty rate in 2024, demonstrating significant socio-economic progress. Additionally, the government launched a $28 billion Free Nutritious Meal program targeting nearly 90 million children and pregnant women to combat malnutrition and support long-term development goals.[26]

Indonesia boasts the world's largest share (55%) of senior and leadership roles held by women and is one of the six countries in the world where a majority of such roles are held by women. On the other hand, the low share of women (54%) participating in the labour market and significant difference in income distribution (female earned income is half that of men) continue to weigh on the country's performance on this subindex. Both the educational and health gender gaps have nearly closed (scores of 97.0 and 97.4% on the respective subindexes). However, small imbalances persist in terms of literacy rates (94% among women compared with 97% among men) and primary enrolment rate (91% versus 96%), although levels are extremely high and rising for both sexes. Whereas the trends are overwhelmingly positive in the economic, health and educational spheres, the political gender gap has widened slightly, from a low base (17.2%, 82nd down 22 places). This results from weaker female representation in parliament (17.4%, down from 19.8%) and in the cabinet (24%, down from 26%). National instruments such as the Gender Development Index[27] and the Gender Empowerment Index28 confirm these findings.[29]

Summary of information for Indonesia:

22 worldpopulationreview.com
23 The human development index measures achievements by accounting for disparities in three basic dimensions of human development—health, knowledge and living standards.
24 hdr.undp.org
25 weforum.org
26 vox.comapnews.com
[27] Gender Development Index, measures disparities by gender. GDI values are estimated separately for women and men, the ratio of which is the GDI value. The closer the ratio is to 1, the smaller the gap between women and men. Values for the three GDI components—longevity, education (with two indicators) and income per capita—are also presented by gender.
[28] The GEM is an index designed to measure gender equality. It shows how much women are lagging behind their male counterparts in economic and political aspects. The IDG measured by three aspects: the proportion of parliamentary seats occupied by females, decision-making role in workplace, and labor force participation rate.
[29] Indonesia's Global Gender Gap index score from 2011 to 2020 https://www.statista.com/statistics/973044/global-gender-gap-score-indonesia/ accessed on 7 September 2021

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Gender Development Index (GDI) 91.85
GDI measures the ratio of HDI (Human Development Index) of women compared to that of men. HDI comprises of life expectancy, meanyears of schooling, expected years of schooling, and expenditure per capita. The current GDI indicates that in 2023, the HDI performance of Indonesian women equals to 91.86 percent of the HDI performance of Indonesian men.

Geder Inequality Index 0.459
GII measures the gaps between men and women in three dimensions: reproductive health, empowerment (in education and leadership), and labour force participation. The GII values between 0 and 1, where 0 reflects full equality. The current GII indicates that in 2022, there are 0.459 points of gaps between Indonesian men and women in the three dimensions.

Women's Financial Inclusion Index 83.88
The National Financial Literacy and Inclusion Survey 2022 reveals that the women's literacy index surpasses the men's for the first time with 50.33 percent for women and 49.05percent for men.

Female Labour Force Participation 54.52
FLFP indicates the proportion of female aged 15 and above who perform economic activities to earn or help earning income among the total female population in the same age. For comparison, the Male Labor Force Participation in the same point of time is 84.26percent.

GBV prevalence 26.1
In the National Survey on Women's Life Experience 2021, 26.1 percent of women aged 15-64 have experienced violence in their lifetime. This is a decrease compared to the results in 2016 with 33.4 percent.

Women's Digital Literacy Index 3.52
On a scale of 1 to 5,women's digital literacy index in 2022 is 3.52 compared to men's at 3.56 point.

Women's Participation in Politics and the Economy

Political Participation

As of 2024, women's participation in Indonesia's political and economic spheres has seen both progress and ongoing challenges.

In the February 2024 national elections, women's representation in the Dewan Perwakilan Rakyat (DPR), Indonesia's national parliament, reached a record high of 22%, with 127 female members out of 580 lawmakers. This increase reflects concerted efforts, including affirmative action policies and reforms by the General Election Commission, to enhance female political representation.[30]

Despite these gains, the political landscape remains predominantly male. President Prabowo Subianto's 2024 cabinet comprises 108 ministers, deputy ministers, and agency chiefs, of which only 14 are women, highlighting the underrepresentation of women in executive roles[31].

Although women's participation in politics has achieved a number of breakthroughs, there is still much to be done. Affirmative action provisions enshrined in Law 12/2003, Law 10/2008 and Law 5/2012 concerning General Elections for Members of DPR, DPD, and DPRD state that at least 30% of candidates fielded by a political party must be women. Changes in the electoral law were a positive first step for women as they constituted 18.21% and 19.2% of parliamentarians in the 2009-2014 and 2014-2019 electoral cycles respectively. These figures are still insufficient, however as they are dismally below the minimum of 30% government-approved gender quota. Indonesia ranks 114 among 193 countries in the number of women in the National Parliaments of the Inter-Parliamentary Union.

[30] alignplatform.org
[31] theaustralian.com.au

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Indonesia's efforts toward gender equality are reflected in its improved ranking on the Global Gender Gap Index, moving from 92nd in 2022 to 87th in 2023. This advancement is partly due to an increase in the share of women in legislative, senior, and managerial roles, rising from 29.7% in 2021 to over 30% in 2023[32].

Economic Participation

Women's labor force participation in Indonesia has remained relatively stagnant over the past two decades. In 2021, the female labor force participation rate was approximately 53%, significantly lower than that of men, resulting in one of the largest gender gaps in the region at around 30%. By 2023, this rate saw a slight increase to 54.4%, yet disparities persist.[33]

Moreover, women continue to face wage disparities, earning approximately 59% of what their male counterparts receive for similar work. While women constitute a significant portion of entrepreneurs, with 64% engaged in business activities, they predominantly operate micro-scale enterprises, indicating barriers to scaling and accessing larger economic opportunities. [34]

Women in Indonesia still face cultural barriers that have a significant effect on their participation in the workforce and hence their contribution to the economy (Women's World Banking, June 2021). As presented in Table 1 on the following page, the working age population in Indonesia is 203.97 million people with various educational backgrounds as shown in Table 10-1. As the Table 10-1 indicates, women make up most students in tertiary education. Yet, 26% of young women were not in employment, education, or training in 2019, compared with 21% of Indonesia's youth overall, a result of persistent gender inequalities.[35]

Table 10-1*Working age population by education completed and gender*

highest level of education completed	Gender		Total
	Men	Women	
no education - elementary school	35.840.359	40.786.779	76.627.138
Junior High School	22.216.398	21.776.410	43.992.808
Senior High School	20.804.722	19.387.185	40.191.907
Vocational School	13.314.844	19.387.185	22.365.982
Diplomas	2.036.339	2.931.719	4.968.058
University	7.744.600	8.081.967	15.826.567
Amount	101.957.262	102.015.198	203.972.460

Source: The Indonesian Ministry in Data 2021/Buku Kementerian dalam Data 2021

Women's labor force participation has stagnated, reaching only 55% in February 2020, compared with 84% for males, and a substantial gender wage gap persists. These factors contribute to lower levels of well-being for women and their households and prevent the economy from deploying the full potential of its human capital. Working women still receive lower wages compared to men even though they have the same level education. The average ratio of women's wages compared to men who worked in 2019 is only 77.39 percent.[36] Wage discrimination against women also occurs in the global world, according to UNDP data, women only earn 77 cents for every dollar man earn in the same work (www.undp.org, 2020b). In March 2021, currently, the development of the Indonesian economy has provided better opportunities for women. However, when compared to other countries with the same income, the level of participation of Indonesian women in the economy is still slightly lower.

In the economic field, female labor force participation is still faced with a dilemma between cultural demands for responsibility in the domestic (family) domain or to play a role in the public sphere or the job market. BPS data indicates that the primary employment status among women and men still fit the stereotyped gender role.

[32] investinginwomen.asia
[33] worldbank.orgindonesia.un.org
[34] e-asianwomen.orgindonesia.un.org
[35] Asia Development Bank, 2020
[36] Ministry of Ministry of Women's Empowerment and Child Protection (PPPA), 2020a

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Caregiving is still dominated by women, while the type of jobs that are typically considered masculine are the domain of men.[37]

Women in Health workforce

Based on MoH's most recent reports, 70.9% of all health workers are female38. Women comprise two-thirds of general medical practitioners and nurses as well as two-fifths of all medical specialists. Pronounced shortages of nurses and midwives at both hospital and community health clinic levels are seen, despite an increase in absolute numbers. Professional mobility of health workers has been modest but growing through the migration of female nurses to the Middle East.

Health sector has been known for the female dominated employment. Indonesia health sector is not the exception. As shown in Table 10-2, the gender distribution confirms that of 1,072,598 health workers, 70.9% are female. Only two sub-categories are dominated by male, including medical specialist (60.8%) and biomedical technologist (51.1%). Midwifery category employs female only (100%). The gender distribution of medical doctors and dentists showed the female domination at 63.6% and 79.4% respectively. This description may indicate the need of gender sensitive approach in the waste management in the health sector.

Table 10-2 Gender distribution by health workforce category/cadre

Category	Sub-category	Total	% Male	% Female
Medical Practitioners	General Practitioner	47,289	36.4	63.6
	Medical Specialists	29,518	60.8	39.2
	Medical Assistants	-	-	-
Dental Practitioners	Dentists	13,030	20.6	79.4
	Dental Specialists	1,720	34.9	65.1
	Dental Technicians	1,755	21.1	78.9
Pharmacy Practitioners	Pharmacists	15,935	20.1	79.9
	Pharmaceutical Technicians/Assistants	34,668	16.7	83.3
Nursing and Midwifery Practitioners	Nursing Professionals	78,894	32.1	67.9
	Midwifery Professionals	3,059	0.0	100.0
	Nursing Associate Professionals	241,878	29.9	70.1
	Midwifery Associate Professionals	211,628	0.0	100.0
Non-Medical Public Health Practitioners	Public Health Generalists	25,809	27.1	72.9
	Food and Nutrition Professionals	22,141	13.9	86.1
	Environmental and Occupational Health Professionals	16,501	33.9	66.1
Medical Technologists	Medical Technicians	12,500	27.4	72.6
	Laboratory Assistants	25,864	22.2	77.8
	Biomedical Technologists	7,590	51.1	48.9
Traditional Medicine Practitioners	Traditional Medicine Practitioner	273	32.5	67.5
Other Health Workers	Optometrists	759	42.7	57.3
	Physiotherapists	5,052	33.2	66.8
	Occupational Therapists	309	29.5	70.5
Health Management and Support Staff	Health Service Manager	3,414	42.7	57.3
	Medical Records Technicians	10,531	28.1	71.9
	Support Staff	260,762	49.4	50.6
Total	-	1,072,598	29.1	70.9

Source: Ministry of Health, Indonesia (2019)

[37] Ibid.
[38] https://genderhealthdata.org/wp-content/uploads/2024/03/Indonesia-Gender-Report-website.pdf

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Gender Mainstreaming Framework

The SIRENE project is designed to ensure that gender is an integral part of all activities. The gender mainstreaming framework will include the following considerations:

1) Women make up a significant portion of healthcare waste workers and are disproportionately affected by mercury exposure.
2) Limited participation of women in decision-making in hazardous waste management and policy formulation.
3) Lack of gender-disaggregated data on mercury exposure and health impacts.
4) Socio-cultural barriers limit women's access to training and technical knowledge on safe waste handling and mercury-free alternatives.

Gender-Specific Indicators

- Percentage of women in decision-making roles in mercury phase-out programs.
- Number of gender-sensitive policies developed and enforced.
- Percentage of women trained in mercury waste management.
- Proportion of female workers using protective measures against mercury exposure.
- Level of women's participation in awareness campaigns and community engagement activities.
- Evidence that gender mainstreaming and equal opportunities have been ensured for job opportunities and access to knowledge and training
- Reduction in gender disparities in workplace mercury exposure.
- Inclusion of gender-specific recommendations in national hazardous waste policies.

Gender-Responsive Actions Across Project Components

Component 1: Strengthening Policy and Regulatory Frameworks

- Develop and enforce gender-responsive policies for mercury phase-out in healthcare facilities.
- Ensure female representation in regulatory decision-making processes.
- Create gender-sensitive guidelines on the collection, storage, and disposal of mercury-containing medical devices (MCMDs).

Component 2: Enhancing Technical and Institutional Capacities

- Design training programs for healthcare workers and waste handlers with a focus on gender-specific risks and safety measures.
- Support female entrepreneurs and workers in the recycling and disposal sectors.
- Provide protective gear and safety training for women engaged in waste collection and informal recycling.

Component 3: Developing Circular Economy Models for Mercury-Free Medical Devices

- Promote women-led enterprises in mercury-free medical device distribution and recycling.
- Conduct gender-inclusive awareness campaigns on alternatives to mercury-based devices.
- Establish financing mechanisms that prioritize women-led businesses in waste management.

Component 4: Monitoring, Documentation, and Knowledge Sharing

- Collect sex-disaggregated data on mercury exposure, policy implementation, and training outcomes.
- Develop case studies showcasing best practices in gender-responsive mercury management.
- Strengthen knowledge-sharing networks among female professionals in environmental health and waste management.

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Gender Mainstreaming Action Plan

This Gender Action Plan presents the outcomes, outputs and activities of the project as designed in the project log frame. The GAP mainstreams gender consideration in each project activity by identifying gender-based gaps, proposes indented gender outcomes, gender-based activities, indicators, responsible institutions and, where applicable, budgets. In accordance with UNDP's Gender Equality Strategy, at least 15 % of all country programme and project budgets should be allocated to advancing gender equality and/or empowering women as their principal objective. Thus, this GAP seeks adherence with the policy, and it is recommended that the project management team ensures the needed financial and human resources are made available to support implementation of the GAP

Project Component 1	Policy and regulatory frameworks strengthened to support the phase-out of mercury containing medical devices (MCMDs) in the health sector				
Project Outcomes	**Project Outputs**	**Gender related activities**	**Indicators and targets**	**Responsibilities**	**Budget**
1.1. Regulations/ policies strengthened, proposed and/or operationalized to prohibit the use of MCMDs in health care facilities.	1.1.1. Regulatory and policy frameworks proposed for total phase out the use of mercury-containing medical devices. 1.1.2. Gender-sensitive regulatory and policy framework concerning mercury collection, distribution, temporary storage, and disposal Developed/ strengthened.	• Activity 1.1: Develop and enforce gender-sensitive policies and regulations on mercury phase-out. • Activity 1.2: Conduct gender-responsive capacity-building programs for policymakers, healthcare workers, and regulatory authorities. • Activity 1.3: Ensure women's participation in policy-making committees and regulatory frameworks.	# of women participating in policy-making committees # women participating in gender responsive training programs for policymakers, healthcare workers, and regulatory authorities. 60% of participants in meetings and training are women	UNDP CO, Gender Specialist, SMWC	Integrated in Project budget
1.2. Gender-sensitive and inclusive Capacity Building activities carried out for government staff (both national and sub-national) to enhance policy enforcement and oversight.	1.2.1. coordination and cooperation Mechanisms between central and local governments established and strengthened.		.		

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	1.2.2. Phase-out of use of MCMDs oversight and Hg elimination commitments enforced for health facilities. 1.2.3. All levels of Governmental institutions in charge of the regulatory systems for mercury collection, distribution, and storage capacitated in new rules and regulations. Inventories of stocks of Hg wastes and MCMDs are updated and assessed and real situation of mercury use, collection and storage in Health Care Facilities (HCF) are known				
Project component 2	Technical and institutional capacities of private sector stakeholders enhanced on MCMDs phase-out and environmentally sound mercury-containing medical waste management improved.				
Project Outcomes	**Project Outputs**	**Gender related activities**	**Indicators and targets**	**Responsibilities**	**Budget**
2.1. MCMDs and their wastes are collected, stabilized (solidified) and disposed of in environmentally sound manner, in accordance with national regulations, international guidelines and Best Environmental Practices (BEP) and based on Gender sensitive principles.	2.1.1. Gender-sensitive technical guidance/ guidelines on mercury, MCMDs and their wastes for collection, distribution, and temporary safe storage are developed and established. 2.1.2. Health facility management	• Activity 2.1: Provide gender-sensitive training programs on mercury waste management and safe handling. • Activity 2.2: Conduct outreach programs targeting female healthcare workers and	# women participating in training program on mercury waste management and safe handling # of outreach program for female healthcare workers	UNDP CO, Gender Specialist, SMWC	Integrated in Project budget

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	capacities to address mercury-free medical devises are strengthened through gender-sensitive capacity building. 2.1.3. Pilot plant for mercury temporary storage from medical devices containing mercury established. 2.1.4. Gender and Social Inclusive (GESI) awareness programme on MCMDs replacement, collection and disposal to health facilities is created and implemented.	informal waste sector workers. • Activity 2.3: Develop safety guidelines that include gender-specific exposure risks and protection measures.	# of outreach program for female informal waste sector workers # gender-specific exposure risks and protection measures in the guidelines 60% of participants in meetings and training are women At least one outreach program implemented per target location		
Project component 3	**Circular models are developed and piloted to promote and sustain the large scale replacement to mercury-free alternatives for MCMDs**				
Project Outcomes	**Project Outputs**	**Gender related activities**	**Indicators and targets**	**Responsibilities**	**Budget**
3.1. Technical guidelines developed on lifecycle management of mercury-free alternatives.	3.1.1. Circular models for mercury-free medical devices (MFMDs) to support MCMDs accelerated replacement assessed. 3.1.2. Green and gender-sensitive Procurement and Technical Guidelines for circular management of mercury-free medical devices developed.	• Activity 3.1: Promote the inclusion of women in decision-making roles in the procurement and disposal of mercury-containing medical devices. • Activity 3.2: Ensure women-led businesses and cooperatives are involved in sustainable	# women with decision making roles in the activities related to procurement and disposal of mercury-containing medical devices # training for women in waste management and recycling industries	UNDP CO, Gender Specialist, SMWC	Integrated in Project budget

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		mercury-free technology solutions. • Activity 3.3: Establish mentorship programs to support women in waste management and recycling industries.			
3.2. Mercury-free medical devices piloted in selected health care facilities, collection and recycling guidelines developed for end-of-life products and disposal technologies/strategies piloted taking into consideration gender and social inclusive approaches.	3.2.1. Medical Devices manufacturers, distributors, and suppliers had incorporated circular economy principles on disposal of Hg-based and electronic-based devices in their CSRs and/or other relevant internal practices, Policies, or strategies. 3.2.2. One (1) pilot at the laboratory scale for mercury stabilization and solidification technology are implemented. 3.2.3. Hg stabilization and solidification strategies and solutions upscaled to 4 (four) locations in partnership with Public-Private selected institutions.		50 % of participants in the definition of procurement and disposal of mercury containing medical devices are women At least one training per recycling industry and waste management facility is carried out		

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3.3. Financing mechanisms to support replication and scale up of MCMDs replacement in collaboration with local fund providers/banks assessed.	Development of gender-sensitive financing mechanisms that explored in collaboration with local fund providers/banks and new/revamped finance solutions proposed				
Project component 4	Project results monitored, documented, and shared.				
Project Outcomes	**Project Outputs**	**Gender related activities**	**Indicators and targets**	**Responsibilities**	**Budget**
4.1. Monitoring and evaluation activities carried out as per GEF requirements.	4.1.1.Assessed and applied Social and Environmental Screening Procedure (SESP). 4.1.2.Gender Action Plan and awareness raising activities on collection, transport, storage and disposal of mercury and mercury waste. 4.1.3.Periodic monitoring, and reporting, Project Implementation Reports (PIR), Mid-Term Review and Terminal Evaluation	• Activity 4.1: Collect and analyze sex-disaggregated data on project impacts. • Activity 4.2: Integrate gender-sensitive indicators in project monitoring and evaluation. • Activity 4.3: Share best practices and lessons learned on gender-inclusive mercury management at national and international levels.	Once a year collection of sex-disaggregated data on project impacts #of best practices and lessons learned on gender-inclusive mercury management collected	UNDP CO, Gender Specialist, SMWC	Integrated in Project budget
4.2. Learning and knowledge sharing activities carried out and knowledge products developed and shared (including lessons-learned from the perspective of	4.2.1. Lessons-learned and best practices for knowledge management are collected and shared at national and				

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gender-equality and social inclusion implementation).	international levels.				

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Resources, Roles and Responsibilities

The project resources allocated for implementing the gender action plan and the respective roles and responsibilities are summarized below.

- **Ministry of Environment (MoE):** Lead the implementation of gender-sensitive policies.
- **Ministry of Women and Children Protection:** Provide guidance on integrating gender concerns in waste management.
- **Local Government Units:** Ensure community engagement and inclusion of women in waste collection and mercury-free initiatives.
- **Civil Society Organizations (CSOs) and Women's Groups:** Support advocacy, training, and capacity-building efforts.

Position / Function	Roles and Responsibilities
National Project Director	The National Project Director (NPD) will have overall responsibility for the implementation of the project. The NPD will ensure that the project operates according to relevant national and provincial policies and procedures, including gender mainstreaming objectives.
Project Manager	The Project Manager will have responsibility for the day-to-day implementation of the project, be tasked with the important role of ensuring that stakeholders are engaged according to plan, oversee the procurement and implementation of project activities and be accountable that gender mainstreaming and other performance targets are achieved.
Project Board	The Project Board will provide strategic oversight to the project, ensuring that the interests of the representative members are considered, including gender mainstreaming objectives.
Gender Expert	A Gender Experts will be recruited to support the Project Management Unit in the four (4) target project locations. The gender-social inclusion focal points will help promote gender issues on the project and assist in the implementation of the gender action plan and monitoring progress towards the achievement of the gender mainstreaming objectives, and advising on training topics and initiatives.
Social and Environmental Safeguards Expert	The Social and Environmental Safeguards Expert will be recruited to oversee the implementation of the gender action plan, support delivery of trainings to project stakeholders, and provide advice across the project, e.g., institutional capacity building, etc.

Monitoring and Evaluation

The implementation of the gender action plan will be monitored and evaluated through the 5-year project timeframe. Progress towards achievement of the gender mainstreaming objectives will be monitored and evaluated, and results documented in project progress reports. Adaptive management measures will be put in place, as needed, to adjust the plan to current circumstances and according to the findings of monitoring and evaluation efforts.

The Monitoring and Evaluation (M&E) framework ensures the effective implementation and tracking of the Gender Action Plan (GAP). It focuses on capturing gender-specific impacts, progress, and challenges while providing actionable insights for improvement. It will measure the effectiveness of gender-sensitive activities and interventions while ensuring the integration of gender considerations across all project components. It also focuses on tracking the participation, outcomes, and benefits for women, youth, and marginalized groups, providing insights to guide adaptive management and improve the implementation of the Gender Action Plan (GAP).

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1. Key Activities

- Establish gender-disaggregated data systems by developing data collection tools to track gender-specific impacts, including participation, access, and benefits for all target groups.
- Ensure all indicators are disaggregated by gender, age, disability, and other relevant identities.
- Perform annual audits to evaluate the alignment of activities with GAP objectives.
- Identify gaps, challenges, and opportunities for improvement based on audit findings.
- Monitor the progress of key gender-related indicators as outlined in the GAP, such as: Percentage of women and youth participating in activities; Representation of women and youth in governance and decision-making structures; Number of gender-sensitive policies and initiatives implemented.
- Organize focus group discussions and community consultations to capture qualitative feedback on the GAP's implementation.
- Prepare quarterly and annual reports summarizing gender-related progress, challenges, and lessons learned.
- Share findings with stakeholders to foster accountability and adaptive management.

2. Roles and Responsibilities

- Project Gender Expert: Leads M&E efforts, ensures gender-sensitive data collection, and compiles M&E reports.
- Implementing Partners: Provide regular updates on gender-specific progress and participate in audits.
- Community Stakeholders: Offer qualitative feedback through consultations and focus groups.

- Indicators and Targets

To operationalize the strategic approaches, the following indicators summarize the key indicators and targets:

Capacity Building, Awareness-Raising, or Training

- Percentage of training participants disaggregated by gender, age, and disability (target: 50% women and youth, 10% persons with disabilities).
- Number of targeted training sessions addressing gender-specific barriers to participation for women, youth, and persons with disabilities.
- Number of gender-sensitive awareness products developed, including materials tailored for accessibility (e.g., Braille, audio formats).
- Percentage of institutions receiving capacity-building support with strengthened gender and disability-inclusive practices.

Livelihood or Economic Opportunities

- Percentage of women, youth, and persons with disabilities benefiting from economic initiatives.
- Percentage of workforce in livelihood programs that includes women, youth, and persons with disabilities (target: 50% women and youth and 10% persons with disabilities).
- Number of market linkages and value chain opportunities established, with specific benefits for women and marginalized groups, including those with disabilities.
- Percentage increase in income for women, youth, and persons with disabilities as a result of project interventions.
- Number of adaptive technologies or tools provided to persons with disabilities to enable participation in economic activities.

Decision-Making

- Percentage of project-related decisions influenced by recommendations from women, youth, and persons with disabilities.

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- Number of gender and disability-sensitive knowledge products developed and distributed.
- Number of leadership training sessions conducted for women, youth, and persons with disabilities.

Participation

- Percentage of participants in assessments, screenings, consultations, and validation exercises disaggregated by gender, age, and disability.
- Number of inclusive tools and methodologies developed to capture the experiences of women, youth, and persons with disabilities.
- Number of accessibility improvements made to ensure full participation of women in project activities (e.g., ramps, sign language interpreters, accessible communication materials).

Monitoring and Evaluation

- Percentage of monitoring and evaluation reports that include sex, age, and disability-disaggregated data.
- Number of gender-specific recommendations implemented as a result of monitoring insights.

Methods

- Quarterly Reviews: Monitor short-term progress and adjust activities as needed.
- Annual Audits: Conduct comprehensive evaluations of the GAP's implementation and outcomes.
- End-of-Project Review: Assess the overall impact of the GAP and document lessons learned for future projects.

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Annex 11: Procurement Plan

Refer to attached standalone document

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Annex 12: Signed LOA between UNDP and IP requesting UNDP Support Services

Not applicable

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Annex 13: Letters of Financial Commitments

Signed Letter of Financial Commitment received from the following contributors. The letters are included in separate files.

No.	Co-financing source	Co-financing type	Name of Co-financier	Investment Mobilized	Co-financing amount
1	Recipient Country	In-kind	Ministry of Environment	Recurrent Expenditure	1,684,925
2	Recipient Country	In-kind	Ministry of Health	Recurrent Expenditure	1,807,291
3	Recipient Country	In-kind	The National Research and Innovation Agency (BRIN)	Recurrent Expenditure	666,667
4	Private Sector	In-kind	Wastec International	Recurrent Expenditure	14,778,000
5	Private Sector	Grant	Asosiasi Produsen Alat Kesehatan Indonesia	Investment Mobilized	15,423,000
6	GEF Agency	In-kind	United Nations Development Programme	Recurrent Expenditure	1,000,000
	Total				**34,309,883**

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Annex 14: Terms of Reference for Project Board and Project Team

Terms of Reference for the Project Board

The Project Board (PB) will serve as the project's decision-making body. It will meet according to necessity, at least twice each year, to review project progress, approve project work plans and approve major project deliverables. The PB is responsible for providing the strategic guidance and oversight to project implementation to ensure that it meets the requirements of the approved Project Document and achieves the stated outcomes. **Specific responsibilities of the Project Board include:**

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;
- Provide guidance on new project risks, and agree on possible mitigation and management actions to address specific risks;
- Agree on project manager's tolerances as required, within the parameters set by UNDP-GEF, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded;
- Advise on major and minor amendments to the project within the parameters set by UNDP-GEF;
- Ensure coordination between various donor and government-funded projects and programmes;
- Ensure coordination with various government agencies and their participation in project activities;
- Track and monitor co-financing for this project;
- Review the project progress, assess performance, and appraise the Annual Work Plan for the following year;
- Appraise the annual project implementation report, including the quality assessment rating report;
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;
- Review combined delivery reports prior to certification by the implementing partner;
- Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Address project-level grievances;
- Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses;
- Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.
- Ensure highest levels of transparency and take all measures to avoid any real or perceived conflicts of interest.

These terms of reference will be finalized during the Project Inception Workshop.

Terms of Reference for Key Project Staff

National Project Director (NPD)

Background

The National Project Director (NPD) is an echelon 2 under the Director General of Solid Waste, Hazardous Substance Management. The NPD will be accountable to KLH and UNDP for the achievement of project objectives and results. The NPD will be part of the Project Board and answer to it. The NPD will be financed through national government funds (co-financing). The NPD's appointment will be made by the Director General of Solid Waste, Hazardous Substance Management, in consultation with the UNDP CO.

Duties and Responsibilities

- Serve as a member of the Project Board.
- Supervise compliance with objectives, activities, results, and all fundamental aspects of project execution as specified in the project document.

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- Supervise compliance of project implementation with KLH policies, procedures and ensure consistency with national plans and strategies.
- Facilitate coordination with other organizations and institutions that support the introduction of best practices in the MCMDs and MFMDs an their waste sector.
- Participate in project evaluation, testing, and monitoring missions.
- Coordinate with national governmental representatives on legal and financial aspects of project activities.
- Coordinate and supervise government staff inputs to project implementation.
- Coordinate, oversee and report on government cofinancing inputs to project implementation.

Project Manager

Background

The Project Manager (PM), will be locally recruited following IP procedures, with input to the selection process from the Project partners. The position will be appointed by the project implementing agencies and funded entirely from the Project. The PM will be responsible for the overall management of the Project, including the mobilisation of all project inputs, supervision over project staff, consultants and sub-contractors. The PM will report to the NPD in close consultation with the assigned UNDP Programme Manager for all of the Project's substantive and administrative issues. From the strategic point of view of the Project, the PM will report on a periodic basis to the Project Board, based on the NPD's instruction. Generally, the PM will support the NPD who will be responsible for meeting government obligations under the Project, under the NIM execution modality. The PM will perform a liaison role with the government, UNDP and other UN agencies, CSOs and project partners, and maintain close collaboration with other donor agencies providing co-financing. The PM will work closely with the Working Group Coordinators.

Duties and Responsibilities

- Plan the activities of the project and monitor progress against the approved work-plan.
- Supervise and coordinate the production of project outputs, as per the project document in a timely and high quality fashion.
- Coordinate all project inputs and ensure that they are adhere to UNDP procedures for nationally executed projects.
- Supervise and coordinate the work of all project staff, consultants and sub-contractors ensuring timing and quality of outputs.
- Coordinate the recruitment and selection of project personnel, consultants and sub-contracts, including drafting terms of reference and work specifications and overseeing all contractors' work.
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments, or reimbursement using the UNDP provided format.
- Prepare, revise and submit project work and financial plans, as required by Project Board and UNDP.
- Monitor financial resources and accounting to ensure accuracy and reliability of financial reports, submitted on a quarterly basis.
- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log.
- Liaise with UNDP, Project Board, relevant government agencies, and all project partners, including donor organisations and CSOs for effective coordination of all project activities.
- Facilitate administrative support to subcontractors and training activities supported by the Project.
- Oversee and ensure timely submission of the Inception Report, Project Implementation Report, Technical reports, quarterly financial reports, and other reports as may be required by UNDP, GEF and WHO.
- Disseminate project reports and respond to queries from MCMDs and MFMDs an their waste concerned stakeholders.
- Report progress of project to the steering committees, and ensure the fulfilment of PSC directives.
- Oversee the exchange and sharing of experiences and lessons learned with relevant MC projects nationally and internationally.
- Identify opportunities for communication of project activity results at a global level on a quarterly basis.

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- Assist community groups, municipalities, CSOs, staff, students and others with development of essential skills through training workshops and on the job training thereby increasing their institutional capabilities.
- Encourage staff, partners and consultants such that strategic, intentional and demonstrable efforts are made to actively include women in the project, including activity design and planning, budgeting, staff and consultant hiring, subcontracting, purchasing, formal community governance and advocacy, outreach to social organizations, training, participation in meetings; and access to programme benefits.
- Assists and advises the Working Group Coordinators (WGCs), Regional Facilitators, Project Assistants, Gender Expert responsible for activity implementation in the target sites.
- Carry regular, announced and unannounced inspections of all regional areas and the WGs.

Required skills and expertise

- A university degree (MSc or PhD) in a subject related to Environmental Sciences, Environmental Chemistry, Mining, Geology, or Chemical/Biological Sciences.
- At least ten (10) years of experience in the implementation, support and management of environmental projects, including monitoring and evaluation activities.
- At least five (5) years of experience in the management of projects related to toxic chemicals, waste management and mercury in particular.
- At least five (5) years of experience in circular economy.
- At least five (5) years of experience in GEF related project management.
- At least five (5) years of experience working with ministries, national or provincial institutions that are concerned with natural resource and/or environmental management.

Competencies

- Strong leadership, managerial and coordination skills, with a demonstrated ability to effectively coordinate the implementation of large multi-stakeholder projects, including financial and technical aspects.
- Ability to effectively manage technical and administrative teams, work with a wide range of stakeholders across various sectors and at all levels, to develop durable partnerships with collaborating agencies.
- Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project.
- Ability to coordinate and supervise multiple Working Groups (WGs) and Working Group Coordinators (WGCs) in their implementation of technical activities in partnership with a variety of subnational stakeholder groups, including community and government.
- Strong drafting, writing, presentating and reporting skills in English and Bahasa.
- Strong communication skills, especially in timely and accurate responses to emails.
- Strong computer skills, in particular mastery of all applications of the MS Office package and internet search.
- Strong knowledge about the political and socio-economic context related to MCMDs and MFMDs an their waste at national and subnational levels.
- Strong command of English and local languages.

Working Group Coordinators

Background

The Project Manager (PM) will be supported by four (4) Working Group Coordinators (WGCs). Each Working Group Coordinator is responsible for one of the Working Groups (Table 4 provides an overview of the focus of the four WGs). The WGs ensure coordination among the stakeholders and are an opportunity to represent the voice of stakeholders on topics such as mercury use in ASGM and the implementation of project activities in line with the agreed project plan and approach.

In addition, the Working Group Coordinators (WGCs) will also be responsible for the implementation of all project activities assigned to national consultants within one of the project components (which corresponds to the WG the WGC leads). The WGCs report to the Project Manager.

Duties and Responsibilities

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- Organize working group meetings
- Laise with national, provincial, district and village level government entities on the implementation of project activities within the assigned project component.
- Support the organization of the national and district level inception workshops.
- Support the organization of the National and Regional Project Advisory Boards.
- Support the organization of training events.
- Support the implementation of the awareness raising campaign.
- Provide day-to-day support to Project Regional Facilitors on the subjects they need support on (in accordance with the assigned project component).
- Support the monitoring of project results.

Note: Once the project has been approved, the ToRs for the WGCs need to be expanded significantly and need to include all the activities of the national consultants assigned as part of a specific project component. Please refer to Annex C (Overview of Technical Consultancies/subcontracts) which details the responsibilities of each of the woring Group Coordinators.

Project Monitoring and Evaluation Officer (=working Group Coordinator no. 4)

Under the overall supervision and guidance of the Project Manager, the M&E Officer will have the responsibility for project monitoring and evaluation. The M&E Officer will work closely with the Communications Officer on knowledge management aspects of the project. Specific responsibilities will include:

- Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards;
- Ensure project's M&E meets the requirements of the Government, the UNDP Country Office, and UNDP-GEF; develop project-specific M&E tools as necessary;
- Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results;
- Oversee/develop/coordinate the implementation of the stakeholder engagement plan;
- Oversee and guide the design of surveys/assessments commissioned for monitoring and evaluating project results;
- Facilitate mid-term and terminal evaluations of the project; including management responses;
- Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products;
- Support regional areas M&E and learning missions;
- Visit regional areas as and when required to appraise project progress on the ground and validate written progress reports.

The Project M& E Officer will be recruited based on the following qualifications

- Master's degree, preferably in the field of environmental or natural resources management;
- At least five years of relevant work experience preferably in a project management setting involving multi-lateral/international funding agency. Previous experience with UN projects will be a definite asset;
- Significant experience in collating, analyzing and writing up results for reporting purposes;
- Very good knowledge of results-based management and project cycle management, particularly with regards to M&E approach and methods. Formal training in RBM/Project Cycle Management (PCM) will be a definite asset;
- Knowledge and working experience of the application of gender mainstreaming in international projects;
- Understanding of the sound management of chemicals, Artisanal and Small-scale Gold Mining, law enforcement, sustainable livelihoods and associated issues;
- Very good inter-personal skills;
- Proficiency in computer application and information technology.
- Excellent language skills in English (writing, speaking and reading) and in local languages.

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Project Regional Facilitator

Background

To ensure day-to-day follow-up at the regional areas level, the project will engage four (4) Project Regional Facilitators whose responsibility will be to liaise with local government entities (provincial, regency, district & village level) and project beneficiaries in the project priority site where they are stationed on all aspects related to the project. The Project Regional Facilitators will report to the Project Manager.

Duties and Responsibilities

- Liaise with provincila, regency and district government staff on MCMDs and MFMDs an their waste (collection, distribution, temporary storage, disposal).
- Support the organization of the district level inception workshop.
- Support the organization of the regional Project Advisory Board.
- Support the organization of training events.
- Support the implementation of the awareness raising campaign.
- Provide day-to-day support to mining groups in their formalization efforts, gaining access to financing and supporting the establishment of mercury-free processing plants.
- Support the monitoring of project results.

Social and Environmental Safeguards Expert

Under the overal supervision and guidance of the Project Manager, the Social and Environmental Safeguards Expert will support project-level compliance with the UNDP SES during project implementation. This will include development, implementation, quality assurance, spot-checking, and advising on measures to be taken to ensure effective implementation of and compliance with the SES. Specific responsibilites will include:

Carry out environmental and social screening of each project site as informed by ESMF;
Oversee the preparation of Environmental and Social Audits (ESAs) and the respective spill prevention plans and other targeted management plans, as required for each project site as identified through SESP screening to ensure the socio-environmental sustainability of different components of the project.
The consultancy aims to analyse, evaluate and propose measures to prevent, control, mitigate, restore and/or compensate the potential environmental and social impacts of the project so that the project complies with UNDP's SES and national legislation.
Implement and improve/revise consultation/stakeholder engagement plan as applicable.
Support finalizing the design and the launch of the project Grievance Redress Mechanism.
Support the implementing partner in carrying out meaningful consultations.

Project Gender Consultant/Expert

Under the overall supervision and guidance of the Project Manager, the Gender Officer will have the responsibility for the implementation of the Gender Action Plan. The Gender Officer will work closely with the M&E Officer, Safeguards Officer and Communications Officers on related aspects of project implementation, reporting, monitoring, evaluation and communication. Specific responsibilities will include:

- Monitor progress in implementation of the project Gender Action Plan ensuring that targets are fully met and the reporting requirements are fulfilled;
- Oversee/develop/coordinate implementation of all gender-related work;
- Review the Gender Action Plan annually, and update and revise corresponding management plans as necessary;
- Work with the M&E officer and Safeguards Officer to ensure reporting, monitoring and evaluation fully address the gender issues of the project;

The Project Gender Officer will be recruited based on the following qualifications:

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- Master's degree in gender studies, gender and development, environment, sustainable development or closely related area.
- Demonstrated understanding of issues related to gender and sustainable development; at least 5 years of practical working experience in gender mainstreaming, women's empowerment and sustainable development in relevant Country/Region/Area of Work;
- Proven experience in gender issues in Country/Region/Area of Work;
- Previous experience with UN projects will be a definite asset;
- Demonstrated understanding of the links between sustainable development, social and gender issues;
- Experience in gender responsive capacity building;
- Experience with project development and results-based management methodologies is highly desired/required;
- Excellent analytical, writing, advocacy, presentation, and communications skills.
- Excellent language skills in English (writing, speaking and reading) and in local languages.

Project Assistant

Under the guidance and supervision of the Project Manager, or the Working Group Coordinator, as per the respective assignment, the Project Assistant will carry out the following tasks:

- Assist the Project Manager in day-to-day management and oversight of project activities;
- Assist the M&E officer in matters related to M&E and knowledge resources management;
- Assist in the preparation of progress reports;
- Ensure all project documentation (progress reports, consulting and other technical reports, minutes of meetings, etc.) are properly maintained in hard and electronic copies in an efficient and readily accessible filing system, for when required by PB, UNDP, project consultants and other PMU staff;
- Provide PMU-related administrative and logistical assistance.

The Project Assistant will be recruited based on the following qualifications:

- A bachelor's degree or an equivalent qualification;
- At least three years of work experience preferably in a project involving natural resource management or chemicals management. Previous experience with UN projects will be a definite asset;
- Very good inter-personal skills;
- Proficiency in the use of computer software applications especially MS Word and MS Excel.
- Excellent language skills in English (speaking and reading) and in local languages

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Annex 15: Response to comments of STAP, Germany and Switzerland

No.	Comments	Response	Changes in CEO ER
Comments of Germany			
1	Suggestions for improvements to be made during the drafting of the final program proposal	Noted and improvements made	
2	The project summary lists disposal of **POP-containing plastics**, which is not reflected in the more detailed project descriptions. Germany asks for details on how the POP-containing plastics will be identified, collected and disposed of	POP-contaminated plastic has been collected by healthcare facilities and will be collected and disposed.	Output 2.1.2, Activities 2.1.2.2 and 2.1.2.3
3	Germany asks to add the factor of air emissions from facilities handling **mercury-containing waste** (barriers to be addressed). Air monitoring for mercury storage and processing facilities should also be added to Component 2. 19	Mercury contents from the unused, unbroken and broken MCMDs will go through the stabilization and solidification process in strict compliance with Minamata Convention requirements for suitable longer-term safe t temporary pending final disposal. Thee waste management enterprise handling the final temporary storage for which air emissions monitoring is and will be fully implemented	Component 2, Output 2.1, Activity 2.1.1.1
4	As Component 2 improves **private sector capacity** for phase-out and environmentally sound disposal of mercury-containing medical waste, Germany asks to explain how private sector stakeholders will be empowered and whether the process will be monitored	Partnership mechanism with private sector will be established at national and sub-national level, and training and capacity building activities will involve private sector at the four (4) regional project sites	Component 2, Output 2.1, Activities 2.1.1.2 and 2.1.3.3
5	Germany proposes to set out how **knowledge of technologies for stabilization and solidification** of mercury at laboratory scale (Component 63) will be disseminated to private sector stakeholders	The knowledge and technologies, supported with expertise and guidance of The National Research and Innovation Agency (BRIN) will be upscaled to individual laboratories in the four (4) regional project sites, and in partnership with select public and private institutions	Outcome 3.2.3, Activities 3.2.3.1 and 3.2.3.2
6	The section on **stakeholder engagement** lists that IP&LCs, civil society and private Sector were consulted. Yet, the summary lists mostly private sector companies that will be engaged, not who has already been contacted. In addition, no reference is made to IP&LCs and CSOs are only mentioned very	A Stakeholder Engagement Plan, upon further investigation and consultation, was developed that include leaseholders to be engaged during project implementation	UNDP Project Document Annex 8 Stakeholder Engagement Plan

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	shortly. Germany asks to provide information on who has already been contacted and how civil society and IP&LCs are to be involved in stakeholder engagement		
7	Germany recommends that **corruption risks and mitigation measures** be considered in the project risk section due to the identified limited capacity to monitor and enforce laws in healthcare waste management in Indonesia, as well as the severe restriction of the formally independent anti-corruption agency during the presidency of Joko Widodo, which may persist since Widodo's son is the vice-president elect. Corruption may occur in relation to the storage, treatment, and disposal of medical waste, or related to medical waste workers, data management, appointment of contractors, or in relation to environmental clearance certificates or others and awareness should be raised.	It is noted that UNDP also has a funding for conducting 1. Harmonized Approach to Cash Transfers (HACT) Assessment. 2. Spot-check 3. Financial Audits The purpose of financial audits and spot checks conducted by UNDP is to ensure that project funds are used efficiently, transparently, and in accordance with the agreed-upon regulations and standards. These processes will help to identify potential risks, strengthen financial management, and ensure accountability in the use of resources for avoiding the occurrence of corruption.	The activities will be implemented under UNDP Country Office to support the Project.
Comments of STAP			
1	**Systems thinking**. The system best considered is that of Hg-containing waste in the hospital sector. The system could be more comprehensively described by considering the waste handling sector dealing with Hg-containing medical devices, how this sector might change, and the implications of any change for effective and safe waste disposal. The system should also include the manufacturers and retailers of medical devices who will be affected by this equipment change-over. Is the system the same in more urbanized vs remote island locations, and if so, what are the implications? The system going beyond Hg-containing medical devices is not well described. For example, what e-waste is included? What system should be considered to increase circularity?	Project designed to address unused unbroken and broken mercury-containing medical devices and also included POP containing plastic in the nation's healthcare facilities. It does include engaging private sector manufacturers of mercury-free medical devices to promote rapid and large scale replacement of MCMDs. Through the four (4) reginal project sites, the project covers both national and sub-national level facilities	Section A, Project Rationale

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2	**Uncertainty futures** were not discussed but could be useful, e.g., the availability of Hg-free medical equipment. How will variability in replacement costs affect the project? Do some of the logic pathways in the Theory of Change depend on the timely cooperation of a stakeholder, and what would be the consequences of not having a timely response? Please consult STAP's brief on Future Narratives for guidance on how to address uncertain futures through simple future narratives	Through collaboration of Ministry of Environment (MoE) and Ministry of Health (MoH), with technical support by The National Research and Innovation Agency (BRIN), will facilitate collection, transportation, stabilization and solidification of mercury for longer-term safe temporary storage for eventual disposal when matured technologies are available. The replacement is, complemented with partnership with private sector mercury-free medical devices manufacturers to promote rapid and large scale replacement	Component 3
3	**Baseline, barriers, and enablers**. The baseline concerning Hg emissions to air is sufficiently well described. Barriers related to Hg-containing medical equipment are considered, e.g., for collecting, transporting, and disposing of Hg. However, more details could be provided to distinguish barriers relevant to urban vs. remote islands since the geography of Indonesia is raised as a challenge. Major challenges are explained regarding regulation, law enforcement, financing, and awareness raising, but not the availability of facilities or expertise in Hg waste handling. A limited budget was identified as a barrier, but how it would be addressed was not clear in the proposal.	During PPG stage, healthcare facilities in both urban and remote locations were investigated and evaluated and taken into consideration in formulating the activities to achieve the planned outputs, outcomes to reach the project objectives	Section A, Project Rationale; Section B, Project Results
4	**Theory of Change (ToC):** The scope of the project needs to be better delineated. Most of the project concerns Hg-containing medical devices, but some parts of the proposal extend more broadly to consider medical devices that could include future e-waste under the umbrella of "circularity." Details are insufficient regarding these other medical devices, including what "circularity" means. For example, "sustainable waste management technologies" are mentioned, but no	Additional paragraph added	Section B Theory of Change

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	details are given about how this fits into the activities The ToC has a limited description of the logic connecting the root problems, barriers, outcomes, and longer-term outcomes. A discussion of drivers and assumptions is missing. Some barriers are not explained or justified, e.g., why is limited public awareness a problem if this project deals with the healthcare and waste handling sectors? Some barriers, such as limited political capacity, geographic constraints, and limited budget, are mentioned but not dealt with.		
5	**Project Components** In general, all descriptions need to list critical assumptions and risks. Component 1: The description here is very general but should address how efforts will be made towards policy coherence, particularly since this was identified as a barrier. This component should include a timeline for achieving specific milestones and how the barrier of poor law enforcement will be addressed. The proposal is inconsistent in describing the project's lack of regulations/policies along with operationalization vs the harmonization of existing policies and regulatory frameworks. The enforcement issue needs more explanation, particularly because the proposed engagement with healthcare units is described as follows: the "governance	Project components, Outcomes, Outputs and Activities to address the barriers to achieve expected project results have been revised with details	Section B, Expected Results
	Component 2: More information is needed on how the private sector will be engaged (incentives and/or penalties and enforcement). The general description needs to consider targets and a timetable for phase-out and environmentally sound management (ESM). How do the planned activities and capacity for stabilization and storage relate to the magnitude of Hg-containing waste? Is there sufficient capacity	Project components, Outcomes, Outputs and Activities to address the barriers to achieve expected project results have been revised with details	Section B, Expected Results

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	available to handle and transport collected Hg-containing devices		
	Component 3: A connection needs to be made with proposed activities that provide safe temporary and long-term storage of collected Hg. The title includes "circular models" – what is circular about Hg collection and disposal? The proposed technology [solidification and stabilization S/S)] is meant for end-of-life disposal, so it is not circular. Also, have the pros and cons of S/S technology for mercury in Indonesia been assessed? Waste treated by S/S would require landfilling, as noted in the proposal, but is this feasible or advisable in a country that has been reported to have landfills at risk of overcapacity? An explanation of what and how a "circular economy approach" and the mishandling of e-waste will be achieved is missing.	Project components, Outcomes, Outputs and Activities to address the barriers to achieve expected project results have been revised with details	Section B, Expected Results
	Component 4: The proposal needs to include more details about what will be monitored, documented, and shared. How do gender equality and social inclusion (GESI) fit into this project?	Project components, Outcomes, Outputs and Activities to address the barriers to achieve expected project results have been revised with details	Section B, Expected Results
6	**Additionality**. The proposal clearly states that progress on controlling Hg emissions from the healthcare sector would proceed without GEF funding but at a much slower pace and without adequate attention to local circumstances. For example, some of the distant Indonesian Islands would not be	Government initiated actions to collect and transport MCMDs from healthcare facilities to safe temporary storage were stopped due to financial and human resources constraints. The project will support the Government's efforts to fulfill its obligations to the Convention, to reduce the risks of exposure to mercury.	
7	**Engaging stakeholders**. The proposal does well to list stakeholders from the private sector, including suppliers of alternative technologies, distributors, as well as waste management companies. However, the proposal did not explain how the listed stakeholders will be engaged. Stakeholders from the hospital sector were not listed, which seems	The Stakeholder Engagement Plan, included as an Annex to the UNDP Project Document, outlines the respective roles and responsibilities of key stakeholders and the engagement during project implementation.	UNDP Project Document, Annex 8, Stakeholder Engagement Plan

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	to be a significant oversight. What is a "gender-responsive regulatory and policy framework"? Women are not included as stakeholders		
8	Calculations of **GEBs**. The 20 tonnes of Hg collected was based on 176,946 units of Hg-containing devices (that's a very certain number). How was this value calculated? What is the assumption of how much Hg is in the range of devices collected? How will GHG emission reduction be achieved through the project? What specific activity will lead to emission reduction? How was the expected emission reduction arrived at? The project description does not mention deca-BDE, but 5.00 tonnes are listed as being removed or disposed of. How was this number determined, and which components of the proposal will deliver this GEB? How was 20,000 tons of avoided residual plastic waste determined, as this is not adequately discussed in the proposal? The calculation of 20 g TEQ of organic pollution or uPOP was based on avoiding the incineration of medical devices. Did this calculation account for ~80% of hospital waste being landfilled or illegally dumped together with MSW?	Detailed calculation and justification of GEBs is included following the section of Core Indicators. Activities designed to achieve the outputs and outcomes are included in the section under Expected Results.	Section following Core Indicators, and Section B Expected Results
9	8. The discussion of policy coherence needs further details. How will the proposal lead to policy coherence? Representatives from different government agencies were not listed amongst those consulted, yet their involvement would seem essential.	A detailed analysis of Regulatory Framework is contained in the UNDP Project Document. Project Component 1 has been revised to provide details on activities to achieve desired outputs and outcomes on strengthened Policy and regulatory frameworks to support mercury phase out and enforcement	UNDP Project Document, and Section B Expected Results section of the CEO ER
10	9. Analysis of risks: The discussion of risk is overly general. For example, risks from climate change that are not	Risks to achieve project outcomes and risk identified at UNDP Social and Environmental Safeguard	Sections on Riss to achieve Project Outcomes and

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	discussed include potential releases of Hg from temporary or "permanent" storage sites due to extreme weather events such as flooding or fire. Increased temperatures will increase Hg release to air during transfer and handling. A climate risk screening is needed for this project. Regarding "political and governance," the proposal should consider how a change of government might affect Component 1, which seeks to improve regulations and compliance monitoring. Technological risks related to achieving circularity or identifying and properly handling PBDE-containing waste should be discssed	Procedures ate identified and analyzed	Safeguards Rating
Comments of Switzerland			
1	The capacity-building aspect, which is present across several components and will help ensure **gender-responsiveness** in the project, needs adequate attention and planning as it was cited as a major barrier in the country. Capacity-building activities can integrate expertise to help manage the specific goals of the project, incorporating guidance from the Minamata Convention Secretariat on phasing out MCMDs and from civil society for coordination, stakeholder engagement, and gender sensitivity.	Noted. The project will leverage the technical expertise and guidance of The National Research and Innovation (BRIN) in the development and implementation of the gender responsive capacity building activities	Section B, Expected Results
2	While taking a **circular approach** will have many cross-benefits for Indonesia's waste management systems, it is also vital that it adequately plans for safe final storage practices for mercury after temporary storage. This means allocating further resources to this activity and will likely require greater capacity building needs as well to ensure proper disposa	While the project will not deal with the final disposal of mercury, through the stabilization and solidification process, mercury contents will be suitably for safe temporary storage in an established facilities of a waste management entity in full compliance with the Minamata Convention requirements. The Government agency, The National Research and Innovation Agency (BRIN) will provide technical support to plan for the safe temporary storage, and to research	Section B, Expected Results

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		suitable technologies for final disposal.	
3	Although coordination will be a significant challenge due to Indonesia's diverse geography and lack of systems in place, this also provides immense potential for extensive reach of the **new coordination measures** in place and expanding sound management of chemicals and waste practices throughout the country. The impact may also be significant in terms of reach, as mercury poses health and environmental risks that are extensive and persistent. These elements should be better reflected in the proposal, as they provide opportunities and may have cross-benefits in different dimensions of life.	The project attempts to ensue extensive outreach to include healthcare facilities throughout Indonesia. This is done by the project to facilitate closer and more effective coordination and collection of MCMDs from the sub-regencies to the regencies in the 38 provinces, and, and will then congregated in four (4) regional project sites to undergo stabilization and solidification process for suitable longer-term temporary storage at established temporary storage facilities at the waste management enterprise.	Section B, Expected Results

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Annex 16: GEF Core indicators

4. Please see separate Excel GEF Core Indicator template for Core Indicators for this Project.

5. Explanation of the methodological approach and underlying logic to justify target levels of the Core and Sub-Coe Indicators:

(**a)** 20 metric tons of mercury from Indonesia's Health sector reduced. Calculation based on the following justifications:

- Average amount of mercury content at Sphygmomanometer which is 65 grams (the data retrieved from the development of PIF).
- Average amount of mercury content at thermometer which is 1.5 grams (the data retrieved from the development of PIF)
- Numbers of health facility in Indonesia, based on data from Ministry of Health in 2024 which covering hospitals, clinics, independent doctor practices and primary healthcare (Puskesmas).
- Estimated number of thermometers belong to the health facility, based on the data collected by Ministry of Health (2022).
- Estimated number of Sphygmomanometers belong to the health facility, based on the data collected by Ministry of Health (2022).

Table. The amount of Mercury from MCMDs in Indonesia.

Type of Health Care Facility	Number	Type of Medical Devices								
		Average Number		Estimated Number of Unit		Estimated Hg Content (Gr)	Estimated Hg Content (Ton)			
		Thermo-meter	Sphygmo-manometers	Thermo-meter	Sphygmo-manometers	Thermo-meter	Sphygmo-manometers	Thermo-meter	Sphygmo-manometers	Dental Amalgam
Hospital	31,55	25	60	78,875	189,300	118,312.,5	12,304,500	0,12	12,30	16.69
Clinics	172,61	3	3	51,783	51,783	776,74,5	3,365,895	0,08	3,37	48.83
Independent Doctor Practice Places	8,465	2	2	16,930	16,930	25,395	1,100,450	0,03	1,10	1.99
Puskesmas	10,180	5	27	50,900	274,860	76350	17,865,900	0,08	17,87	60.01
Total (Unbroken)	**39,061**	**35**	**92**	**198,488**	**532,873**	**297,732**	**34,636,745**	**0,30**	**34,64**	**127.52**
Total (Broken)				**23,819**	**69,273**	**35,729**	**4,502,745**	**0.04**	**4.50**	-
Grand Total				**222,307**	**602,146**	**333461**	**39,139,490**	**0.34**	**39.14**	**127.52**

(b) 20 g TEQ/year of UPOPs emissions avoided: calculated against the quantity of MCMDs that are diverted from incineration with the adoption of non-incineration dismantling and stabilization technologies.

(c) 100 mt of POP-containing plastic collected and disposed safely containing 5 tons of PBDEs which emissions will be avoided with avoided open burning.

(d) 20,000 tons of recyclable plastic and metals material collected and recycled.

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(e) 10,000 metric tons of CO2e emissions avoided: The reduction / elimination of 5% of the releases or emissions in 2022 is the baseline withing the total of 176,946 units of MCMDs that will go under non-incineration treatment and also due to the avoided open burning of healthcare related plastics.

(f) 100,000 people directly benefitted (50,000 female and 50,000 male): as per the targeted audience that GHG benefit from the project and will be selected in pilot sites and pilot units among 3,122 hospitals, 10,260 Primary Health Care (PHC) and more than 5,000 other health care facilities and the HCW collection and processing units/companies/institutions. In which at least 30% are expected to be women in line with national regulations related to gender inclusiveness in Indonesia.

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Annex 17: GEF Taxonomy

Level 1	Level 2	Level 3	Level 4
☐ **Influencing models**			
	☒ **Transform policy and regulatory environments**		
	☒ **Strengthen institutional capacity and decision-making**		
	☒ **Convene multi-stakeholder alliances**		
	☒ **Demonstrate innovative approaches**		
	☒ **Deploy innovative financial instruments**		
☒ **Stakeholders**			
	☐ **Indigenous Peoples**		
	☒ **Private Sector**		
		☒ Capital providers	
		☒ Financial intermediaries and market facilitators	
		☒ Large corporations	
		☒ SMEs	
		☒ Individuals/Entrepreneurs	
		☐ Non-Grant Pilot	
		☐ Project Reflow	
	☒ **Beneficiaries**		
	☒ **Local Communities**		
	☒ **Civil Society**		
		☒ Community Based Organization	
		☒ Non-Governmental Organization	
		☐ Academia	
		☒ Trade Unions and Workers Unions	
	☒ **Type of Engagement**		
		☒ Information Dissemination	
		☒ Partnership	
		☒ Consultation	
		☒ Participation	
	☒ **Communications**		
		☒ Awareness Raising	
		☒ Education	
		☒ Public Campaigns	
		☒ Behavior Change	
☒ **Capacity, Knowledge and Research**			
	☐ **Enabling Activities**		
	☒ **Capacity Development**		
	☒ **Knowledge Generation and Exchange**		
	☒ **Targeted Research**		
	☒ **Learning**		
		☒ Theory of Change	
		☒ Adaptive Management	
		☐ Indicators to Measure Change	
	☒ **Innovation**		
	☒ **Knowledge and Learning**		
		☐ Knowledge Management	
		☒ Innovation	

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		☒Capacity Development	
		☒Learning	
	☒**Stakeholder Engagement Plan**		
☒**Gender Equality**			
	☒**Gender Mainstreaming**		
		☒Beneficiaries	
		☒Women groups	
		☒Sex-disaggregated indicators	
		☒Gender-sensitive indicators	
	☐**Gender results areas**		
		☐Access and control over natural resources	
		☒Participation and leadership	
		☒Access to benefits and services	
		☒Capacity development	
		☒Awareness raising	
		☒Knowledge generation	
☐**Focal Areas/Theme**			
	☐**Integrated Programs**		
		☐Commodity Supply Chains (Good Growth Partnership)	
			☐Sustainable Commodities Production
			☐Deforestation-free Sourcing
			☐Financial Screening Tools
			☐High Conservation Value Forests
			☐High Carbon Stocks Forests
			☐Soybean Supply Chain
			☐Oil Palm Supply Chain
			☐Beef Supply Chain
			☐Smallholder Farmers
			☐Adaptive Management
		☐Food Security in Sub-Sahara Africa	
			☐Resilience (climate and shocks)
			☐Sustainable Production Systems
			☐Agroecosystems
			☐Land and Soil Health
			☐Diversified Farming
			☐Integrated Land and Water Management
			☐Smallholder Farming
			☐Small and Medium Enterprises
			☐Crop Genetic Diversity
			☐Food Value Chains
			☐Gender Dimensions
			☐Multi-stakeholder Platforms
		☐Food Systems, Land Use and Restoration	
			☐Sustainable Food Systems
			☐Landscape Restoration
			☐Sustainable Commodity Production
			☐Comprehensive Land Use Planning
			☐Integrated Landscapes
			☐Food Value Chains
			☐Deforestation-free Sourcing
			☐Smallholder Farmers
		☐Sustainable Cities	
			☐Integrated urban planning

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			☐ Urban sustainability framework
			☐ Transport and Mobility
			☐ Buildings
			☐ Municipal waste management
			☐ Green space
			☐ Urban Biodiversity
			☐ Urban Food Systems
			☐ Energy efficiency
			☐ Municipal Financing
			☐ Global Platform for Sustainable Cities
			☐ Urban Resilience
	☐ **Biodiversity**		
		☐ Protected Areas and Landscapes	
			☐ Terrestrial Protected Areas
			☐ Coastal and Marine Protected Areas
			☐ Productive Landscapes
			☐ Productive Seascapes
			☐ Community Based Natural Resource Management
		☐ Mainstreaming	
			☐ Extractive Industries (oil, gas, mining)
			☐ Forestry (Including HCVF and REDD+)
			☐ Tourism
			☐ Agriculture & agrobiodiversity
			☐ Fisheries
			☐ Infrastructure
			☐ Certification (National Standards)
			☐ Certification (International Standards)
		☐ Species	
			☐ Illegal Wildlife Trade
			☐ Threatened Species
			☐ Wildlife for Sustainable Development
			☐ Crop Wild Relatives
			☐ Plant Genetic Resources
			☐ Animal Genetic Resources
			☐ Livestock Wild Relatives
			☐ Invasive Alien Species (IAS)
		☐ Biomes	
			☐ Mangroves
			☐ Coral Reefs
			☐ Sea Grasses
			☐ Wetlands
			☐ Rivers
			☐ Lakes
			☐ Tropical Rain Forests
			☐ Tropical Dry Forests
			☐ Temperate Forests
			☐ Grasslands
			☐ Paramo
			☐ Desert
		☐ Financial and Accounting	
			☐ Payment for Ecosystem Services
			☐ Natural Capital Assessment and Accounting

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			☐ Conservation Trust Funds
			☐ Conservation Finance
		☐ Supplementary Protocol to the CBD	
			☐ Biosafety
			☐ Access to Genetic Resources Benefit Sharing
	☐ **Forests**		
		☐ Forest and Landscape Restoration	
			☐ REDD/REDD+
		☐ Forest	
			☐ Amazon
			☐ Congo
			☐ Drylands
	☐ **Land Degradation**		
		☐ Sustainable Land Management	
			☐ Restoration and Rehabilitation of Degraded Lands
			☐ Ecosystem Approach
			☐ Integrated and Cross-sectoral approach
			☐ Community-Based NRM
			☐ Sustainable Livelihoods
			☐ Income Generating Activities
			☐ Sustainable Agriculture
			☐ Sustainable Pasture Management
			☐ Sustainable Forest/Woodland Management
			☐ Improved Soil and Water Management Techniques
			☐ Sustainable Fire Management
			☐ Drought Mitigation/Early Warning
		☐ Land Degradation Neutrality	
			☐ Land Productivity
			☐ Land Cover and Land cover change
			☐ Carbon stocks above or below ground
		☐ Food Security	
	☐ **International Waters**		
		☐ Ship	
		☐ Coastal	
		☐ Freshwater	
			☐ Aquifer
			☐ River Basin
			☐ Lake Basin
		☐ Learning	
		☐ Fisheries	
		☐ Persistent toxic substances	
		☐ SIDS : Small Island Dev States	
		☐ Targeted Research	
		☐ Pollution	
			☐ Persistent toxic substances
			☐ Plastics
			☐ Nutrient pollution from all sectors except wastewater
			☐ Nutrient pollution from Wastewater
		☐ Transboundary Diagnostic Analysis and Strategic Action Plan preparation	

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		☐ Strategic Action Plan Implementation	
		☐ Areas Beyond National Jurisdiction	
		☐ Large Marine Ecosystems	
		☐ Private Sector	
		☐ Aquaculture	
		☐ Marine Protected Area	
		☐ Biomes	
			☐ Mangrove
			☐ Coral Reefs
			☐ Seagrasses
			☐ Polar Ecosystems
			☐ Constructed Wetlands
	☒ **Chemicals and Waste**		
		☒ Mercury	
		☐ Artisanal and Scale Gold Mining	
		☐ Coal Fired Power Plants	
		☐ Coal Fired Industrial Boilers	
		☐ Cement	
		☐ Non-Ferrous Metals Production	
		☐ Ozone	
		☒ Persistent Organic Pollutants	
		☒ Unintentional Persistent Organic Pollutants	
		☒ Sound Management of chemicals and Waste	
		☒ Waste Management	
			☒ Hazardous Waste Management
			☒ Industrial Waste
			☒ e-Waste
		☒ Emissions	
		☒ Disposal	
		☒ New Persistent Organic Pollutants	
		☐ Polychlorinated Biphenyls	
		☒ Plastics	
		☐ Eco-Efficiency	
		☐ Pesticides	
		☐ DDT - Vector Management	
		☐ DDT - Other	
		☐ Industrial Emissions	
		☒ Open Burning	
		☒ Best Available Technology / Best Environmental Practices	
		☐ Green Chemistry	
	☐ **Climate Change**		
		☐ **Climate Change Adaptation**	
			☐ Climate Finance
			☐ Least Developed Countries
			☐ Small Island Developing States
			☐ Disaster Risk Management
			☐ Sea-level rise
			☐ Climate Resilience
			☐ Climate information
			☐ Ecosystem-based Adaptation
			☐ Adaptation Tech Transfer
			☐ National Adaptation Programme of Action
			☐ National Adaptation Plan

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			☐ Mainstreaming Adaptation
			☐ Private Sector
			☐ Innovation
			☐ Complementarity
			☐ Community-based Adaptation
			☐ Livelihoods
		☐ **Climate Change Mitigation**	
			☐ Agriculture, Forestry, and other Land Use
			☐ Energy Efficiency
			☐ Sustainable Urban Systems and Transport
			☐ Technology Transfer
			☐ Renewable Energy
			☐ Financing
			☐ Enabling Activities
		☒ **Technology Transfer**	
			☐ Poznan Strategic Programme on Technology Transfer
			☐ Climate Technology Centre & Network (CTCN)
			☐ Endogenous technology
			☐ Technology Needs Assessment
			☐ Adaptation Tech Transfer
		☐ **United Nations Framework on Climate Change**	☐ Nationally Determined Contribution
	☒ **Rio Markers**		
		☐ Paris Agreement	
		☒ Sustainable Development Goals	
		☐ Climate Change Mitigation 0	
		☐ Climate Change Mitigation 1	
		☐ Climate Change Mitigation 2	
		☐ Climate Change Adaptation 0	
		☐ Climate Change Adaptation 1	
		☐ Climate Change Adaptation 2	

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Annex 18: Results of the Partners Capacity Assessment Tool (PACT) and HACT Micro Assessment

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Annex 19: UNDP Project Quality Assurance Report

(to be completed in UNDP online corporate planning system)