

**United Nations Development Programme**

**Project Document for projects**

**financed by the various GEF Trust Funds**

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| --- | --- | --- | --- | --- | --- |
| **Project title:** Demonstration of phase-out of mercury-containing medical thermometers and sphygmomanometers and promoting the application of mercury-free alternatives in medical facilities in China | | | | | |
| **Country(ies):** China | **Implementing Partner (GEF Executing Entity):** Foreign Environmental Cooperation Center (FECO), Ministry of Ecology and Environment (MEE) | | | | **Execution Modality***:* National Implementation Modality (NIM) |
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| **Brief project description:**  China is a large manufacturer of mercury-containing medical thermometers and sphygmomanometers. There are several challenges in terms of policy and regulatory framework, technical and financial supports as well as educational and awareness raising that could hamper the phase-out of the production of mercury-containing medical thermometers and sphygmomanometers in the manufacturing enterprises and the application of mercury-free medical thermometers and sphygmomanometers in medical facilities in China. This project aims to establish the enabling environment to accelerate the transfer to the production of mercury-free medical devices, and to lay the foundation for market acceptance and growth for mercury-free devices in medical facilities, in order to meet associated phase-out deadlines under the Minamata Convention on Mercury. | | | | | |
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| Government of China | | | USD 4,599,000 (Grants)  USD 9,874,000 (in-kind) | | |
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| **Signatures:** | | | | | |
| **Signature:** print name below | | **Agreed by Government Development Coordination Authority****[[1]](#footnote-1)** | | **Date/Month/Year:** | |
| **Signature:** print name below | | **Agreed by Implementing Partner** | | **Date/Month/Year:** | |
| **Signature:** Beate Trankmann | | **Agreed by UNDP[[2]](#footnote-2)** | | **Date/Month/Year:** | |
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# Acronyms

|  |  |
| --- | --- |
| BPPS NCE-VF | Bureau for Policy and Programme Support, Nature, Climate and Energy, Vertical Fund team |
| CAMDI | China Association for Medical Devices Industry |
| CO | UNDP Country Office |
| DDG | Deputy Director General |
| ERC | (UNDP) Evaluation Resource Center |
| ESM | Environmentally sound management |
| FA | Finance Assistant |
| FECO | Foreign Environmental Cooperation Office |
| FSP | Full Sized Project |
| GEF | Global Environment Facility |
| GEFSEC | Global Environment Facility Secretariat |
| M&E | Monitoring and Evaluation |
| MEE | Ministry of Ecology and Environment |
| MIA | Minamata Convention Initial Assessment |
| MT | Metric Tons |
| MTR | Mid-Term Review |
| NHC | National Health Commission |
| NPD | National Project Director |
| NSG | National Steering Group |
| NTA | National Technical Advisor |
| PA | Project Assistant |
| PIF | Project Identification Form |
| PIR | GEF Project Implementation Report |
| PM | Project Management |
| PMC | Project management costs |
| POPP | Programme and Operations Policies and Procedures |
| PPG | Project Preparation Grant |
| PTA | (UNDP NCE) Principal Technical Advisor |
| RA | Risk analysis |
| RM | Risk management |
| RTA | UNDP NCE) Regional Technical Advisor |
| STAP | GEF Scientific Technical Advisory Panel |
| TE | Terminal Evaluation |
| TRAC | (UNDP) Target for Resource Assignment |
| UNDP | United Nations Development Programme |
| WHO | World Health Organization |

# Development Challenge

**The problem of mercury in national context**

Mercury can lead to significant adverse neurological and other health effects in humans, including the unborn child and infants. The global transport of mercury in the environment requires concerted global actions to address the problem of mercury pollution. As one of the global efforts to protect human health and the environment from anthropogenic emissions and releases of mercury as well as mercury compounds, the Minamata Convention on Mercury was agreed on by the intergovernmental negotiating committee and was opened for signature on October 10, 2013.

The Minamata Convention on Mercury went into effect on August 16, 2017 for signatory parties to the Convention including China, and sets out a range of measures to meet the abovementioned objective, including measures to control the supply and trade of mercury, the control of mercury-added products, etc. Parties to the Convention agree in Article 4 of the Minamata Convention on Mercury to forbid the manufacture, import or export of mercury-added products (listed in Part I of Annex A) after the 2020 phase-out date. This list of mercury-added products includes mercury-containing medical devices like thermometers and sphygmomanometers.

As per the Minamata Convention on Mercury, the import and/or export and manufacture of mercury-containing medical thermometers and sphygmomanometers will be forbidden from January 1, 2021 onwards. As for China, the manufacture of mercury-containing medical thermometers and sphygmomanometers will be forbidden from January 1, 2026 on since China registered an exemption pursuant to Article 6 of the Minamata Convention of Mercury ([www.mercuryconvention.org/Countries/Parties/Exemptions/tabid/5967/language/en-US/Default.aspx](http://www.mercuryconvention.org/Countries/Parties/Exemptions/tabid/5967/language/en-US/Default.aspx))

**Production of Mercury-contained thermometers and sphygmomanometers in China**

China is a large manufacturer of mercury-containing medical thermometers and sphygmomanometers. The production facilities are mostly located in Eastern China like Jiangsu, Anhui and Shandong Provinces etc. Affected by the relevant control policies and economic situation, recent investigation showed the production of mercury-containing thermometers fell from about 150 million to about 100 million units between 2010 and 2016.

Surveys conducted in 2020 showed that there were more than 300 enterprises in China producing medical thermometers and sphygmomanometers. While most are small to medium sized enterprises (SMEs) that have permits to produce mercury-free thermometers and sphygmomanometers, their product quality varied considerably and still falls short from expected stability and accuracy required for large scale market supply and well acceptance in medical institutions. In addition, 23 enterprises in different size (small, medium and large) still using mercury in thermometers and sphygmomanometers and currently face technical and financial challenges to adapt to Hg-free products.

Data gathered from seven (7) of the eighteen (18) enterprises that produce mercury-containing thermometers s, whose combined production volume exceeds more than 50% of the total sector production capacity, shows the production volume has increased again since 2017. Based on the survey, the national production of mercury-containing thermometers was expected to exceed 200 million units in 2020. One third of the produced mercury-containing thermometers is exported to other countries.

Less than 5 enterprises among the mercury-containing thermometer producers have the license to produce the mercury-free Galinstan-in-glass thermometers, which is an alternative to mercury-in-glass thermometers. These enterprises face critical challenges related to low yield, limited production capacity, high production cost, uneven product quality and a relatively small market share of Galinstan-in-glass thermometers. Several mercury-containing thermometers manufacturers are also producing or capable to produce digital thermometers but have poor market competitiveness compared to companies that are solely manufacturing digital ones. Therefore, technology transfer is necessary among the manufacturers.

With respect to mercury-containing sphygmomanometers, there are a total of 5 enterprises that have the ability to produce and their production output in 2020 was about 1.3 million units.

There are mainly three types of sphygmomanometers in the market: (i) mercury-containing sphygmomanometers; (ii) aneroid sphygmomanometers; and (iii) oscillometric sphygmomanometers. Through survey conducted in 2020, it was observed that among the 5 enterprises which produce mercury-containing sphygmomanometers at present, all have incipient/limited capacities to also produce mercury free aneroid sphygmomanometers.

Most thermometers and sphygmomanometers producers sell their products through third-party trading companies to domestic and foreign consumers, rarely directly to medical facilities. Therefore, the enterprises and medical facilities are not directly linked.

**Consumption of mercury-contained thermometers and sphygmomanometers in China**

Mercury-containing thermometers and sphygmomanometers are widely used in medical facilities in China. There are nearly 1 million medical facilities at 3 different grades including tertiary, secondary and primary medical institutions (mostly consist of township, community, and village clinics, etc.). The size of these medical facilities at same grade is different according to the specific conditions of each province, city and county. Previous investigations show that some medical facilities have demonstrated the application of mercury-free medical devices like the digital ones, and the substitution has shown an increasing trend in recent years, however considering the stability, quality, price and people’s awareness of digital thermometers and sphygmomanometers, the promotion of mercury-free ones were slow. Mercury-containing medical thermometers and sphygmomanometers are still the mainstream devices in China, especially in medical institutions, and are the first choice for many medical workers in part due to their cost and simplicity to use. Due to the huge number of medical institutions as mentioned above, the total amount of mercury-containing medical thermometers and sphygmomanometers used in medical facilities is difficult to estimate.

An investigation in 2020 covering a sample 25 medical institutions showed that, from 2017 to 2019, medical institutions also consumed a large amount of mercury for the maintenance and calibration of mercury-containing sphygmomanometers. Some hospitals even had elemental mercury storage on hand. Among the 25 medical institutions investigated, there are more mercury-containing thermometers and sphygmomanometers than mercury-free ones, although the amount of the mercury-containing devices in medical institutions dropped sharply in recent years. It was identified that digital sphygmomanometers are more commonly used in higher-level medical facilities.

**Institutional and legal baseline for phasing out the production of mercury-containing medical thermometers and sphygmomanometers**

For the import and/or export and manufacture of mercury-containing medical thermometers and sphygmomanometers, the Government of China has issued several related policies and regulations to meet the requirement of the Minamata Convention on Mercury. For example, in 2017, an Announcement of the Entry-into-Effect of Minamata Convention on Mercury (2017-85) led by the then Ministry of Environmental Protection (now the Ministry of Ecology and Environment) was issued. It clearly stated that the import and/or export of mercury-containing medical thermometers and sphygmomanometers will be banned from January 1, 2021 and the manufacture of mercury-containing medical thermometers and sphygmomanometers will be banned from January 1, 2026.

In 2017, the then Ministry of Environmental Protection issued the "National Catalogue of Environmental Protection Technology", which listed mercury-containing medical thermometers and sphygmomanometers as high-pollution and high-environmental-risk products. In 2019, the National Development and Reform Commission issued the "Guiding Catalogue of Industrial Structure Adjustment (2019 version)", which listed the manufacture of mercury-containing medical thermometers and sphygmomanometers after December 31, 2025 in the catalogue of phase-out. In 2020, National Medical Products Administration issued an announcement stating that the validity of the licenses for all mercury-containing medical thermometers and sphygmomanometer manufacturers should not be later than December 31, 2025.

The Ministry of Commerce, the Ministry of Ecology and Environment and the General Administration of Customs have jointly issued the "Catalogue of Prohibited Imports" (the seventh batch) and the "Catalogue of Prohibited Exports" (the sixth batch), clarifying that from January 1, 2021, the import and export of mercury-added products controlled by the Convention is prohibited. In addition, there are also some standards, verification requirements and guidelines for thermometers and sphygmomanometers as listed in Table 1 below.

**Table 1 Law/regulation/standard/guidelines related to the import and export and the manufacture and verification of mercury-containing medical thermometers and sphygmomanometers**

|  |  |  |  |
| --- | --- | --- | --- |
| **Law/regulation/standard/ Guideline** | **Issuing Institution** | **Issuing Date** | **Requirements or limits** |
| Announcement of the Entry-into-Effect of Minamata Convention on Mercury | Ministry of Environmental Protection and other 17 relative Ministries or Administrations | August 15, 2017 | The import and/or export of mercury-containing medical thermometers and sphygmomanometers will be banned from January 1, 2021 and the manufacture of mercury-containing medical thermometers and sphygmomanometers will be banned from January 1, 2026 |
| National Catalogue of Environmental Protection Technology | Former Ministry of Environmental Protection | 2013, 2014, 2015, 2017 | Mercury-containing medical thermometers and sphygmomanometers are high-pollution and high-environmental-risk products |
| Guiding Catalogue of Industrial Structure Adjustment (2019 version) | National Development and Reform Commission | Septembrer10, 2019 | Manufacture of mercury-containing medical thermometers and sphygmomanometers after December 31, 2025 belongs to the catalogue of phase-out |
| Notice of the Comprehensive Department of National Medical Products Administration on Matters Concerning the Implementation of the Minamata Convention on Mercury | National Medical Products Administration | October 10, 2020 | The validity of the production licenses for all mercury-containing medical thermometers and sphygmomanometers should not be later than December 31, 2025 |
| Catalogue of Prohibited Imports (the seventh batch) and the Catalogue of Prohibited Exports (the sixth batch) | The Ministry of Commerce, the Ministry of Ecology and Environment and the General Administration of Customs | December 30, 2020 | The import and export of mercury-added products controlled by the Convention is prohibited from January 1, 2021 |
| GB 1588-2001 Clinical thermometer | General Administration of Supervision, Inspection and Quarantine of the People`s Republic of China | December 4, 2001 | This national standard specifies the classification, nomenclature, requirements, test methods, inspection, labeling and other requirements for clinical glass thermometers |
| GB/T 21416-2008 Clinical electronic thermometer | General Administration of Supervision, Inspection and Quarantine of the People`s Republic of China and the Standardization Administration of China | January 22, 2008 | This national standard specifies the terms and definitions, requirements, test methods, inspection rules and labeling and other requirements for clinical electronic thermometer |
| GB 3053-1993 Sphygmomanometer | State Bureau of Technical Supervision | October 16, 1993 | This national standard specifies the product classification, technical requirements, test methods, acceptance rules and labeling of sphygmomanometers |
| Administration measures of the people's Republic of China for the compulsory verification of working measuring instruments | State Administration for Market Regulation | February 25, 2019 | Clinical thermometers and sphygmomanometers are required for compulsory verification. |
| Verification regulation of clinical thermometers  (JJG 111-2019） | State Administration for Market Regulation | December 31, 2019 | The glass thermometer only need verification once and should be discarded if not accurate. The regulation applies to mercury-containing medical thermometers |
| Verification regulation of clinical electronic thermometers  (JJG 1162-2019） | State Administration for Market Regulation | December 31, 2019 | The verification cycle for clinical electronic thermometers should be no more than one year |
| Verification regulation of infrared ear thermometers  (JJG 1164-2019） | State Administration for Market Regulation | December 31, 2019 | The verification cycle for infrared ear thermometers should be no more than one year |
| Verification regulation of sphygmomanometer  (JJG 270-2008） | General Administration of Supervision, Inspection and Quarantine of the People`s Republic of China | March 25, 2008 | The verification cycle for sphygmomanometer should be no more than a half year |
| Verification regulation of non-invasive automated sphygmomanometer  (JJG 692-2010） | General Administration of Supervision, Inspection and Quarantine of the People`s Republic of China | May 11, 2010 | The verification cycle for non-invasive automated sphygmomanometer is one year or shorter if necessary. It must be verified after maintenance. |

As for the sound management of mercury and obsolete mercury-containing medical thermometers and sphygmomanometers, mercury waste is listed in the Directory of National Hazardous Wastes and need to be managed based on Law on Pollution Prevention and Control of Solid Wastes. Standard for pollution control on hazardous waste storage (GB 18597-2001) and Technical specifications for collection, storage, transportation of hazardous waste (HJ 2025-2012) specified the requirements for the management of mercury waste as listed in Table 2.

**Table 2 Law/regulation/standard/ Guideline for sound management of obsolete mercury-containing medical thermometers and sphygmomanometers**

|  |  |  |  |
| --- | --- | --- | --- |
| **Law/regulation/standard/ guidelines** | **Issuing Institution** | **Issuing date** | **Relevant requirements or limits** |
| Law on Pollution Prevention and Control of Solid Waste (revised version) | Standing Committee of the National People's Congress | April 29, 2020 | Obsolete mercury-containing medical thermometers and sphygmomanometers are hazardous waste |
| Directory of National Hazardous Wastes (revised version) | Ministry of Ecology and Environment, National Development and Reform, Ministry of Public Security, Ministry of Transport, National Health Commission | November 25, 2020 | Obsolete mercury-containing medical thermometers and sphygmomanometers are hazardous waste |
| Standard for pollution control on hazardous waste storage (GB 18597-2001) | State Environmental Protection Agency, General Administration of Supervision, Inspection and Quarantine of the People`s Republic of China | December 28, 2001 | The general requirements for hazardous waste storage, and the requirements for hazardous waste packaging, site selection, design, operation, safety protection, monitoring and closing of storage facilities |
| Technical specifications for collection, storage, transportation of hazardous waste  (HJ 2025-2012) | Ministry of Environmental Protection | December 24, 2012 | Technical requirements for hazardous waste collection, storage and transportation, which is a guiding standard |
| Regulation on the Administration of Medical Wastes | State Council | March 28, 2008 | Regulations about the collection, transportation, storage, disposal, supervision and management of medical waste |
| The Classified Catalogue of Medical Wastes | National Health and Family Planning Commission | June 5, 2013 | Obsolete mercury-containing medical thermometers and sphygmomanometers belongs to medical wastes |

**Barriers that need to be addressed for phasing out of the production of mercury-containing medical thermometers and sphygmomanometers and the application of mercury-free medical thermometers and sphygmomanometers in medical facilities.**

There are several challenges in terms of policy and regulatory framework, technical and financial supports as well as educational and awareness raising that could hamper the phase-out the production of mercury-containing medical thermometers and sphygmomanometers in enterprises and the application of mercury-free medical thermometers and sphygmomanometers in medical facilities in China.

COVID-19 pandemic immediate implications to the mercury-free market of medical devices

With the outbreak of COVID-19 in China, the demand for body temperature checking in households, community and public place had resulted in increased demand use of thermometers. As noted in the 2020 survey carried on during project preparation process, from the 100 million units produces in 2016, this production has increased and was expected to reach 200 million units of mercury-contained thermometers in 2020, putting pressure in the national demand and jeopardizing the phase-out commitments under the Minamata Convention.

in the other hand the demand on the application of contact-free and mercury-free thermometers in medical institutions and communal places had also promoted an increased use of mercury-free thermometers, but also concerns considering the need for accuracy and reliability of these thermometers.

Policy and regulatory challenges

Since the phase-out date for the import and/or export and manufacture of mercury-containing medical thermometers and sphygmomanometers has been set as per the Minamata Convention on Mercury, corresponding national policies, regulations and action plans are needed to reach this goal.

In light of the approaching phase-out of the production of mercury-containing medical thermometers and sphygmomanometers, several policy, regulatory instruments and action plans were issued by the Government of China to ensure the introduction and appropriate application of mercury-free medical thermometers and sphygmomanometers in medical facilities, and by the general public as listed in Tables 1 and 2 above. However, some 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 bylaws.

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.

Technical challenges

The baseline for the replacement of mercury-containing medical thermometers and sphygmomanometers is that mercury-free alternatives should meet the demand of the consumers and the market, both in terms of quantities and quality, without causing much inconvenience. As for the manufacture of mercury-free medical thermometers, non-electronic thermometers with liquid Galinstan, and electronic thermometers, are both considered promising alternatives to mercury-containing medical thermometers.

In the case of the manufacture of Galinstan-in-glass thermometers, there are several technical issues to be addressed, including the high price of liquid Galinstan, the requirement for technical improvement in such thermometers because of their slow reset time, and suboptimal efficacy at low temperatures, as compared to mercury-containing medical thermometers. Furthermore, only a few companies hold related-patents to produce Galinstan-in-glass thermometers in China, such that the production capacity of Galinstan-in-glass thermometers is currently very limited. The lack of trained personnel for the manufacture of Galinstan-in-glass thermometers is another obstacle. Therefore, the demonstrative technical transfer from production of mercury-containing medical thermometers to Galinstan-in-glass thermometers is necessary.

As for the manufacture of electronic thermometers, dependence on the chips from the suppliers outside of the country and its intellectual property might be the barriers in the conversion and increase the cost of the electronic alternatives. The lack of trained personnel is another obstacle. In addition, the quality of the electronic thermometers is variable, and there is a need for universal quality control in production. Therefore, the demonstrative technical transfer from production of mercury-containing medical thermometers to electronic thermometers is necessary.

As for the manufacture of mercury-free sphygmomanometers, there are two main alternatives: mercury free aneroid sphygmomanometers and electronic sphygmomanometers. Similar to the manufacture of electronic thermometers, the manufacture of electronic sphygmomanometers also lacks chips with independent/self-owned intellectual property rights, and trained personnel, and the same issue of variability of quality exists. Therefore, the demonstrative technical transfer from production of mercury-containing sphygmomanometers to electronic ones is necessary.

China’s National Implement Plan for the Implementation of the Minamata Convention, for which work has been initiated to begin its preparation, will seek to work with enterprises to phase out mercury from their operations and enhance safe handling of mercury on site. However, in fine-tuning the sectoral plan for this, there needs to be prioritization of enterprises, and improved understanding of not only where the largest mercury consumption lies in production of devices, but also of the greatest risks of contamination and threats to human and environmental health. The development of a long-term risk management strategy for enterprises could be supported through pilot assessment of contaminated sites associated with the operations of enterprises, and development of guidance and tools for the sound management of mercury-contaminated sites and obsolete mercury and mercury-containing medical thermometers and sphygmomanometers at enterprises is necessary in order to reduce risks to workers on site.

The introduction and application of mercury-free thermometers and sphygmomanometers in medical facilities requires accurate and reliable measurements similar to the mercury-containing ones. The lack of the confidence on the quality of measurements taken with mercury-free devices, and the lack of trained medical workers to accurately use and maintain mercury-free medical devices in many medical facilities are significant barriers. These need to be overcome with demonstration interventions in medical facilities (at various health-care level) to instill in medical personnel the confidence in the quality and usability of mercury-free alternatives.

Finally, the development of long-term guidance and tools for the sound management of obsolete mercury and mercury-containing medical thermometers and sphygmomanometers at medical facilities is also necessary. Mercury released from the broken thermometers and sphygmomanometers may collect in cracks and crevices or may accumulate within the facility with time that can pose a prolonged health risk to building occupants. Currently, risk assessment and management plans for the management of the released of mercury from broken mercury-containing medical thermometers and sphygmomanometers at medical facilities are lacking.

Financial challenges

Most of the enterprises manufacturing mercury-containing medical thermometers and sphygmomanometers are private companies with relatively low profitability. As such they face financial constraints for the conversion from mercury-containing medical thermometers and sphygmomanometers to mercury-free alternatives. The transfer to mercury-free alternatives generally requires construction of new production lines, and training of employees in new technologies. Financial support to demonstrate the technical transfer from mercury-containing medical thermometers and sphygmomanometers will support manufacturing companies in accessing incremental investments for the conversion to mercury-free technologies and train their employees in new technologies. In those instances, where site contamination and disposal of obsolete mercury-containing materials is an issue, they can also require assistance to conduct risk assessment and putting management procedures and approaches in place to protect their workers as well as surrounding communities.

Considering the relatively high price and high cost for the maintenance of mercury-free alternatives combined with medical staff that is not trained in their use, medical facilities are reluctant to introduce mercury-free alternatives. Financial support and a green financing framework in participating medical facilities will facilitate the adoption of mercury-free alternatives, and help to conduct risk assessment and develop management plans to ensure the sound management of broken and/or obsolete mercury-containing medical thermometers and sphygmomanometers to safeguard medical staff, patients, visitors and surrounding communities. Medical facilities could also help to provide critical feedback to manufacturers and the government alike, in testing performance of new technologies, and helping to confirm the best products for upscale and wider use in the long term. Besides, the general public are supposed to follow the choice of medical facilities on mercury-free alternatives.

Educational and awareness raising challenges

It is recognized that mercury-containing medical thermometers and sphygmomanometers are still widely used in China, while some developed and a few developing countries had phased-out the use of mercury-containing medical devices. Therefore, the gathering of international experiences, lessons-learned and the exchange of best and worst practices from countries and medical facilities will be critical to contribute to a successful phase out in China.

As relates to the adoption of mercury-free alternatives, the lack of trained medical workers to use such devices requires thorough, systematic education, including appropriate use and gaining critical capacity as relates to calibration and accuracy of measurements. For the general public, the knowledge on the health impact of mercury is still insufficient and needs to be further enhanced, particularly to the impact on pregnant women and children. Also, the knowledge on the performance and correct using methods so forth of mercury-free alternatives is also necessary. It is therefore necessary to assure that “buy-in” of peoples and communities to ensure the introduction, promotion and wider acceptance of the mercury-free alternatives is implemented successfully.

Awareness raising among government entities, private sector entities, civil society stakeholder groups and the general public and medical personnel is critical, concrete actions are needed to focus on the necessity to replace mercury-containing medical thermometers and sphygmomanometers in light of the current deadlines, as well as to continuously conduct R&D on mercury-free alternatives (such as the refinement of Galinstan devices).

Gender challenges

In general, certain gender disparities persist in China in areas of knowledge, employment, and involvement in decision-making due to cultural barriers. In this sense, women working in thermometers and sphygmomanometers producing enterprises continue to face challenges in equal access to training and employment and are particularly exposed to mercury during the production process.

In terms of women participation in medical institutions, it is noted that they form part of more than 50% of the healthcare workforce, being majority in the nursing careers and are relevant in medical Specialties positions, however gaps still exist in terms of participation and decision making in the process involved in procurement and use of medical devices.

The project recognizes that without adequate and appropriate consideration of the gender gaps and relevant gender-responsive measures in design and implementation of its intervention, women would be continuously suffering disadvantages in access to participation training at production and decision making and access of mercury-free technologies (at all levels), as well and other relevant benefits and services in the use of mercury-free devices such as minimization of contamination risk, which are gender gaps most strategic and relevant to GEF-programming.

At end-user/household level, it is acknowledged that large number of families still use mercury-contained thermometers as these consist cost-effective and easy-to-use solutions. However, accidents in use that involved break up of glass and mercury leakage are also common at households and this can directly expose women and children particularly in small, poorly ventilated rooms. Therefore accurate and reliable mercury-free fever thermometers must be made available at end-user level in also cost-effective manner, and additional awareness raising is required to support families in gain confidence in their use. In this regard, the role of women as family leaders is also critical for behavioral change.

**Problem Analysis for the successful introduction of mercury-free medical thermometers and sphygmomanometers in China.**

Taking into account the myriad of barriers, and the interconnectedness of production phase out with market uptake, a cause-effect “problem tree” can be constructed to help categorize barriers, see where they lie, who can help alleviate them, and how addressing barriers in component activities can feed into achieving the ultimate project objective. Figure 1 below gives a graphic representation of this analysis of the barriers at baseline.

Figure 1 Problem Analysis to explore the Cause-Effect for Challenges Faced in the phase out of mercury-based medical devices in China

Lack of market due to high price and poor quality

Lack of incentive to convert production lines

Slow uptake of enterprises to convert production lines to non-mercury technology

Lack of access to investment finance to convert production lines to non-mercury technologies

**Continued, un-slowed production and medical use of mercury thermometers and sphygmomanometers in the face of the January 1, 2021 ban on import exports, and specially exemption production ban of January 1, 2026**

Lack of a production quality control standard to standardize performance of non-mercury devices

**Inability to achieve compliance with Minamata Annex A, Article 4.1 phase-out schedule Annex A, Article 4.1 phase out schedule**

Lack of technical capacity and policy awareness in the production sector (especially smaller enterprises)

Lack of resources/capacity /willingness to act

Lack of cross Ministerial cooperation to jointly develop the necessary action plans and guidelines, and identify appropriate private sector partners required to phase out mercury devices (e.g., Environment, Health, Industry.)

Lack of a (green) procurement standard and safe disposal guidelines for mercury devices in public medical facilities

Slow uptake of non-mercury devices by China’s medical services

Lack of incentive to purchase and use non-mercury medical devices

Lack of government finance to supplement additional cost of non-mercury medical devices

**Policy Related Barriers**

Lack of policy and regulatory tools, and associated action plans, to guide phase out of mercury medical devices under the Minamata Convention

Lack of awareness and capacity of healthcare facility management and staff to use and maintain non-mercury devices, and to soundly manage obsolete mercury devices

**Production Barriers**

**Medical Service Market Penetration Barriers**

**Technical Capacity and Knowledge Barriers**

**Finance related Barriers**

**Consistency with National Priorities**

This project is consistent with the priorities identified in China’s Minamata Initial Assessment (MIA) under the Minamata Convention. The Government of China has made significant effort to control mercury pollution and signed the Minamata Convention on Mercury on October 10, 2013. The Convention went into effect on August 16, 2017.

The GEF-funded MIA has set China on the right path to fulfilling its obligation under the Minamata Convention, and place sound chemicals management at the forefront of the national sustainable development agenda. This project will be fully aligned with priorities identified in China’s MIA, which will focus on the phase-out of mercury in medical thermometers and sphygmomanometers in key production facilities and promote the appropriate application of mercury-free alternatives in medical services.

This project is also fully consistent with the national strategies of environmental protection in China. The outline of the 14th Five-Year Plan (2021-2025) for national economic and social development and the long-range objectives through the year 2035 was adopted, it requires the construction of ecological civilization, green development and pollution prevention and control. The Ministry of Ecology and Environment has initiated work to prepare a National Implement Plan for the implementation of the Minamata Convention on Mercury under the project "Capacity Strengthening for the Implementation of the Minamata Convention (2018-2022)", including the phase-out of mercury-containing medical thermometers and sphygmomanometers.

Considering the production of mercury-free thermometers, verification regulation of clinical electronic thermometers (JJG 1162-2019) was issued to facilitate the production and application of electronic thermometers. In 2017, the then Ministry of Environmental Protection issued the "National Catalogue of Environmental Protection Technology", which listed mercury-containing medical thermometers and sphygmomanometers as high-pollution and high-environmental-risk products.

In 2019, the National Development and Reform Commission issued the "Guiding Catalogue of Industrial Structure Adjustment (2019 version)," which encouraged R&D on and the use of mercury-free thermometers and sphygmomanometers and restricted the production of mercury-containing medical thermometers and sphygmomanometers. There are many other related strategies and plans being explored to promote the production and application of mercury-free thermometers and sphygmomanometers.

Finally, the National Medical Products Administration issued an announcement in 0ctober 2020 that the validity period of the licenses for all mercury-containing medical thermometers and sphygmomanometer manufacturers will not exceed December 31, 2025.

# Strategy

In light of the ban on the manufacture of mercury-containing medical thermometers and sphygmomanometers by 2026 in China, it is necessary to better understand the consumption patterns of mercury-free alternatives at all levels and potential markets; to demonstrate the application of mercury-free alternatives with representative samples ahead of upscaling; to improve technical capacities of production plants, transfer technologies and remove technical and financial barriers to conversion of production lines; and to soundly manage obsolete mercury-containing thermometers and sphygmomanometers, and to find ways to incentivize rapid uptake of mercury-free ones.

The project will close the gaps that still exist between the current regulatory system and the requirements of the Minamata Convention on Mercury on the phase-out of the production of mercury-containing medical thermometers and sphygmomanometers and link them with the end-user application of mercury-free medical devices. Therefore, cross ministerial cooperation (e.g., Environment, Health, and Industry, etc.) to jointly develop the necessary regulatory frameworks, action plans and guidelines, and identify appropriate private sector partners is required to phase out the production of mercury-containing medical thermometers and sphygmomanometers in enterprises and introduce mercury-free medical devices in medical facilities.

Under this project, the GEF incremental support will be critical to allow China to enhance the institutional capacities and technical capabilities of public and private stakeholders for phase-out of the production of mercury-containing medical thermometers and sphygmomanometers in enterprises and the application of mercury-free medical devices in medical facilities, by:

1. Reviewing and updating the current regulation and policies, with due consideration of the requirements of Minamata Conventions on Mercury;
2. Carrying out pilot demonstrative activities that will provide the evidence base for the scope of capacity building and technical assistance needs, areas of prioritization; and
3. Develop long term tools and financial schemes that take into consideration the associated costs of upscaling phase-out through China’s National Plan for the Implementation of the Minamata Convention (hereafter referred to as “the National Plan”) for which work has been initiated to begin its preparation.

The Foreign Environmental Cooperation Center (FECO) of the Ministry of Ecology and Environment (MEE) has scoped the potential co-finance to meet the 1 (GEF TF) to 7 (co-finance) ratio requested, resulting in the current indicative co-financing amount of USD 112 million, as listed in Section IX, of this project document by working with the relevant enterprises and medical institutions, capital and operational investment required to support the alternative scenario indicated in this project document, as well as local fund sources associated with poverty alleviation and demonstration activity medical institutions.

The co-finance will focus on the enterprise investment associated with: (i) the elimination and technology transformation of the production of mercury containing medical equipment; (ii) on promotion and application of non-mercury technologies in medical facilities; (iii) on environmental and human risk assessment and control measures (within pilot enterprises and medical institutions); (iv) on public awareness, and (v) capacity building activities.

**Proposed alternative scenario, with a brief description of expected outcomes and components of the project (Theory of Change – TOC)**

In carrying out an analysis of the project objectives, the negative aspects or “problems” identified in the problem analysis (see Figure 1) were reformulated into positive ones to reflect what is envisioned for the future.

This can be drawn up in an “objectives tree” (see Figure 2) for the Theory of Change of the project, such that the various levels of objectives and the ‘means-end’ relationships between them are clear, as are the different levels of objectives for the overall project strategy.

The objective of this project therefore becomes to “**set the enabling environment to accelerate uptake of mercury-free technology in production of medical thermometers and sphygmomanometers, and to lay the foundation for market acceptance and growth for mercury-free devices in the medical services sector, to meet the associated phase out deadlines under the Minamata Convention**”

Figure 2 Outcome/Objectives Analysis for the phase out of mercury-based medical devices

Incentivized enterprises converting production lines

Green finance infrastructure in place to give enterprises access to investment finance to convert production lines to non-mercury technologies

Acceptance and full utilization of non-mercury medical devices in China’smedical services

**medical**

Meeting January 1, 2021 ban on import/exports of mercury thermometers and sphygmomanometers, as well as special exemption production ban of January 1, 2026

**Achievement of compliance with Minamata Annex A, Article 4.1 phase out schedule**

Enterprises equipped to change over production lines according to legally mandated, national phase out planning guidelines

Production quality control standards in place to standardize performance of non-mercury devices

Full buy-in and commitment to support conversionto non-mercury devices

Green procurement standards and safe disposal guidelines for mercury devices in public medical services, are in place

Non-mercury medical devices part of standard procurement and use in medical services, and obsolete mercury devices removed through standardized safe disposal processes

Policy, regulatory tools, and associated action plans in place, to guide phase out of mercury medical devices under the Minamata Convention

Phased escalation of production line conversions to non-mercury technology in order to meet Minamata Convention deadlines

Subsidization of procurement of non-mercury medical devices in place until market growth lowers prices

Medical services staff empowered to use and maintain non- mercury devices, and to safely dispose of obsolete mercury devices

Cross Ministerial cooperation to jointly develop and implement the necessary regulatory frameworks, action plans and guidelines, in coordination with appropriate private sector partners, to phase out mercury devices (e.g., Environment, Health, Industry, etc.)

**Policy Related Barriers**

**Production Barriers**

**Medical Service Market Penetration Barriers**

**Technical Capacity and Knowledge Barriers**

**Finance related Barriers**

**Component 1. Integrated policy, regulatory framework, quality standards, fiscal tools, action plans and associated capacities, to support the phase out of mercury-containing medical thermometers and sphygmomanometers under the Minamata Convention**

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 production of mercury-containing medical thermometers and sphygmomanometers in enterprises and promote the introduction and use of mercury-free medical devices in medical facilities.

The component will develop and implement integrated approach consisting of policy and regulatory measures, quality standards, fiscal tools, 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 in expanding beyond an initial “siloed policy review and amendment exercise”, and providing opportunity for integration between different public sector entities and broader consultation amongst private and public partners.

A Cross-ministerial cooperation mechanism will be established 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.

Proposals on policy and regulatory frameworks on chemical management and on the use of mercury-free products will be developed to update regulatory measures and strengthen management capacity. These activities will be accompanied by capacity-building programmes geared to relevant Officers in charge of the monitoring, supervision, regulation and enforcement of the phase-out of mercury in the production of medical thermometers and sphygmomanometers.

A collaboration mechanism will also be established with the World Health Organization (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 demonstration phase-out of mercury, particularly in the medical facilities.

Finally, this component will also promote consultations 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 creative fiscal or revenue generating tools 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. Demonstration of technology transfer and investment for (i) supporting enterprises in phasing out the production of mercury-containing medical devices; (ii) the application of mercury-free devices in medical facilities, and (iii) enhanced knowledge base for the risk assessment and sound management of obsolete mercury devices, contaminated materials/wastes, and contaminated areas on premises**

Components 2 and 3 complement each other and will be implemented in a coordinated manner to help addressing the technical barriers identified in the above section.

Component 2 will focus on generating the evidence base for real time replication and provision of the necessary technology transfer and investment support to enable the conversion of the manufacturing from mercury-containing medical thermometers and sphygmomanometers to mercury-free alternatives. This will be achieved through demonstration activities at the selected production facilities:

1. Four (4) of the top 10 producers of mercury-containing thermometers, and
2. Two (2) producers of mercury-containing sphygmomanometers

The enterprises that are considered as potential demonstration candidates have been selected through open solicitation conducted during the PPG stage to participate in the demonstration activities. All enterprises that manufacture mercury-containing thermometers and sphygmomanometers in China were given opportunity to submit application and offers to the project. The evaluation and selection criteria is specified in the online open bidding announcement and also released to all manufacturing enterprises through the industry association at the same time. The selection process and criteria included:

*Enterprises interested in participating as a demonstration enterprise met the following minimum qualifications:*

(a) Qualification: Enterprise must be an independent legal entity with no record of serious violation of laws and shall be mainly engaged in the research and development, production and sales of mercury-containing thermometers or sphygmomanometers;

(b) Environmental management: Mercury-containing waste gas and water shall be discharged after meeting relevant standards. Mercury-containing wastes shall be managed according to relevant requirements on hazardous waste management;

(c) Other requirement: Entity shall agree to cooperate in the testing, research and publicity activities during the duration of the project.

*Demonstration enterprises selection process:*

(a) Interested enterprises submitted their letter of intents and application materials according to the project requirements, bearing an official seal and accompanied by a certificate issued to prove that the information contained therein is true and reliable;

(b) Application evidence-materials included: (i) Business license (copy); (ii) Statement on no record of serious violation of laws; (iii) Registration certificates of mercury-containing medical devices (copy): the registration certificate shall remain valid for at least six months; otherwise, a certificate shall be provided for the extension of registration certificate; (iv) Production permit of medical devices (copy); (v) Business permit of medical devices (copy); (vi) Permit of pollutant emission (original or copy or record table, if any); (vii) Documents for project establishment, the EIA report and official replies or other relevant documents (including the production line, production capacity and other information pages); (viii) A letter of recommendation from the environmental protection department at provincial or municipality level (stating the basic information of enterprise, the supervisory monitoring report in 2019 and notes thereto, reason of recommendation, etc.).

(c) Based on application materials received, the Implementing Partner and an expert panel conducted formal examination of the submission and determined the candidates for participating in the demonstration activities.

*Enterprises selection Criteria:*

The expert panel scored the applications on enterprise situation, phase-out objectives, anticipated demonstration output, technical route and fund use, and miscellaneous aspects to base their decision on the selection. The main criteria are:

(a) Favorable enterprise situation, including the enterprises’ size, management measures of the enterprise for the prevention and control of mercury pollution, and its willingness for the provision of co-finance, including adherence to national laws on Labor Practices.

(b) Scientific and reasonable plan for phase-out objectives, including the discontinuation Plan on producing mercury-containing medical devices, reducing mercury consumption and mercury-containing products sales plan, mercury-free alternatives R&D, production and promotion plan and so forth.

(c) Responsiveness between the anticipated demonstration output and the result framework of the project document, including the result of production phase-out and transformation, environmentally sound management of mercury, organization of or participation in training activities, promotion of gender equality and summary of demonstration experience and achievements.

(d) Scientific and reasonable technical route and fund use, including feasible technical route design, rational staffing, disciplines, and division of labor of the team and rational allocation of the project budget.

(e) Miscellaneous aspects which enabling the phase-out activities, including having work plan to conduct publicity and helping other enterprises to transform, and recommendation letter issued by local environmental protection department.

Most of the demonstration enterprises were established in the years of 1960s and 1970s, having a well-established structure and production lines that required costly conversion to mercury-free production. The four (4) potential demonstration enterprises are located in industrial parks, with the other two located some 100-500 meters away from mixed urban (including industrial) and cultivated land. The mercury consumption of the four selected mercury-containing medical thermometer producers all exceeded 30 metric tons in 2019, representing over 60% of the sector consumption, their production capacity represents 60% of the sector output, and all have certain technical reserves for the production of mercury-free alternatives.

Manufacturing enterprises of mercury-containing sphygmomanometer are located in Jiangsu Province and Shanghai with most of them located in industrial park while the others are close to residential areas or farmlands, with residents or farmland located about 50 meters from the factory site. The two (2) selected mercury-containing sphygmomanometers producers include the top mercury consumption enterprise and the other a small consuming enterprise and their combined production exceeded more than 70% of the sector output and 70% of the sector mercury consumption. These selected demonstration producers will carry out technology transfer according to their own situation.

Manufacturing Level Demonstration Projects will:

1. Encourage demonstration enterprises of mercury-containing medical devices to gradually reduce mercury consumption in mercury devices production and sales and shut down the production lines by December 31, 2025; lead the whole industry in phasing out the use of mercury and to ensure achievement of the goal of the Minamata Convention. In implementing the demonstration activities, enterprises plan to phase out mercury-containing equipments, and plan to improve mercury-free producing capacity by changing the original mercury-containing production lines into mercury-free ones or installing new manufacturing equipment;
2. Promote R&D, production and marketing of mercury-free alternatives;
3. Adhere to environmentally sound management of mercury; organize or participate in themed training; promote gender equality, etc.; and
4. Share achievements and experiences of the demonstration with other enterprises.

Through the demonstration interventions, an incentive mechanism will be established and an assessment to determine the cost and various mercury-free technology options will be completed for each demonstration manufacturing enterprise. In addition, if there are issues of on-premises contamination and significant stores of mercury (containing) waste to be disposed of, and this is critical considering that some enterprises are located in industrial-mixed areas densely populated or close the farmland areas, in which any potential contamination from mercury can result in considerable impacts to environmental and human health.

In this regard, the demonstrations will provide a unique opportunity to pilot mitigation mechanisms and safe handling activities (at least one facility will be selected depending on the findings for prioritization). Ultimately, this will provide critical information for upscale through China’s National Plan.

Main activities of the mercury environmentally sound management (ESM) demonstration in the thermometer and sphygmomanometer producers will include: (i): establish mercury phase-out and ESM plan; (ii) create inventory of mercury contamination sites and facilities; (iii) collection and storage of mercury concerned, including providing guidance on mercury waste cleanup and handling linked to risk assessment (RA) procedures development for mercury contaminated sites and risk management (RM) strategies guidance for mercury contaminated sites; and (iii) development of sustainable ESM Strategies for mercury and mercury-contained/contaminated wastes and recommendations for contaminated sites.

Consumer Level Demonstration Projects

This project component will also promote the demonstration of the uptake of mercury-free alternatives in at least 6 medical institutions in one (1) to two (2) different demonstration locations covering different size categories (tertiary, secondary- and primary-grade) and types. The project pays particular attention to those facilities located in remote and/or poor areas in order to ensure that there is appropriate representation of facilities to mirror China’s overall profile of medical facilities. This selection strategy is critical, so that the evidence gathered from piloting is relevant, and can be captured and up-scaled post project in the overarching National Plan.

The documented experience from all demonstration medical institutions will be shared and promoted to more medical institutions locally and nationally to promote wider use of mercury-free alternatives and ensure environmental sound management of mercury wastes. Besides, the research and study on promoting mercury-free alternatives will feed the Components 1 and 4 in order to help to develop a more environmentally sound strategy for the health care sector.

The correct use of mercury-free alternatives, including their routine internal and external calibration, required capacity building for the accurate calibration of mercury-free alternatives, and activities like collection and storage of mercury concerned, mercury waste cleanup and handling, mercury waste transport and disposal and risk analysis (RA) of mercury contaminated areas and sustainable ESM of mercury waste and contaminated sites, will be supported by the project.

The demonstration interventions also aim to train medical staff to correctly use mercury-free thermometers and sphygmomanometers and soundly manage obsolete mercury-containing medical thermometers and sphygmomanometers. Demonstration outcomes will be captured and shared in awareness and training materials and guidance documents for long term, post-GEF-funded project, and the replication process.

**Component 3. Development of long-term guidance and tools for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers, and mercury-contaminated areas**

This component will focus on the identification and prioritization process for long-term sound management of mercury-contaminated sites and obsolete mercury-containing medical thermometers and sphygmomanometers. An assessment regarding the status of potential mercury-contaminated sites in pilot enterprises (where the production of mercury-containing medical thermometers and sphygmomanometers has taken place) will be undertaken.

The risks posed due to mercury contamination in these sites will be assessed and a strategy for their risk management will be developed. As part of this project component, an assessment of risk to employees and surrounding communities working on or living close to these sites will also be conducted; a targeted Environmental and Social Management Framework (ESMF) for the downstream implementation of the industries´ co-financed activities will be conducted (in response to Risks 5 and 8, – as per detailed in Annex 5 - SESP). This overall risk management strategy and associated guidance will serve as guidance for replication in the National Plan that can effectively link to the national strategies of disposal of mercury waste and interim storage of mercury.

As part of the private sector risk assessment that will be undertaken, the project will ensure that the interim storage facilities at the selected enterprises (Activity 2.1.1 and Activity 3.3.1) referring to 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 (as detailed in Annex 5 – SESP).

Finally, this component will also undertake a similar risk assessment in the course of development of a risk management plan related to the accumulated mercury from accidental broken mercury-containing medical thermometers and sphygmomanometers at the manufacturing facilities, and the safe handling and disposal of obsolete mercury-containing medical thermometers and sphygmomanometers in medical facilities.

**Component 4. Knowledge Sharing & Management, Monitoring and Evaluation**

Component 4 will address the educational and awareness raising barriers, it will promote experience gathering, sharing, technical exchanges, information dissemination and awareness raising among different stakeholders including the government, public and private sectors, medical personnel, civil society groups and the general public. The component will facilitate the complete phase out of production of mercury-containing medical thermometers and sphygmomanometers by 31 December 2025, and the successful promotion of wider application of mercury-free alternatives at local and national medical facilities. This project component will also ensure the smooth implementation of project activities through standard, internal periodical communication, evaluation and external review.

A Communication Strategy will be created delivering differentiated approaches for stakeholders (manufacturing enterprises, medical facilities, mercury mining enterprises, government and international agencies, etc.) and supporting the knowledge sharing and training activities in a geared and effective manner.

Knowledge management tools will be developed and deployed to accelerate the nationwide transformation to mercury-free production of medical devices, promoting wide application of mercury-free technologies as a result of the national replication programme designed and piloted under Components 1, 2 and 3. These tools will support the dissemination of experiences, lessons learned and best practices, to accelerate the rollout of real-time project results and scale up.

This component will also be responsible to deploy the Gender Action Plan developed, as referenced in Annex 9, to raise awareness and empower women’s roles in sound management activitiesand promote gender sensitive approaches for the project´s KM activities that can incorporate gender equality principles and actions into environmentally sound management of mercury waste activities.

Finally, the Monitoring and Evaluation Tools will be used as required to guarantee the best performance in project execution and monitoring, as well as to promote the adaptive management during the project lifecycle.

**Alignment with GEF focal area**

This project is aligned with the GEF Chemicals and Waste focal area, Program 1, “Industrial Chemicals Program,” with a focus on “reducing the use and releases of mercury, as mandated under the Minamata Convention on Mercury, through activities that will reduce the use of mercury for the production of medical devices and enhance the management of related contaminated wastes and sites”.

This project will demonstrate technical transfer to support the phase-out of the production of mercury-containing medical thermometers and sphygmomanometers and support the introduction and use of mercury-free medical thermometers and sphygmomanometers in medical facilities. The project is expected to reduce the use of mercury by at least 75 metric tons of Hg throughout its duration.

**Incremental cost reasoning**

The project is designed to respond to the requirements of the Minamata Convention on Mercury and reduce the risks of mercury on human health and the environment by demonstrating the phase-out of mercury in the manufacturing of medical thermometers and sphygmomanometers. The project also aims to ensure the uptake of mercury-free alternatives in demonstration medical facilities. The project will complement and enhance implementation of China’s National Plan to implement the Minamata Convention.

Specifically, its incrementality lies in its purpose to

create the enabling environment (i.e. policy, legal, capacity, financial);

establish technical guidance (including the risk mitigation strategies for safe handling/disposal);

form the evidence base (i.e. characterizing the production and medical sectors in terms of priorities for action; demonstrating the investment and capacity building activities); and critically,

support the costs associated with this for representative enterprises and facilities

In turn, the outputs generated by the Project will be used to inform national sectoral planning, and upscale action nationwide in support of China’s National Plan for the Implementation of the Minamata Convention.

Therefore, this project represents a critical incremental investment for China to this end.

It is important to note that the Project has identified a number of enterprises currently manufacturing mercury-containing medical thermometers and sphygmomanometers that are private sector companies with low profitability. Furthermore, there are also technical, regulatory, and knowledge-related constraints to be tackled.

Thus, GEF funding will provide critical assistance in providing for:

the establishing and implementing proposals on policies, regulations, standards and tools to promote the removal of barriers preventing the transfer to mercury-free production processes and medical devices (Outputs 1.1, 1.2 below);

the development/improvement of organizational and institutional capacity at the level of municipalities, public administration and the private sector (Outputs 1.1, 1.2, 1.3);

the mobilization of all relevant resources (e.g. capital, land, labor and technology) to phase out mercury with mercury-free alternatives (Outputs 2.1, 2.2);

the introduction of innovative practices and development of tools and technologies for the manufacture of mercury-free alternatives (Outputs 2.1, 2.2);

the development of risk assessment and management strategies for both enterprises and medical facilities to deal with mercury waste. (Outputs 3.1, 3.2).

Similarly, due to the much higher price of the mercury-free alternatives, lack of medical staff trained in the proper use and calibration of such devices, and overall lack of confidence in accuracy and reliability, medical facilities are usually reluctant to adopt mercury-free alternatives.

In addition, understanding the parameters and related risks associated with the safe management of the obsolete mercury-containing medical devices in medical facilities is lacking. The GEF funding will therefore be critical for:

the establishing and implementing proposals on policies, regulations, standards and tools to promote the appropriate application of mercury-free alternatives in medical services (Outputs 1.1, 1.2);

the adaption to mercury-free alternatives through choosing the most appropriate mercury-free alternatives in demonstrative medical facilities (Outputs2.2);

the risk assessment and building of capacity in sound management of mercury in obsolete mercury-containing medical devices at pilot demonstration medical facilities (Outputs 3.1, 3.2, 3.3).

GEF funding will also support the development and operation of a Communications Strategy to enable cooperation on technology exchange between international and Chinese experts and institutions, as well as information sharing and awareness raising system among stakeholders (Outputs 4.1, 4.2).

Finally, GEF funding will be critical to leverage domestic co-finance. It will also play a significant role as catalyst in promoting the mobilization of social and private sector resources. The Project has already launched efforts to catalyze commitment from project partners, such that so far, indicative co-finance of USD 112 million has been identified from enterprises and medical institutions that will focus heavily on (i) the elimination and technology transformation of the production of mercury containing medical equipment; (ii) on promotion and application of non-mercury technologies in medical facilities; (iii) on environmental and human risk assessment and control measures (within pilot enterprises and medical institutions); (iv) on public awareness, and (v) capacity building activities. The detailed co-finance and contributors are indicated in Sections IX and X.

The project will use GEF funding efficiently and smartly, incorporating creative fiscal tools, to generate post-project, long term access to finance and other public revenue streams (if appropriate) for long term support of the production and uptake of non-mercury devices. The Government of China will also strategically leverage stakeholder resources to not only ensure adequate levels of co-financing, but also to raise the levels of cash contribution from private sector and local government. The Government of China commits highly to support the implementation of Minamata Convention on Mercury through its National Plan, and so the incremental GEF financing is considered very valuable.

This project builds on the knowledge and experience of past projects and initiatives such as:

1. The GEF funded project "China Minamata Convention Initial Assessment (MIA) project (2015-2018)." Based on the situation in 2014, this project collected the available data of production and use of mercury-containing medical thermometers and sphygmomanometers, estimated the whole national production in China. Initially provided data reference for China's implementation work. Indeed, this project was identified as a priority during the MIA project, as the production of thermometers and sphygmomanometers is one of the major industries using mercury and the production and utilization of these medical instrument will bring mercury pollution and health risk;
2. The GEF funded project "Capacity Strengthening for the Implementation of the Minamata Convention (2018-2022)". The on-going capacity strengthening project will partly help in supporting the identification of technologies for producing mercury-free alternatives, which will facilitate the demonstration activities contained in this project. The gaps including policies, technologies and finance for the successful replacement of mercury-added products and Convention implementation will be further identified and acted on.

FECO/MEE was the Execution Agency (Implementing Partner, as of UNDP PPM) for both of these projects which assure total integration and experiences learned and shared. The two ongoing GEF projects focus on establishing a comprehensive overview of the mercury issues in China. On the other hand, this mercury-containing medical devices project will specifically address the mercury issues in mercury-added products, i.e. mercury-containing medical thermometers and sphygmomanometers.

Co-financing that will be provided by the Implementing Agency (IA) UNDP, the Government of China, private sector entities, medical facilities and others will focus on: (i) the establishment of infrastructure for manufacturing mercury-free alternatives in demonstration plants (Outcome 2.1); (ii) support capacity strengthening to enable the introduction and correct use and calibration of mercury-free alternatives in demonstration medical facilities (Outcome 2.2); and (iii) support technology exchange, information gathering, sharing and awareness raising among stakeholders (Outcome 4.1).

# Results and Partnerships

**Project Objective: Establishing the enabling environment to accelerate the transfer to the production of mercury-free medical devices, and to lay the foundation for market acceptance and growth for mercury-free devices in medical facilities, in order to meet associated phase-out deadlines under the Minamata Convention on Mercury**

**Objective Indicators:**

* Through Demonstration at 4 selected mercury-containing thermometers manufacturers and 2 mercury-containing sphygmomanometers manufacturers, completely stop their production lines, reducing mercury consumption, production and sales to zero, eliminating the consumption of 75 metric tons of mercury on completion of the demonstration projects by 31 December 2025;
* Facilitated by technology transformation and national replication programme, completely phase out by 31 December 2025 the consumption of mercury by the 18 enterprises manufacturing mercury-containing thermometers and mercury consumed by the 5 enterprises manufacturing mercury-containing sphygmomanometers;
* Mercury-free medical devices promoted in at least 6 demonstration medical facilities, staff trained to use and maintain mercury-free medical devices;
* Environmental sound management of mercury on interim mercury storage, mercury-containing waste and mercury contaminated areas at the demonstration production facilities and medical facilities implemented

**Component 1. Integrated policy, regulatory framework, quality standards, fiscal tools, action plans and associated capacities were achieved, to support the phase out of mercury-containing medical thermometers and sphygmomanometers under the Minamata Convention**

**Expected Outcome 1.1:**

Cross ministerial cooperation established to jointly develop and implement the necessary policy, regulations, tools, action plans and guidelines, in coordination with appropriate private sector partners, to phase out the production and consumption of mercury-containing medical devices, to reduce the use of primary mercury in medical devices, to manage waste of obsolete devices, and to promote the uptake of mercury-free medical devices.

**Expected outputs:**

**Output 1.1:** Inter-ministerial Committee established (e.g., Environment, Health, Industry, etc.) to support the execution of China’s National Implement Plan for the Implementation of the Minamata Convention and take actions to address the identified policy and enforcement capacity gaps between national regulatory policies and the Convention’s legal requirements for Parties, and to look at modalities for linking mercury consumption reductions from this sector into the primary mining plans within the National Minamata Implementation Plan, to avoid redirection of phased out consumption to other sectors.

*Activity 1.1.1:*

* Coordinate with relevant ministries to establish the Inter-ministerial Committee.
* Develop an implementation action plan to formulate proposals and training plan to improve the capacity of national policy and enforcement effectiveness, including management capacity of inspection officers etc., in meeting compliance of Minamata Convention obligations.
* Examine linkage of mercury consumption in the production of medical devices and overall national mercury consumption as it relates to national mining production, and establish monitoring measure to ensure sustainable reduction of mercury consumption achieved through phase out in mercury-containing medical devices.

**Output 1.2:** Proposal on policy and regulatory frameworks on chemical management, supervision and law enforcement, standards for inspection and maintenance of mercury-free products, and rules on the use of mercury-free products are developed or updated and capacity-building programmes updated or developed to support the monitoring, supervision, regulation and enforcement of the phase-out of mercury in the production of medical thermometers and sphygmomanometers, by collaborating with World Health Organization (WHO) to ensure incorporation of international best practice and experience.

*Activity 1.2.1:*Develop proposals to update relevant policies, regulations, standards and monitoring and management systems that will support and facilitate the smooth implementation of demonstration phase-out of mercury in the production of mercury-containing medical devices to enable China to fulfill the necessary requirements and ensure compliance of the Convention.

**Output 1.3:** Proposals on green procurement standards and action plans developed to promote the application of and grow the market for mercury-free medical thermometers and sphygmomanometers in medical facilities.

*Activity 1.3.1:* Consultations with relevant stakeholders to develop proposals on policy and regulatory frameworks, green procurement standards and action plan to facilitate promoting the wide application of mercury-free medical devices at medical facilities.

**Output 1.4:** Green Finance Framework developed and mercury-free devices procurement subsidization scheme created.

*Activity 1.4.1:* Interact with technical experts and relevant stakeholders to develop a Green Finance Framework to encourage green financing.

*Activity 1.4.2:* Support green procurement practices, develop guides and model specifications for acquisition of mercury-free medical thermometers and sphygmomanometers.

*Activity 1.4.3:* Provide information and other data to feed Components 2 and 4 related to capacity building and awareness activities geared towards awareness and capacity building at medical facilities.

**Component 2. Demonstration of technology transfer and investment for (i) supporting enterprises in phasing out the production of mercury-containing medical devices; (ii) the application of mercury-free devices in medical facilities, and (iii) enhanced knowledge base for the risk assessment and sound management of obsolete mercury devices, contaminated materials/wastes, and contaminated areas on premises completed**

**Expected outcome 2.1:**

Enterprises 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 75 metric tons of mercury.

**Output 2.1:** Production of mercury-free medical thermometers and sphygmomanometers achieved and sound management of obsolete mercury and stocks of mercury devices implemented in four (4) producers of mercury-containing medical thermometers and two (2) producers of mercury-containing sphygmomanometers

Based on the 2019 surveyed consumption of the six (6) candidate demonstration enterprises, upon signature of the execution-assistance contracts for the demonstration activities, it is expected that the quantity of the 2019 mercury consumption to be reduced at these demonstration enterprises may exceed the 75 metric tons.

*Activity 2.1.1:* Based on a risk assessment of the alternative technologies that will be used taking into consideration avoiding retrenchment, demonstration activities will accelerate phase-out and production transformation to mercury-free devices, undertake relevant trainings, document demonstration experience and achievements no later than 31 December 2025; and will develop a risk management plan to reduce related social and environmental risk.

*Activity 2.1.2:* Develop plan for environmentally sound management of mercury waste and guidance actions (risk assessment) for contaminated areas.

*Activity 2.1.3*: Organize personnel training to manage technical issues in order to continuously improve the quality and convenience of use of mercury-free thermometers and sphygmomanometers.

*Activity 2.1.4:* Develop preliminary plan for gender equality and mainstreaming activities in workplace and at management level.

**Output 2.2:** Use of mercury-free devices and the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers demonstrated in at least 6 medical facilities. 60% of baseline mercury-containing medical thermometers and sphygmomanometers replaced by mercury-free devices and staff capitated to use and maintain mercury-free devices and to soundly manage obsolete mercury devices and related wastes.

*Activity 2.2.1:* Carry-on consultations with the World Health Organization (WHO), international and domestic experts to facilitate knowledge in support of experience exchanges and domestic training activities.

*Activity 2.2.2:* Develop relevant trainings to staff and medical institutions and promote knowledge and experience sharing about the replacement of mercury-containing thermometers and sphygmomanometers.

*Activity 2.2.3:* Develop relevant researches/investigation to technically support introduction and adoption of mercury-free alternatives in medical facilities.

*Activity 2.2.4:* Organize and implement field activities to effectively substitute mercury-containing medical thermometers and sphygmomanometers for clinical purposes at selected medical institutions.

*Activity 2.2.5:* Develop safe disposal management plan/strategy for mercury-containing medical thermometers and sphygmomanometers.

**Component 3. Development of long-term guidance and tools for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers, and mercury-contaminated areas accomplished.**

**Expected outcome 3.1:**

Production enterprises and medical facilities implemented appropriate strategies, tools and guidance to assure long-term sound management of mercury-containing medical devices and mercury contaminated areas.

**Output** **3.1.** Guidance tools for inventory of mercury-contaminated sites at piloted enterprises producing mercury-containing medical thermometers and sphygmomanometers developed.

*Activity 3.1.1:* Develop guiding methodology andcarry on model investigation on how to identify and collect data to establish inventory on mercury-contaminated sites including conducting risk assessment analysis.

**Output** **3.2**. Risk management strategy, technical guidance and training materials developed for the sound management of residual mercury stocks and obsolete mercury-containing medical thermometers and sphygmomanometers at production enterprises/sites.

*Activity 3.2.1:* Identify, monitor and undertake actions that ensure sound and secure management of interim storage of mercury and mercury wastes in piloted facilities.

*Activity 3.2.2:* Develop risk management strategy, technical guidance and training materials to facilitate implementation and future replication and scale up of sound management of mercury waste, storage, and identification of contaminated sites at national level. The strategy will include measures to minimize impact on inhabitants, businesses located on land identified as contaminated.

**Output 3.3** Risk management strategy, technical guidance and training materials developed for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers in medical facilities.

*Activity 3.3.1:* As part of the private sector risk assessment, the project will ensure the safe handling and/or disposal of residual mercury and obsolete devices and implementation of sound management on disposal, storage of mercury-containing medical devices, and mercury waste at both the manufacturing enterprises and the medical facilities. A Spill Prevention and Management Plan will be developed and implemented for safe handling and safely cleanup of accidental mercury releases.

*Activity 3.3.2:* Develop risk management strategy, technical guidance and training materials to facilitate promotion of mercury-free medical device.

**Component 4. Knowledge Sharing & Management, Monitoring and Evaluation established and implemented**

**Expected outcome 4.1:**

Tools forKnowledge sharing developed, activities and experiences about policy, technical knowledge and lessons learned for the project shared. Disaggregated information on stakeholder’s activities and experiences under the project gathered and fed into the Monitoring and Evaluation processes of the Project.

**Output 4.1**. Project Communication Strategy created and effective KM and M&E support delivered in differentiated approaches for stakeholders (manufacturing enterprises, medical facilities, mercury mining enterprises, government and international agencies, etc.)

*Activity 4.1.1.* Document the project´s activities and the outputs achieved in close monitoring Components 1, 2 and 3 and share knowledge and achievements with relevant stakeholders.

*Activity 4.1.2.* Support the replication of achievements by creating knowledge management tools that can accelerate the nationwide transformation to mercury-free production of medical devices, promoting wide application of mercury-free technologies.

*Activity 4.1.3.* Provide KM tools that can be incorporated in environmentally sound management strategies of obsolete medical devices, mercury waste and contaminated sites and support the alignment of the national replication plan to be developed with National Implement Plan.

Activity 4.1.4. Carry on public awareness and general education activities to facilitate buy-in/phase-in of mercury-free medical devices.

**Output 4.2.** Awareness raised manufacturers, medical facilities and public on sound management of chemicals; knowledge gathered and shared, as well as learning tools created and utilized periodically during the project lifecycle.

*Activity 4.2.1:* Carry outdisaggregated surveys designed to measure impact before/during/after training or demonstration activities.

*Activity 4.2.2.* Regularly compile or update relevant trainings and awareness materials such as guidelines or textbooks for the use of mercury-free alternatives; and carry on awareness events for the general public *et al.*

*Activity 4.2.3.* Disseminate experiences, lessons learned and best practices, to accelerate production transformation, wide application of mercury-free medical devices; and

*Activity 4.2.4.* Gender Action Plan developed, as referenced in Annex 9, to raise awareness and empower women’s roles in sound management activities *and* promote gender sensitive approaches for the project´s KM activities that can incorporate gender equality principles and actions into environmentally sound management of mercury waste activities.

**Output 4.3:** Monitoring and Evaluation Tools (PIR, Mid Term and Terminal Evaluations as well as Quarterly Performance Reports and Project Board Reports, budget revisions and financial control and project management tools) delivered as required and adaptive management actions implemented during the project lifecycle.

*Activity 4.3.1:* Preparequarterly and annual reports; support timely PIRs time; carry on the monitoring and supervision efficiently and ensure smooth and timely execution of project activities. Support the timely conduction of MTR and TE and continuously assess the project execution performance to incorporate adaptive management practices and lessons learned into daily execution.

The above activities will take measures as referenced in the Annex 5 (SESP) to meet the SES requirements.

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, which will be the GEF Implementing Agency (IA) responsible for the oversight of the project;
* Ministry of Ecology and Environment (MEE), as the administrative authority on ecological and environmental protection, is designated by the State Council as the core agency for coordination of all ecological and environmental protection work including mercury related activates in China. As the focal point for the implementation of the Minamata Convention in China, MEE is the National Executing Agency (Implementing Partner) for this project;
* The National Steering Group (NSG) is an Inter-ministerial Steering Group and will comprise of MEE and other ministries like the National Medical Products Administration NMPA), the National Health Commission (NHC) 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 NSG 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 National Project Team will be established and based in Foreign Environmental Cooperation Center (FECO, formerly the Foreign Economic Cooperation Office) of MEE.
* 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 thermometers and sphygmomanometers, risk assessment and management of mercury-contaminated sites to minimize exposure risks to population groups. The project also seeks public participation by consulting those potentially affected by the production, use and management of mercury-containing medical thermometers and sphygmomanometers, e.g. residents living close to mercury-using industries and employees of such industries.
* Mercury mining enterprises. Strengthening the supervision on upstream mercury mining enterprises involved in this project is one of the measures to fulfill the convention and reduce the use of mercury.

During the project’s preparation, a series of consultations, interviews, telephone review and site visits were undertaken with all types of different stakeholders including the National Health Commission, local environmental management departments, medical devices manufacturers, medical institutions, university and scientific research institutions. 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.

Risks*:*

During PPG stage, through investigation and survey activities, preparation and design of the Stakeholder Engagement Plan and the Gender Analysis and Gender Action Plan, and more particularly, the conducting of the UNDP Social and Environmental Screening Procedures (SESP), the following risks that may threaten the achievement of project results have been identified. In assessing these risks, proper mitigation measures have been developed to address the risks during project implementation. Activities required for the mitigation measures have been included in the activities of the various project components, with corresponding budget allocated for such activities as appeared in Section X, Total Budget and Work Plan.

|  |  |  |
| --- | --- | --- |
| **Risks** | **Impact, Likelihood, and Level** | **Mitigation measures** |
| 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 | I=2  L=1  Low | Through Component 1, Activity 1.1.1, Activity 1.2.1 will 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. Although this risk is LOW, the project will undertake these activities as incremental support resulting from the improved Regulatory and Institutional Frameworks. |
| Small or medium sized manufacturers and health care facilities are not involved in decision-making regarding development of policy and regulatory frameworks and green procurement standards and do not have equal access to financing through the Green Finance Framework | I=3  L=3  Moderate | Stakeholder engagement will be undertaken to ensure fair representation of small and medium sized manufacturers of mercury medical devices who may otherwise be marginalized from participating in any financing schemes and be at a disadvantage once the final phase out of mercury device production for domestic markets commences at the end of 2025 (Activities 1.3 and 1.4). A Stakeholder Engagement Plan (SEP) has been prepared (ProDoc Annex 5) to incorporating 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 quality-controlled conversion of production lines. It will also create a procurement subsidization scheme 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. |
| Potential risk to enterprise viability and workers’ employment, particularly women, in the course of the transition to production of non-mercury devices, in particular. | I=3  L=4  Moderate | The project is designed to help with the transition to non-mercury medical devices, since there will be mandatory end of production of mercury devices for export by the end of 2020 and complete shut- down of production for domestic markets by the end of 2025. The project is therefore inherently addressing the risk of loss of income for businesses from mandatory shut down of mercury device manufacture under Minamata Convention compliance implementation, by offering capacity for production of non-mercury equipment, and preserving livelihoods. Nevertheless, stakeholder engagement throughout project implementation will ensure that enterprises that may be affected by the project all benefit from this support through capacity building and awareness raising on green financing available (Activities 1.3.1 and 1.4.1). A Stakeholder Engagement Plan has been prepared for that purpose.  A risk assessment will be undertaken for the alternative technology (Activity 2.1.1) to be used taking into consideration avoiding retrenchment. The industry will consult with trade unions or other workplace representatives over the proposed redundancies on measures to avoid or reduce redundancies, the method of selection and mitigating the effects, integrating outcomes into the final restructuring plan. This includes potentially training qualified existing staff on other roles or skills that may be needed at the industry. Where no viable alternatives are identified, a Restructuring Plan will be developed to reduce and mitigate adverse impacts of retrenchment on workers. At a minimum, the Restructuring Plan will include the following:  Ensuring that any collective dismissals are carried out in accordance with the provisions of national law and applicable collective agreements.   * Ensuring that the criteria for selection for redundancy are objective, fair and transparent and aim to be gender-neutral; and implement a procedure which provides individuals with the right to challenge their selection. * Ensuring that all outstanding back pay, social security benefits and pension contributions and benefits are paid to those affected by retrenchment in a timely manner. * In the case of large-scale redundancies, provide the UNDP with a copy of the restructuring plan in advance of any dismissals. |
| 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 | I=3  L=2  Moderate | The Gender Action Plan has addressed potential risks and included measures to mainstream gender in all project components, with specific focus on encouraging women representation in the following:   * Inter-ministerial committee for National Implementation Plan * Development of policy and regulatory frameworks, quality control standards, monitoring and management systems, and capacity-building programs * Capacity building of medical staff to use and maintain mercury-free devices, and to soundly manage obsolete mercury devices and related wastes * Cooperation with WHO to share knowledge about the replacement of mercury thermometers and sphygmomanometers in health care   Training on sound management of residual mercury stocks and obsolete mercury containing devices, and the remediation of contaminated sites on production sites and in medical facilities |
| Risk of release and worker/community exposure during decommissioning, transport and storage of waste mercury-related equipment, devices and elemental mercury in the course of the project | I=4  L=2  Moderate | As part of the private sector risk assessment that will be undertaken, the project will ensure that the interim storage facilities at the selected enterprises (Activity 2.1.1 and Activity 3.3.1) are referring to the Minamata Convention’s Guidelines [on the environmentally sound interim storage of mercury](http://www.mercuryconvention.org/Portals/11/documents/forms-guidance/English/Guidelines_Environmentally-sound-interim-storage_Nov2018.pdf) 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 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.   Regarding the contaminated sites, an Environmental Risk Assessment will be undertaken referring to the [UNEP/Minamata Convention Guidelines on the Management of Contaminated Sites](http://www.mercuryconvention.org/Portals/11/documents/forms-guidance/English/Guidance_Contaminated_Sites_EN.pdf) which will require the identification and characterization of the scope (e.g., extent of contamination, proximity to human populations, depth to groundwater, proximity to surface water or sensitive habitats), analysis of the hazard level and toxicity, analysis of exposure and analysis of risks to determine the level of management and remediation possible. |
| Risk of flooding of mercury device interim storage facilities | I=3  L=2  Moderate | As mentioned earlier, the project, through the environmental audit of the interim storage facilities, will take into consideration flood risks when locating and designing storage facilities to minimize the risk of inundation. |
| Increased GHG emissions from alternative processes to eliminate the use of Mercury | I=3  L=3  Moderate | When selecting the process for the transition of industries (Activity 2.1.1), the level of GHG emissions of the considered alternatives will be one of the criteria to be evaluated for best environmental practice and SES requirements will be followed where applicable. |
| Resettlement or economic displacement or damage to agricultural lands indirectly resulting from the project’s identification of contaminated sites that require remediation in pilot sites through co-financed activities. | I=4  L=2  Moderate | An appropriately scoped ESMF will be developed to manage this risk and all E/S risks associated with these specific co-financed activities. The risk management strategy that will be developed as part of Activity 3.2.2 and will be part of the cooperation agreement / contracts to be signed with each demonstration company per site.  The management strategy carries the appropriate Environmental Impact Assessment (EIA; required under national law for this co-financing activity) and will address all relevant SES requirements for the land identified as contaminated in Activity 3.1.1. This will be further described in the forthcoming ESMF, including the extent to which consistency with the SES is necessary under the policy for these co-financed activities that fall outside the project’s framework.  These will include, amongst other measures, consultations with affected persons in line with the Stakeholder Engagement Plan |
| Working conditions that do not meet national labor laws and international commitments and exposure to health and safety risk within the demonstration enterprises and hazardous waste disposal enterprises | I=4  L=2  Moderate | Prior to engaging any enterprise, in particular the demonstration enterprises that manufacture medical thermometers (Activity 2.1.1) and sphygmomanometers, a private sector risk assessment will be conducted. This will be done through a visit to the facility and ensuring that occupational health and safety measures are applied (through an Occupational Risk Assessment) and that the interim storage facilities where mercury-containing devices will be stored, prior to disposal, are in compliance with Minamata guidelines and that the necessary “Safety Certification” has been obtained from local authorities. If not already available at the enterprises, an Occupational Health and Safety Plan that determines the measures to be adopted (such as ventilation and wearing personal protective equipment) will be prepared and implemented.  In addition, the demonstration enterprises will confirm that they have ensured the hazardous waste disposal enterprises they engaged/will engage are duly registered and authorized to conduct such business. |
| Health and safety risk to workers during refurbishment of demonstration enterprises | I=3  L=2  Moderate | As noted above, an appropriately scoped ESMF will be developed to manage this risk and all E/S risks associated with these specific co-financed activities.  The contractor engaged in the refurbishment activities will be required to submit and implement a worker health and safety plan in line with Local Regulations as well referring to International Standards and Guidelines of the Minamata Convention (for BAT/BEP). The project will approve this plan and ensure that it is being implemented. These risk management actions will be conducted in line with UNDP´s SES. |
| The COVID-19 Pandemic may inhibit the smooth implementation of this project, especially the sharing of the foreign experiences | I=2  L=2  Low | Government of China at different levels has taken rigorous measures to prevent COVID-19. Besides, since temperature check are frequently performed, the conveniences of mercury-free thermometers are more preferred compared to mercury-containing medical thermometer. This can also promote the implementation of this project.  As China has instituted strict measures and has been able to contain the epidemic during its peak spreading period. Together with increased population being vaccinated, domestic cases gradually zeroed out and the national economy has returned to the right track under the guidance of national health policies.  The project plans to carry out continuous monitoring and assessment of the impact of COVID-19 on the progress of project implementation, and undertake appropriate adaptive management.  Project management and implementation supervision can be undertaken through various means such as online and telephone interactions, international experiences may be shared through web seminars. |

Stakeholder engagement and south-south cooperation:

Stakeholders will be actively engaged in the whole project, including i) before the project implementation; ii) engagement in project implementation; iii) participation in project monitoring Mid-term Review and Terminal Evaluation; iv) information request procedure for broad public; and v) grievance redress mechanism. Detailed information can be found in Stakeholder Engagement Plan, attached as Annex 8 of this Project Document.

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 this GEF-financed, UNDP-supported project.

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. Summary of key stakeholder analysis is presented in the following table:

Summary of Key Stakeholder Analysis

| **Key Stakeholders** | **Mandate Relevant to the project** | **Roles in the project** |
| --- | --- | --- |
| **National level administrative authorities** | | |
| Ministry of Finance (MoF) | MoF manages loans (grants) from multi- and bi-lateral development organizations and foreign governments. | GEF Operational Focal Point (OFP). Coordination and implementation of GEF projects in China. The MoF was briefed on project development and will endorse the final Project Document. |
| National Development and Reform Commission (NDRC) | NRRC is responsible for promotion of the strategy of sustainable development through its lead role in the five-year planning process.  NDRC makes proposal on strategy, plan, and relevant policies on using foreign funds. | NDRC will be a key partner in project mainstreaming efforts related to its lead role in the adjustment of industrial structure. |
| Ministry of Ecology and Environment (MEE) | Supervise and administer to ensure the attainment of national emission reduction targets；  Supervise efforts to prevent environment pollution; Formulate and implement regulations for pollution of the air, water, sea, soil, noise, light, odor, solid waste, chemicals, and vehicles;  Guide and coordinate educational campaigns over ecological environmental protection; Formulate and implement educational campaign outlines for ecological environmental protection; Promote societal and public participation in environmental protection efforts;  Responsible for implementing Minamata Convention in China | Advise and supervise the project development relate to management of mercury-polluted production sites and disposal of obsolete mercury-containing equipment. |
| Foreign Environmental Cooperation Centre (FECO), Ministry of Ecology and Environment, China | Provide key technical support to MEE for implementing Minamata Convention in China | As the executing agency of the project, FECO is responsible for the project design, advise and supervise the project implementation. |
| National Health Commission of PRC | Makes proposal on the demonstration and expansion medical facilities to apply mercury-free medical devices. | Join the project inter-Ministerial Committee to jointly develop and implement the necessary policy, regulations, action plans, tools and guidelines, relevant to mercury-free devices use and scientifically disposal of obsolete mercury-containing medical devices.  Advise the demonstration and expansion medical facilities to apply mercury-free medical devices, and dispose obsolete mercury-containing medical devices. |
| State Administration for Market Regulation | Responsible for comprehensive management of market. Develop regulations and policies on marketing. | Join the project inter-Ministerial Committee to jointly develop and implement the necessary policy, regulations, action plans, tools and guidelines, relevant to trade and phase out of mercury-free thermometer and sphygmomanometer production;  Advise the demonstration enterprises to implement the policies and regulations made by the Cross Ministerial Cooperation, and to trade and phase out mercury-containing medical devices production |
| 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. |
| 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 Commissions | 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 obsolete mercury-containing medical devices. |
| Provincial and/or local environmental management department | Carry out management of ecological and environmental protection and supervise the implementation | Supervise the demonstration enterprises and medical institutions to implement the policies and regulations made by the Cross Ministerial Cooperation, ecological and environmental protection, and the phase out of mercury-containing medical devices production |
| **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 China. |
| 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. |
| **Other stakeholders** | | |
| Mercury mining enterprises | Mining and trade mercury commercially | Reduce mining mercury to stop providing mercury to the demonstration mercury-containing medical devices enterprises. |
| 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. |
| 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. |
| CSOs | Have their focuses and special interests on mercury pollution. | 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 in the influential area of the mercury-polluted sites;  Living surrounding the demonstration medical facilities;  Communities of project publicity on application of mercury-free thermometers and sphygmomanometers | Participate in design of dealing with mercury-stock in the demonstration enterprises, and/or participate in design of disposal scheme of obsolete mercury-containing medical devices in the medical facilities.  Targets of the project publicity on application of mercury-free thermometers and sphygmomanometers. |
| 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.

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 scientifically use of mercury-free medical devices due to their time availability. The barriers and the measure are stated in the table below:

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 labor participation rate in China is lower than that of men, which means that women have relatively less opportunity to be employed. his 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.*

After the analysis, further actions were taken to identify and assess the project key stakeholders through consulting and discussing with UNDP, the Foreign Environmental Cooperation Center (FECO) of the Ministry of Ecology and Environment (MEE), 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 (PM) 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.

This project will also using the awareness raising/engagement and data gathering platform, e.g. UNDP platform for south-south cooperation to exchange international experience in import and export management. Project experiences, knowledge and lessons learned will be shared nationwide and through UNDP’s global networks.

Gender equality and Women’s Empowerment:

During the Project Preparation Phase, a Gender Analysis was conducted by a national gender expert. The objective of the gender analysis followed by the development of the Gender Mainstreaming Action Plan is to warrant that the gender perspective is mainstreamed throughout the project to endure that women and men have equitable access to the benefits and opportunities resulting from the project’s planned activities, and that gender inequalities are not perpetuated during implementation, monitoring and evaluation of the project’s components.

The plan was developed based upon consultations with the stakeholders, review of available documents, collection of secondary data, and analysis of the data collected.

*Gender gap and potential gendered impacts:* It is known from analysis on gender situation in China, in the mercury-containing medical thermometers and sphygmomanometers production enterprises, and in the surveyed medical facilities that gender disparities related to application of medical devices mainly exist in areas of knowledge, employment, and involvement in decision-making. Women continue to face challenges in equal access to training, employment, participation, and decision making.

Without adequate and appropriate consideration of the gender gaps and taking effective gender-responsive measures in design and implementation of the project, women would be continuously with limited participation, limited access to trainings and decision making, and other benefits and services, which are the three gender gaps most strategic and relevant to GEF-programming[6].

*Gender responsive theory of change:* The majority of medical technical staff especially clinic nurses are women. Women’s equal engagement in the project design and implementation such as participation in trainings, technical and/or skills will enhance women’s capacity and empower women technically. Women’s capacity of applying mercury-free medical devices is the foundation for achieving the project objective of applying mercury-free in medical facilities.

Women are key persons using thermometers and sphygmomanometers at home. The project publicity targets toward women will increase women’s awareness and skills in applying mercury-free thermometers and sphygmomanometers.

Equal involvement of women in the project consultation can greatly facilitate equal opportunities for women to express themselves, to voice their needs, priorities, ideas, and opinions, and equally integrate women’s concerns in the project design, which will lay a foundation for the project to develop and take culturally-appropriate and responsive measures to minimize or eliminate barriers to women’s engagement and to maximize women’s contribution to the project. Meanwhile, it also equally benefits women.

Engaging more women in the project-related decision making, such as in development of the project related policies, is not only women’s rights. More importance, integrating women’s perspective into the project decision-making will greatly make contribution toward project’s social, economic and environmental impacts, and make the project results sustainable.

*Barriers to women’s engagement:* Traditional habit that men workers engagement first is a barrier for women workers equal participation in trainings on production of mercury-free medical devices. Women’s available time is another barrier to engagement in demonstration production enterprises and in demonstration medical facilities. Women are often busy with their jobs and domestic chores, especially female clinicians and female clinic nurses who are very busy with their work. Using participatory approaches to identify proper training time and training location is crucial for women’s participation. Some actions are proposed in the Gender Mainstreaming Action Plan (GMAP) to overcome the barriers and facilitate women’s equal participation in the project.

Overall strategy of the plan is to ensure female residents’ equal participation in and benefit from the project as male ones. With support of gender focal points assigned by each of the Project Implementation Units, to collect detailed sex-disaggregated data on project beneficiaries and participants.

The following key strategies are proposed to promote gender equality during the project implementation:

* Establishment of gender-sensitive corporate environment for the project implementation
* Formulation of the project management committee and other relevant decision-making groups with enough consideration on increasing women’s involvement
* Integration of gender in the development of relevant policy frameworks
* Inclusion of all the displaced women’s reemployment policies and plans in the project phase-out guidelines
* Medical capacity development programs prioritize male and female clinic nurses in scientifically use of mercury-free thermometers and mercury-free sphygmomanometers
* The project publicity target toward women, who are key persons using thermometers at home
* Collection of sex-disaggregated data on the project implementation

Detailed information can be found in the Gender Analysis and Gender Mainstreaming Action Plan, included as Annex 9 of this Project Document.

Innovativeness, Sustainability and Potential for Scaling Up:

Innovativeness

This project has an innovative approach to demonstrate technology transfer to support conversion from technologies manufacturing mercury-containing medical thermometers and sphygmomanometers to mercury-free ones. The Minamata Convention requires to ban production of mercury-containing thermometers and sphygmomanometers. The project is devoted to phase-out the production of mercury-containing thermometers and sphygmomanometer to meet the obligation of the Convention, at the same time, to take actions to promote the application of non-mercury alternatives in medical institutions which is the main users of thermometers and sphygmomanometers to accelerate the production transformation and reduce the effect and harm of mercury on humans and environment. The R&D work in streamlining performance of Galinstan-in-glass devices and overall standardization of production and performance of the non-mercury technologies in China could also yield innovations. The technologies, knowledge sharing and experiences obtained through this project can be used as basis for national wide replication. In addition, coming up with solutions to optimize performance of alternatives (e.g. those associated with Galinstan-in-glass thermometers, and quality/performance standard setting for devices) is something that can be of global benefit to the manufacturing sector.

At the operational level, the promotion of R&D and technology transfer to mercury-free alternatives will assist privately owned production facilities to phase out mercury. At the managerial and economic development level, removal of market barriers to the adoption of new technologies will be encouraged through a novel incentive programmes. At the strategic level, national policy reform will promote green industrial and public heath development in China, including through use of specific regulations and legal frameworks to impose increasing financial costs for those non-compliance companies. The outline of the 14th Five-Year Plan for national economic and social development and the long-range objectives through the year 2035 (hereinafter referred to as the 14th Five-Year Plan) requires the construction of ecological civilization, green development and pollution prevention and control, and also emphasis to make all-round efforts to build a Healthy China, improve public health service projects and strengthen the community-level public health system, implement the public health responsibilities of medical institutions.

Sustainability

Innovation, sustainability and scale up are expected to also be achieved with the development of potential long-term green finance mechanisms to support conversion of all manufacturing facilities in China, safe handling of mercury waste and green procurement by medical facilities. Furthermore, China’s 14th Five-Year Plan emphasizes on expanding investment space to support the development on public health and ecological environmental protection.

Improving the regulatory framework and strengthening China’s capacity through relevant policy adjustments and increased stakeholder awareness, will ensure the phase-out of the production of mercury-containing medical thermometers and sphygmomanometers, and support China’s national implementation of the Minamata Convention on Mercury. This will ensure the sustainability of the project. The sustainability of technology interventions will be ensured through the demonstrative adaption to mercury-free technologies in enterprises, which can be easily replicated to other plants.

Potential for Scaling Up and Industries Conversion Up-take to comply with national deadlines

Real time National Republication will be imitated early in the second year (2023) of project implementation, as soon as some results of technology transformation, knowledge and implementation experience will be ready to be shared by the demonstration production enterprises and medical institutions with the other producing enterprises and medical facilities. Cost effective technologies will be promoted throughout this project to ensure engagement and awareness of the private sector stakeholders.

The National Replication will therefore have a three-year duration (2023-2025) to facilitate the achievement of complete phase-out by all producing enterprises by 31 December 2025, in addition to the fact that the National Medical Products Administration has issued Notice that production license of such mercury-containing medical devices shall not exceed 31 December 2025. Social sustainability will be ensured by strengthening information dissemination of project outcomes and awareness raising of the general public, private sectors and other stakeholders to minimize exposure to mercury.

The demonstration activities at the medical institutions will raise awareness on the correct application, proper calibration and maintenance of the mercury-free medical devices and through the replication activities, will raise awareness and promote wider application of the mercury-free to facilitate market uptake of mercury-free medical devices. With promotional activities targeting enterprises, medical facilities and the public on mercury hazard prevention, environmental and public health concerns, in particular, the promotion of medical personnel on the proper application and maintenance of mercury-free devices, this will be a significant effort to promote market uptake

In addition, by engaging with relevant stakeholders through its Component 1, the project will develop appropriate frameworks on green procurement standards and action plans to phase-in mercury-free medical devices at medical facilities, as well as to creative fiscal or revenue generating tools to support the long-term phase-out of mercury from the medical devices production sector, and to cover any initial cost increases related to procurement of non-mercury devices by key medical facilities. This actions will drive end-user/consumer demand to close the loop and speed up the mercury-free devices update by industries working from the demand side.

This project attaches high importance to technology innovation. The novel and updated technologies for mercury-free thermometers and sphygmomanometers can be scaled up and replicated in China and other countries and regions through replication activities. The experiences obtained through the demonstration of appropriate application of mercury-free thermometers and sphygmomanometers can also be replicated in China and other countries and regions.

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# Project Results Framework

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **This project will contribute to the following Sustainable Development Goal (s):** 3 good health and well-being; 5 gender equality; 8 decent work and economic growth; and 9 industry, innovation and infrastructure. | | | | |
| **This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD):** United Nations Sustainable Development Cooperation Framework (2021-2025) Outcome 3: People in China and the region benefit from a healthier and more resilient environment.  UNDP Country Programme Document for China (2021-2025), Pillar 2 (A healthier planet and resilient environment), Output 2.1: Adaptive policies developed at target level (subnational), financed and applied for nature-based systems to align with multilateral agreements and transboundary platforms. | | | | |
|  | **Objective and Outcome Indicators** | **Baseline****[[3]](#footnote-3)** | **Mid-term Target[[4]](#footnote-4)** | **End of Project Target** |
| **Project Objective:**  Establishing the enabling environment to accelerate the transfer to the production of mercury-free medical devices, and to lay the foundation for market acceptance and growth for mercury-free devices in medical facilities, in order to meet associated phase-out deadlines under the Minamata Convention on Mercury. | **Mandatory** Indicator 1: # direct project beneficiaries disaggregated by gender (individual people)[[5]](#footnote-5) | 0 direct project beneficiary | 100,000 beneficiaries (50,000 female, 50,000 male) | 300,000 beneficiaries (150,000 female, 150,000 male) |
| **Mandatory** GEF Core Indicators:  Core Indicator 9: Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products (thousand metric tons of toxic chemicals reduced)  **Indicator 2:**  Sub indicator 9.2: Reduction of 75 metric tons of mercury at demonstration enterprises to transform to production of mercury-free medical devices.  Sub-indicator 9.4: One country with legislation and policy implemented to control mercury and waste.  Sub-indicator 9.5: at least 1 non-mercury thermometer, and 1 non-mercury sphygmomanometer technology piloted. | In 2019, about 200 metric tons of mercury was consumed in 18 thermometer producers and 35 metric tons in 5 sphygmomanometer producers in China. | 4 demonstration thermometer producers and 2 sphygmomanometer producers completed equipment and plant modification to start transformation to mercury-free production, with reduction of 30 metric tons of mercury achieved.  3 workshops held for knowledge sharing and technology transformation.  Implementation action plan developed to address identified capacity gaps to enable China to enhance legislation and policy implemented to control mercury and waste.  Piloting of at least 1 non-mercury thermometer, and 1 non-mercury sphygmomanometer technology in good progress with knowledge and implementation experience shared with other manufacturers. | All 6 demonstration enterprises completely stop production of mercury-containing medical thermometers and sphygmomanometers and reduction of 75 metric tons of mercury achieved. Through national replication, production of mercury-containing medical devices will be completely stopped.  6 workshops held for knowledge sharing and technology transformation.  Proposals for the establishment or revision of legislation and policy to facilitate the control of chemicals i.e. mercury and waste.  At least 1 non-mercury thermometer and 1 non-mercury sphygmomanometer technology successfully piloted and implementation experience and knowledge shared with other manufacturers. |
| **Project component 1** | **Integrated policy, regulatory framework, quality standards, fiscal tools, action plans and associated capacities, to support the phase out of mercury-containing medical thermometers and sphygmomanometers under the Minamata Convention** | | | |
| **Project Outcome[[6]](#footnote-6) 1.1**  Cross ministerial cooperation established to jointly develop and implement the necessary policy, regulations, tools, action plans and guidelines, in coordination with appropriate private sector partners, to phase out the production and consumption of mercury-containing medical devices, to reduce the use of primary mercury in medical devices, to manage waste of obsolete devices, and to promote the uptake of mercury-free medical devices. | **Indicator 3:** Number of proposals on policies, regulations, standards, technical guidelines, strategies for strengthening the national legal framework to support the production transformation, wide application of mercury-free thermometers and sphygmomanometers, and sound management of mercury, interim storage and waste. | China has issued policies and regulations on reducing and restricting production and application of mercury-containing medical devices and their management. However, regulatory gaps were identified in 1) interim storage of mercury and sound management of obsolete mercury and contaminated sites, 2) inspection, maintenance and calibration of mercury-free alternatives, and 3) uptake and application of mercury-free products in medical facilities | At least 2 policies, regulations, standards, tools and associated capacity and guidelines proposed to be developed/enhanced in the control, monitoring and enforcement of sound management of mercury, interim storage and waste, and uptake and application of mercury-free products in the medical facilities promoted | At least 6 proposals for the development/enhancement of policies, regulations, standards, tools and associated capacities in the control, monitoring and enforcement of sound management of mercury, interim storage and waste, with measurable uptake and application of mercury-free products at medical facilities |
| **Outputs to achieve Outcome 1.1** | **Output 1.1:** Inter-ministerial Committee established (e.g., Environment, Health, Industry, etc.) to support the execution of China’s National Implement Plan for the Implementation of the Minamata Convention and take actions to address the identified policy and enforcement capacity gaps between national regulatory policies and the Convention’s legal requirements for Parties, and to look at modalities for linking mercury consumption reductions from this sector into the primary mining plans within the National Minamata Implementation Plan, to avoid redirection of phased out consumption to other sectors.  **Output 1.2:** Proposals on policy and regulatory frameworks on chemical management, supervision and law enforcement, standards for inspection and maintenance of mercury-free products, and rules on the use of mercury-free products are developed or updated and capacity-building programmes updated or developed to support the monitoring, supervision, regulation and enforcement of the phase-out of mercury in the production of medical thermometers and sphygmomanometers, by collaborating with World Health Organization (WHO) to ensure incorporation of international best practice and experience.  **Output 1.3:** Proposals on green procurement standards and action plans developed to promote the application of and grow the market for mercury-free medical thermometers and sphygmomanometers in medical facilities.  **Output 1.4:** Green Finance Framework developed and mercury-free devices procurement subsidization scheme created. | | | |
| **Project component 2** | **Demonstration of technology transfer and investment for (i) supporting enterprises in phasing out the production of mercury-containing medical devices; (ii) the application of mercury-free devices in medical facilities, and (iii) enhanced knowledge base for the risk assessment and sound management of obsolete mercury devices, contaminated materials/wastes, and contaminated areas on premises** | | | |
| **Outcome 2.1**  Enterprises 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 75 metric tons of mercury. | **Indicator 4**: Enterprises are capacitated to convert their production lines to mercury-free production in line with 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 75 metric tons of mercury. | Enterprises producing mercury-containing medical thermometers and sphygmomanometers that will be banned in China from 1 January 2026, and have insufficient capacity or knowledge to soundly manage mercury, stockpiled devices and/or contaminated areas on premises. | 4 qualified enterprises producing mercury-containing thermometer and 2 enterprises producing mercury-containing sphygmomanometer selected for demonstration converted to mercury-free production in line with legally mandated national phase-out planning guidelines will complete equipment and plant modification and ready for trial production of mercury-free devices, with reduction of 30 metric tons of mercury achieved  Enterprises trained to carry out soundly manage of remaining mercury, stockpiled devices and/or contaminated areas on premises. Demonstration experience and knowledge documented | All 6 demonstration enterprises successfully converted to mercury-free production lines in line with legally mandated national phase-out planning guidelines, have the capacity to soundly manage remaining mercury, stockpiled devices and/or contaminated areas on premises resulting in the phase-out of at least 75 metric tons of mercury. Demonstration achievements and experience shared and replicated at other manufacturers to accelerate production phase-out and transformation, leading to complete stop of mercury-containing production by 31 December 2025. |
| **Indicator 5:** Percentage of replacement to mercury-free devices in the demonstration medical facilities | Mercury-containing medical thermometers and sphygmomanometers were still widely used in many medical facilities. Medical staff were significantly short of experience and capacity knowledge to use and maintain mercury-free devices, and sound management of mercury containing waste. | Within the 6 demonstration medical facilities in the two pilot areas, replacement of 30% of mercury-containing medical thermometers and sphygmomanometers achieved, and capacity strengthened for safe disposal management of obsolete mercury devices and related wastes. | At least 6 demonstration medical facilities in the one to two pilot areas completed the replacement of 60% of mercury-containing medical thermometers and sphygmomanometers, gained experience and capacity to use and maintain mercury-free devices, are trained to soundly manage of obsolete mercury devices and related wastes, and share experience in promoting wide application of mercury-free devices. |
| **Outputs to achieve Outcome 2.1** | **Output 2.1:** Production of mercury-free medical thermometers and sphygmomanometers achieved and sound management of obsolete mercury and stocks of mercury devices implemented in four (4) producers of mercury-containing thermometers and two (2) producers of mercury-containing sphygmomanometers  **Output 2.2:** Use of mercury-free devices and the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers demonstrated in at least 6 medical facilities. 60% of baseline mercury-containing medical thermometers and sphygmomanometers replaced by mercury-free devices and staff capitated to use and maintain mercury-free devices and to soundly manage obsolete mercury devices and related wastes. | | | |
| **Project component 3** | **Development of long-term guidance and tools for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers, and mercury-contaminated areas** | | | |
| **Outcome 3.1**  Production enterprises and medical facilities implemented appropriate strategies, tools and guidance to assure long-term sound management of mercury-containing medical devices and mercury contaminated areas | **Indicator 6**: Number of persons in production enterprises and medical facilities trained and internal strategies, tools and guidelines developed or adopted to guide environmentally sound management of mercury, interim storage, waste and contaminated sites, and empowered to assist in the national replication to all actions across relevant sectors | Production entities and medical facilities have insufficient knowledge and lack appropriate strategies, tools and guidance on environmentally sound management | 4 production enterprises of mercury-containing thermometer, 2 mercury-containing sphygmomanometer producers and 6 medical facilities with a total of 1,500 persons (1,000 female and 500 male) participated in trainings, workshops and guidance on sound management of mercury and wastes.  Enterprises and medical facilities capacity strengthened to develop strategies to implement environmentally sound management of chemicals and waste.  At least 2 internal strategies, tools and guidance updated or adopted to undertaken environmentally sound management | All 6 production enterprisesand 6 medical facilities with a total of 4,000 persons (2,800 female and 1,200 male) are strengthened with tools and guidance to have strategies developed and to actually implementing environmentally sound management of mercury and waste and contaminated sites.  Enterprises and medical facilities are also able to share their demonstration achievements and experience to facilitate national replication for a sound and sustainable management of chemicals and wastes  At least 6 internal strategies, tools and guidance updated or adopted to undertake environmentally sound management. |
| **Outputs to achieve Outcome 3.1** | **Output** **3.1.** Guidance tools for inventory of mercury-contaminated sites at piloted enterprises producing mercury-containing medical thermometers and sphygmomanometers developed.  **Output** **3.2**. Risk management strategy, technical guidance and training materials developed for the sound management of residual mercury stocks and obsolete mercury-containing medical thermometers and sphygmomanometers at production enterprises/sites.  **Output 3.3** Risk management strategy, technical guidance and training materials developed for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers in medical facilities. | | | |
| **Project component 4** | **Knowledge sharing and management, Monitoring and Evaluation** | | | |
| **Outcome 4.1**  Tools forKnowledge sharing developed, activities and experiences about policy, technical knowledge and lessons learned for the project shared. Disaggregated information on stakeholder’s activities and experiences under the project gathered and fed into the Monitoring and Evaluation processes of the Project.  . | **Indicator 7**: Number of workshop and person trained in the Gender Action Plan and Project Communication Strategy and number of people benefited from knowledge sharing and public awareness raising activities.  Application of standard UNDP/GEF M&E and adaptive management processes in response to project oversight needs and MTR findings. | Limited sharing on policy, technical knowledge and lessons learned about phase out of mercury]-containing thermometers and sphygmomanometers the application and maintenance of mercury-free devices and sound management of mercury, interim storage, and waste  0 GEF UNDP M&E requirements met and no adaptive management applied. | 1,500 direct beneficiaries (1,000 female and 500 male) trained through 4 workshops and various measures like traditional media and new media (TVs, newspapers, websites, WeChat, etc.) on policy, technical knowledge and lessons about phase-out of mercury-containing medical thermometers, sphygmomanometers and the application of mercury-free devices, and sound management of mercury, interim storage and waste. to reach the total beneficiaries of 100,000 (50,000 female, 50,000 male)  Project activities are properly managed and monitored to ensure smooth implementation and achievement of results with Project inception report, PIR reports and Mid-term Review timely submitted. | 4,000 direct beneficiaries (2,800 female and 1,200 male) in total are trained through 10 workshops and various measures like traditional media and new media (TVs, newspapers, websites, WeChat, etc.) on policy, technical knowledge and lessons about phase-out of mercury-containing medical thermometers and sphygmomanometers, the application of mercury-free devices, and sound management of mercury, interim storage and waste to reach the total beneficiaries of 300,000 (150,000 female, 150,000 male).  Project activities are properly managed and monitored to ensure smooth implementation and achievement of results with Project inception report, PIR reports, Financial audit reports and Terminal Evaluation timely submitted. |
| **Outputs to achieve Outcome 4.1** | **Output 4.1**. Project Communication Strategy created and effective KM and M&E support delivered in differentiated approaches for stakeholders (manufacturing enterprises, medical facilities, mercury mining enterprises, government and international agencies, etc.)  **Output 4.2.** Awareness raised manufacturers, medical facilities and public on sound management of chemicals; knowledge gathered and shared, as well as learning tools created and utilized periodically during the project lifecycle.  **Output 4.3:** Monitoring and Evaluation Tools (PIR, Mid Term and Terminal Evaluations as well as Quarterly Performance Reports and Project Board Reports, budget revisions and financial control and project management tools) delivered as required and adaptive management actions implemented during the project lifecycle. | | | |

# Monitoring and Evaluation (M&E) Plan

The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored annually and 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. The Monitoring Plan included in Annex details the roles, responsibilities, and frequency of monitoring project results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the [UNDP POPP](http://www.undp.org/content/undp/en/home/operations/accountability/programme_and_operationspoliciesandprocedures.html) and [UNDP Evaluation Policy](http://www.undp.org/content/undp/en/home/operations/accountability/evaluation/evaluation_policyofundp.html). The UNDP Country Office is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements.

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the [GEF Monitoring Policy](https://www.thegef.org/sites/default/files/council-meeting-documents/GEF-C.56-03%2C%20Policy%20on%20Monitoring.pdf) and the [GEF Evaluation Policy](https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.ME_C56_02_GEF_Evaluation_Policy_May_2019_0.pdf) and other [relevant GEF policies](https://www.thegef.org/documents/policies-guidelines)[[7]](#footnote-7). The costed M&E plan included below, and the Monitoring plan in Annex, 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 during the Project Inception Workshop and will be detailed in the Inception Report.

**Additional GEF monitoring and reporting requirements:**

Inception Workshop and Report: A project inception workshop will be held within 60 days of project CEO endorsement, with the aim to:

1. 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.
2. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
3. Review the results framework and monitoring plan.
4. 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.
5. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
6. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
7. Plan and schedule Project Board meetings and finalize the first-year annual work plan.
8. 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. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR. The PIR submitted to the GEF will be shared with the Project Board. The quality rating of the previous year’s PIR will be used to inform the preparation of the subsequent PIR.

GEF and/or LDCF/SCCF Core Indicators:

The GEF and/or LDCF/SCCF Core indicators included as Annex 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 indicator status. The updated monitoring data should 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 [website](https://www.thegef.org/sites/default/files/documents/Results_Guidelines.pdf). If relevant to the project: The required Protected Area Management Effectiveness Tracking Tool (METTs) have been prepared and the scores included in the GEF Core Indicators.

*Independent Mid-term Review (MTR):*

The terms of reference, the review process and the final MTR report will follow the standard templates and guidance for GEF-financed projects available on the [UNDP Evaluation Resource Center](http://web.undp.org/evaluation/guidance.shtml#gef) (ERC).

The evaluation will be ‘independent, impartial and rigorous’. The evaluators 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. 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 evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

The final MTR report and MTR TOR will be publicly available in English and will be posted on the UNDP ERC by 19 December 2024. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report’s completion.

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 guidance for GEF-financed projects available on the [UNDP Evaluation Resource Center](http://web.undp.org/evaluation/guidance.shtml#gef).

The evaluation will be ‘independent, impartial and rigorous’. The evaluators 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. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project being 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 the BPPS/GEF Directorate.

The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC by 19 September 2026. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report’s completion.

Final Report:

The project’s terminal 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.

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 Policy[[8]](#footnote-8) and the GEF policy on public involvement[[9]](#footnote-9).

| **Monitoring and Evaluation Plan and Budget:** | | |
| --- | --- | --- |
| **GEF M&E requirements** | **Indicative costs (US$)** | **Time frame** |
| **Inception Workshop** | 8,000 | Within 60 days of CEO endorsement of this project |
| **Inception Report** | None | Within 90 days of CEO endorsement of this project |
| **M&E of GEF core indicators and project results framework** | 20,000 | Annually and at mid-point and closure |
| **GEF Project Implementation Report (PIR)** | None | Annually typically between June-August |
| **Monitoring of environmental and social risks, and corresponding management plans as relevant** | 55,000 | On-going |
| **Implementation and monitoring of the Stakeholder Engagement Plan** | 35,000 | On-going |
| **Implementation and monitoring of the Gender Action Plan** | 60,000 | On-going |
| **Supervision missions** | None | Annually |
| **Independent Mid-term Review (MTR)** | 30,000 | Before 19 December 2024 |
| **Independent Terminal Evaluation (TE)** | 30,000 | Before 19 September 2026 |
| **TOTAL indicative COST** | 238,000 |  |

Excluding project team staff time, and UNDP staff and travel expenses

# Governance and Management Arrangements

**Roles and responsibilities of the project’s governance mechanism:** The project will be implemented following UNDP’s national implementation modality, according to the Standard Basic Assistance Agreement between UNDP and the Government of China, signed on 29 June 1979.

Implementing Partner: The Implementing Partner for this project is FECO.

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.
* Risk management as outlined in this Project Document;
* 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.

**Responsible Parties**:

Three categories of Responsible Parties will be engaged in the implementation of this project:

***Responsible Party A***: The Responsible Party A is the demonstration mercury-containing thermometers and sphygmomanometers producing enterprises. With the guidance of the Implementing Partner, they are responsible for carrying out project activities to gradually reduce mercury consumption in mercury devices production and sales and shut down production by 31 December 2025, lead the whole industry in phasing out the use of mercury and to ensure achievement of the goal of the Minamata Convention. In implementing the demonstration activities, these enterprises will undergo refurbishment of their existing workshops, and plan to improve mercury-free producing capacity by changing the original mercury-containing production lines into mercury-free ones or installing new manufacturing equipment.

Furthermore, these enterprises will promote R&D, production and marketing of mercury-free alternatives, adhere to environmentally sound management of mercury; organize or participate in themed training; promote gender equality, etc. and Share achievements and experiences of the demonstration with other enterprises. These enterprises have also committed to provide co-financing to undertake the demonstration activities.

***Responsible Party B***: The Responsible Party B for this project are related associations, research institutions and NGOs regarding environment management (including mercury), public health, metrological verification, policy and standard, etc.. They are responsible for providing technical support and consultations to facilitate project implementation and decision making of governance and management.

***Responsible Party C***: The Responsible Party C are local governments and medical facilities. Guided by the Implementing Partner, they are responsible for carrying out demonstration project activities to promote and facilitate the replacement of mercury-containing medical thermometers and sphygmomanometers, on the correct use of mercury-free alternatives, including their routine internal and external calibration, required capacity building for the accurate calibration of mercury-free alternatives, and activities like collection and storage of mercury concerned, mercury waste cleanup and handling, mercury waste transport and disposal and risk analysis (RA) of mercury contaminated areas and sustainable ESM of mercury waste and contaminated sites. These demonstration medical institutions will also capture and share in awareness and training materials and guidance documents for long term, post-GEF-funded project, and the replication process to more medical institutions locally and nationally to promote wider use of mercury-free alternatives and ensure environmental sound management of mercury wastes.

**UNDP**: UNDP is accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. UNDP is also responsible for the Project Assurance role of the Project Board/Steering Committee.

Project organization structure:

**Implementing Partner**

***FECO***

***(Project Management Unit including NPD, PM, PA and Finance assistant.)***

**Project Board**

**Development Partners**

***UNDP***

**Project Executive**

***DDG, FECO/MEE***

**Beneficiary Representatives**

***CAMDI***

**UNDP Project Assurance**

***UNDP CO, UNDP NCE RTA and UNDP NCE PTA***

**Project Support**

***Technical Team (NTA, National Stakeholder Advisor, Project Gender Advisor and other consultants)***

**Project Organization Structure**

**Responsible Party A**

***Demonstration Enterprises (6 candidate selected)***

**Responsible Party C**

***Local government (2), Medical Institutions (6 to be selected)***

**Responsible Party B**

***Associations, Research institutions and NGOs regarding environment management, public health, metrological verification, policy and standard, etc.***

The Project Board is responsible for taking corrective action as needed to ensure the project achieves the desired results. 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 Resident Representative (or their designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

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.

The composition of the Project Board must include the following roles:

1. Project Executive: Is an individual who represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implemented projects. The Project Executive is the Deputy Director General (DDG) of FECO/MEE.
2. Beneficiary Representative(s): 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. Often civil society representative(s) can fulfil this role. The Beneficiary representatives are the China Association for Medical Devices Industry (CAMDI).

Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project. The Development Partner(s) is UNDP~~:~~

1. Project Assurance: UNDP performs the quality assurance and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed, and conflict of interest issues are monitored and addressed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. UNDP provides a three-tier oversight services involving the UNDP Country Offices and UNDP at regional (UNDP NCE RTA) and headquarters (UNDP NCE PTA) levels. Project assurance is totally independent of project execution.

**Project Manager (PM):** The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager’s prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

The Implementing Partner appoints the Project Manager, who should be different from the Implementing Partner’s representative in the Project Board.

Specific responsibilities include:

* Provide direction and guidance to project team(s)/responsible party(ies);
* Liaise with the Project Board to assure the overall direction and integrity of the project;
* Identify and obtain any support and advice required for the management, planning and control of the project;
* Responsible for project administration;
* Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;
* Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors’ work;
* Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
* Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
* Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
* Be responsible for preparing and submitting financial reports to UNDP 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;
* Capture lessons learned during project implementation;
* Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available.
* Prepare the GEF PIR and submit the final report to the Project Board;
* Based on the GEF PIR and the Project Board review, prepare the AWP for the following year.
* Ensure the mid-term review process is undertaken as per the UNDP guidance, and submit the final MTR report to the Project Board.
* Identify follow-on actions and submit them for consideration to the Project Board;
* Ensure the terminal evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Board;

The head of the Implementing Partner 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:

1. The project’s management and results, the achievement of its objectives, the use of its resources and the application of the rules and procedures.
2. 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.
3. The presentation of financial reports and respond for the custody and appropriate use of project funds.
4. 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. The Ministry of Foreign Coordination and Planning will perform, together with UNDP, its appointment of that position.

**Technical Team:** The Technical Team will consist of different technical areas from the industrial associations or individuals or entities engaged by the Implementing Partner. This team will ensure the proper and suitable assistance in every area involved in chemicals life cycle management. The following areas needs to be included: Waste, Enforcement, Emissions & Releases, Contaminated Sites, Chemicals and Monitoring.

Governance role for project target groups: The Project Manager will ensure the engagement of target groups in decision making for the project by following the Stakeholder Engagement Plan, where a stakeholder identification and analysis was carried out. This analysis includes concerns and expectations as well as recommendations in order to ensure that there is enough support for the project. This exercise helps build local ownership, strengthens project integrity and design, and helps create foundational relationships that may contribute to constructive problem solving if difficulties or challenging issues arise.

Project stakeholders and target groups:

* Ministry of Ecology and Environment (MEE), as the administrative authority on ecological and environmental protection, is designated by the State Council as the core agency for coordination of all ecological and environmental protection work including mercury related activates in China. As the focal point for the implementation of the Minamata Convention in China, MEE is national implementing agency for this project;
* The National Steering Group (NSG) is an Inter-ministerial Steering Group and will comprise of MEE and other ministries like the Ministry of Industry and Information Technology (MIIT), the National Health Commission (NHC) 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 NSG 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 National Project Team comprising of staff from MEE, MIIT, and NHC etc. will be established and based in Foreign Environmental Cooperation Center (FECO, formerly the Foreign Economic Cooperation Office) of MEE.
* Participating production enterprises and medical facilities will be the major role-players in the demonstration of technology transfer to and application of mercury-free alternatives, as well as undertaking sound management of mercury waste and develop plan for contaminated areas remediation;
* 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 thermometers and sphygmomanometers, risk assessment and management of mercury-contaminated sites to minimize exposure risks to population groups. The project also seeks public participation by consulting those potentially affected by the production, use and management of mercury-containing medical thermometers and sphygmomanometers, e.g. residents living close to mercury-using industries and employees of such industries.
* Mercury mining enterprises. Strengthening the supervision on upstream mercury mining enterprises involved in this project is one of the measures to fulfill the convention and reduce the use of mercury.

**Project extensions:** The UNDP Resident Representative and the UNDP-GEF Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GEF project budget cannot be increased. A single extension may be granted on an exceptional basis and only if the following conditions are met: one extension only for a project for a maximum of six months; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GEF resources; the UNDP Country Office oversight costs in excess of the CO’s Agency fee specified in the DOA during the extension period must be covered by non-GEF resources.

# Financial Planning and Management

The total cost of the project is **USD 128,000,000**. This is financed through a GEF grant of USD 16,000,000 administered by UNDP and additional support of USD 112,000,000. UNDP, as the GEF Implementing Agency, is responsible for the oversight of the GEF resources.

Confirmed Co-financing: The actual realization of project co-financing will be monitored during the *mid-term review* and terminal evaluation process and will be reported to the GEF. Note that all project activities included in the project results framework that will be delivered by co-financing partners (even if the funds do not pass through UNDP accounts) must comply with UNDP’s social and environmental standards. Co-financing will be used for the following project activities/outputs:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Co-financing source** | **Co-financing type** | **Co-financing amount (US$)** | **Planned Co-financing**  **Activities/Outputs** | **Risks** | **Risk Mitigation Measures** |
| Pollution Control Center of Solid Wastes and Chemicals of Shandong Province | Grants | 3,099,000 | Project management, office space, training, community consultations | Budget allocation change by the local administration | Project team and UNDP will monitor co-financing to the project |
| In-kind | 3,874,000 |
| Department of Ecology and Environment of Shaanxi Province | Grant | 1,500,000 |
| In-kind | 6,000,000 |
| Dong’a-hua Medical Technology Co., Ltd. | Grants | 12,400,000 | Projetct implementation, office space, training, community consultations | Insufficient co-financing | The participants are asked to raise enough budget and will verify each year their co-financing disbursements |
| In-kind | 6,000,000 |
| Anhui Fangda Pharmaceutical Machinery Co. Ltd. | Grants | 3,719,200 |
| In-kind | 11,446,500 |
| Jiangsu Yuyue Medical Instruments Co., Ltd | Grants | 4,842,710 |
| In-kind | 12,000,000 |
| Hongjiang Zhengxing Medical Instrument Factory | Grants | 6,784,440 |
| In-kind | 8,400,000 |
| Jiangsu Yuyue Medical Equipment & Supply Co., Ltd... | Grants | 20,463,350 |
| In-kind | 9,000,000 |
| Jiangsu Yuanyan Medical Equipment Co., Ltd. | Grants | 1,084,800 |
| In-kind | 700,000 |
| China Association for Medical Devices Industry | Grants | 163,000 | Training, community consultations | Lower or insufficient co-financing due to adverse economic impacts | The project team will monitor every year co-financing to the project |
| In-kind | 223,000 |
| UNDP | In-kind | 300,000 | Project management, office space, training, community consultations | Low risk of staff workload causing unexpected delay in implementation | UNDP will coordinate activities based on agreed project work plan |
| **Total Co-financing** |  | **112,000,000** |  |  |  |

Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board.

Should the following deviations occur, the Project Manager and UNDP Country Office will seek the approval of the BPPS/GEF team to ensure accurate reporting to the GEF:

a) Budget re-allocations among components in the project budget with amounts involving 10% of the total project grant or more;

b) Introduction of new budget items that exceed 5% of original GEF allocation.

Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

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.

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 completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. **Operational closure must happen with 3 months after posting the TE report to the UNDP ERC**. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.

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. In all cases of transfer, a transfer document must be prepared and kept on file[[10]](#footnote-10). The transfer should be done before Project Management Unit complete their assignments.

Financial completion (closure): 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).

The project will be financially completed within 6 months of operational closure or after the date of cancellation. 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 the BPPS/GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

Refund to GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/GEF Directorate in New York. No action is required by the UNDP Country Office on the actual refund from UNDP project to the GEF Trustee.

# Total Budget and Work Plan

|  |  |  |  |
| --- | --- | --- | --- |
| **Total Budget and Work Plan** | | | |
| Atlas Award ID: | 00120057 | Atlas Output Project ID: | 00116374 |
| Atlas Proposal or Award Title: | Demonstration of phase-out of mercury-containing medical thermometers and sphygmomanometers and promoting the application of mercury-free alternatives in medical facilities in China |  | |
| Atlas Business Unit | CHN10 | | |
| Atlas Primary Output Project Title | Demonstration of phase-out of mercury-containing medical thermometers and sphygmomanometers and promoting the application of mercury-free alternatives in medical facilities in China | | |
| UNDP-GEF PIMS No. | 6279 | | |
| Implementing Partner | FECO/MEE | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Atlas Activity (GEF Component)** | **Atlas Implementing Agent (Responsible Party[2] , IP or UNDP)** | **Atlas Fund ID** | **Donor Name** | **Atlas Budgetary Account Code[3]** | **ATLAS Budget Account Description[3]** | **Amount 2022(USD)** | **Amount 2023(USD)** | **Amount 2024(USD)** | **Amount 2025(USD)** | **Amount 2026(USD)** | **Total (USD)** | ***See Budget Note:*** |
|
| **COMPONENT 1:  Integrated policy, regulatory framework, quality standards, fiscal tools, action plans and associated capacities, to support the phase out of mercury-containing medical thermometers and sphygmomanometers under the Minamata Convention** | **FECO/MEE** | **62000** | **GEF** | 71200 | International Consultants |  | 46,000 |  |  |  | 46,000 | *1* |
| 71300 | Local Consultants | 49,231 | 56,922 | 18,462 | 49,231 | 49,231 | 223,077 | *2* |
| 71600 | Travel | 23,385 | 38,922 | 23,385 | 23,384 | 23,385 | 132,461 | *3* |
| 72100 | Contractual Services - Companies | 0 | 0 | 46,154 | 30,769 | 30,769 | 107,692 | *4* |
| 72500 | Supplies | 2,154 | 2,154 | 2,154 | 2,154 | 2,154 | 10,770 | *5* |
| 74200 | Audio Visual&Print Prod Costs | 7,753 | 7,753 | 7,753 | 7,753 | 7,757 | 38,769 | *6* |
| 74500 | Miscellaneous Expenses | 861 | 861 | 861 | 861 | 864 | 4,308 | *7* |
| 75700 | Training, Workshops and Confer | 7,384 | 7,385 | 7,385 | 7,385 | 7,384 | 36,923 | *8* |
| **Total Component 1** | | **90,768** | **159,997** | **106,154** | **121,537** | **121,544** | **600,000** |  |
| **COMPONENT 2:  Demonstration of technology transfer and investment for (i) supporting enterprises in phasing out the production of mercury-containing medical devices; (ii) the application of devices in medical facilities, and (iii) enhanced knowledge base for the risk assessment and sound management of obsolete mercury devices, contaminated materials/wastes, and contaminated areas on premises** | **FECO/MEE** | **62000** | **GEF** | 71300 | Local Consultants | 15,385 | 0 | 0 | 0 | 0 | 15,385 | *9* |
| 71600 | Travel | 2,461 | 2,462 | 2,462 | 2,462 | 2,461 | 12,308 | *10* |
| 72100 | Contractual Services-Companies | 1,286,538 | 2,476,154 | 2,476,154 | 3,804,230 | 2,476,154 | 12,519,230 | *11* |
| 72400 | Communic & Audio Visual Equip | 2,738 | 2,738 | 2,738 | 2,738 | 2,740 | 13,692 | *12* |
| 72500 | Supplies | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 6,000 | *13* |
| 74200 | Audio Visual&Print Prod Costs | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 10,000 | *14* |
| 74500 | Miscellaneous Expenses | 4,000 | 4,000 | 4,000 | 4,000 | 4,000 | 20,000 | *15* |
| 75700 | Training, Workshops and Confer | 3,385 | 0 | 0 | 0 | 0 | 3,385 | *16* |
| **Total Component 2** | | **1,317,707** | **2,488,554** | **2,488,554** | **3,816,630** | **2,488,555** | **12,600,000** |  |
| **COMPONENT 3: Development of long-term guidance and tools for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers, and mercury-contaminated areas** | **FECO/MEE** | **62000** | **GEF** | 71300 | Local Consultants | 0 | 69,231 | 69,231 | 23,077 | 23,077 | 184,616 | *17* |
| 71600 | Travel | 923 | 923 | 923 | 923 | 923 | 4,615 | *18* |
| 72100 | Contractual Services - Companies | 0 | 142,308 | 344,872 | 579,487 | 129,487 | 1,196,154 | 19 |
| 74500 | Miscellaneous Expenses | 769 | 769 | 769 | 769 | 770 | 3,846 | 20 |
| 75700 | Training, Workshops and Confer | 2,154 | 2,153 | 2,154 | 2,154 | 2,154 | 10,769 | *21* |
| **Total Component 3** | | **3,846** | **215,384** | **417,949** | **606,410** | **156,411** | **1,400,000** |  |
| **COMPONENT 4: Knowledge Sharing & Management, Monitoring and Evaluation** | **FECO/MEE** | **62000** | **GEF** | 71300 | Local Consultants | 12,308 | 12,308 | 12,308 | 12,308 | 12,307 | 61,539 | *22* |
| 71600 | Travel | 6,200 | 40,046 | 109,277 | 40,046 | 60,046 | 255,615 | *23* |
| 72100 | Contractual Services - Companies | 0 | 0 | 0 | 0 | 60,000 | 60,000 | *24* |
| 74100 | Professional Services | 3,800 | 3,800 | 8,800 | 3,800 | 8,800 | 29,000 | *25* |
| 74200 | Audio Visual&Print Prod Costs | 0 | 23,077 | 23,077 | 23,077 | 23,077 | 92,308 | *26* |
| 74500 | Miscellaneous Expenses | 307 | 308 | 308 | 308 | 307 | 1,538 | *27* |
| 75700 | Training, Workshops and Confer | 13,231 | 5,231 | 21,846 | 19,846 | 19,846 | 80,000 | *28* |
| **UNDP** | **62000** | **GEF** | 71200 | International Consultants | 0 | 0 | 17,000 | 0 | 17,000 | 34,000 | *29* |
| 71300 | Local Consultants | 0 | 0 | 13,000 | 0 | 13,000 | 26,000 | *30* |
|  |  |  | **Total Component 4** | | **35,846** | **84,770** | **205,616** | **99,385** | **214,383** | **640,000** |  |
| **Project management costs [6]** | **FECO/MEE** | **62000** | **GEF** | 71600 | Travel | 2,154 | 2,154 | 2,154 | 2,154 | 2,154 | 10,770 | *31* |
| 71800 | Contractual Services-Imp Partn | 123,077 | 123,077 | 123,077 | 123,077 | 123,077 | 615,385 | *32* |
| 72200 | Equipment and Furniture | 1,500 | 3,000 | 3,000 | 0 | 0 | 7,500 | *33* |
| 72400 | Communic & Audio Visual Equip | 1,000 | 1,000 | 1,000 | 1,000 | 1,000 | 5,000 | *34* |
| 72500 | Supplies | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 10,000 | *35* |
| 73100 | Rental & Maintenance Premises | 13,000 | 13,000 | 13,000 | 13,000 | 13,000 | 65,000 | *36* |
| 74200 | Audio Visual&Print Prod Costs | 3,077 | 3,077 | 3,077 | 3,077 | 3,077 | 15,385 | *37* |
| 74500 | Miscellaneous Expenses | 392 | 392 | 392 | 392 | 392 | 1,960 | *38* |
| **UNDP** | **62000** | **GEF** | 74100 | Professional Services | 5,800 | 5,800 | 5,800 | 5,800 | 5,800 | 29,000 | *39* |
|  |  |  |  | **Total Project Management** | **152,000** | **153,500** | **153,500** | **150,500** | **150,500** | **760,000** |  |
|  | | | | **PROJECT TOTAL** | | **1,600,167** | **3,102,205** | **3,371,773** | **4,794,462** | **3,131,393** | **16,000,000** |  |

**Summary of Co-Funds for Co-Finance:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Contributors** | **Amount 2022** | **Amount 2023** | **Amount 2024** | **Amount 2025** | **Amount 2026** | **Total** |
| Pollution Control Center of Solid Waste and Chemicals of Shandong Province | 1,394,600 | 1,394,600 | 1,394,600 | 1,394,600 | 1,394,600 | 6,973,000 |
| Department of Ecology and Environment of Shaanxi Province | 1,500,000 | 1,500,000 | 1,500,000 | 1,500,000 | 1,500,000 | 7,500,000 |
| DONG E E-HUA MEDICAL TECHNOLOGY CO., LTD. | 3,680,000 | 3,680,000 | 3,680,000 | 3,680,000 | 3,680,000 | 18,400,000 |
| Anhui Fangda Pharmaceutical Machinery Co. Ltd. | 3,033,140 | 3,033,140 | 3,033,140 | 3,033,140 | 3,033,140 | 15,165,700 |
| Jiangsu Yuyue Medical Instruments Co., Ltd | 3,368,542 | 3,368,542 | 3,368,542 | 3,368,542 | 3,368,542 | 16,842,710 |
| Hongjiang Zhengxing Medical Instrument Factory | 3,036,888 | 3,036,888 | 3,036,888 | 3,036,888 | 3,036,888 | 15,184,440 |
| Jiangsu Yuyue Medical Equipment & Supply Co., Ltd. | 5,892,670 | 5,892,670 | 5,892,670 | 5,892,670 | 5,892,670 | 29,463,350 |
| Jiangsu Yuanyan Medical Equipment Co., Ltd. | 356,960 | 356,960 | 356,960 | 356,960 | 356,960 | 1,784,800 |
| China Association for Medical Devices Industry | 77,200 | 77,200 | 77,200 | 77,200 | 77,200 | 386,000 |
| UNDP | 60,000 | 60,000 | 60,000 | 60,000 | 60,000 | 300,000 |
| **Total** | **22,400,000** | **22,400,000** | **22,400,000** | **22,400,000** | **22,400,000** | **112,000,000** |

**Budget Notes:**

|  |  |  |
| --- | --- | --- |
| **Budget note number** | **Budget line** | **Comments:** Budget note should be output based rather than input based. Even for individual consultants’ outputs of the consultants must be clear. Include cost breakdown and calculation basis (e.g. daily fee and number of days/weeks, unit cost and number), as well as a total amount for the budget line. |
| **Component 1. Integrated policy, regulatory framework, quality standards, fiscal tools, action plans and associated capacities, to support the phase out of mercury-containing medical thermometers and sphygmomanometers under the Minamata Convention** | | |
| 1 | 71200 | International Mercury-containing Medical Devices Phase-out Strategy Advisor at $2,000/week for 23 weeks, **$46,000** |
| 2 | 71300 | Local consultants costs:  (a) National Technical Advisor to provide technical support for the project including conducting a training need assessment and developing training plan covering management capacity of inspection officers etc., for 46 weeks at $2,000/week], rounded up to be budgeted at **$92,308**;  (b) Chemical Management Advisor for 16 weeks at $1,923/week, rounded up to be budgeted at **$30,769**  (c) Supervision and Law Enforcement Advisor for 16 weeks at $1,923/week, rounded up to be budgeted at **$30,769**;  (d) Green Procurement Advisor for 16 weeks at $1,923/week, rounded up to be budgeted at **$30,769**;  (e) Green Financing Advisor for 20 weeks at $1,923/week, rounded up to be budgeted at **$38,462**) |
| 3 | 71600 | Travel costs for:   1. International Mercury-containing Medical Device Phase-out Strategy Advisor, 3 missions at average costs of $5,179/mission, total **$15,538**; and 2. Domestic travel costs to demonstration producers and medical facilities locations for field research, technical consultations, policy consultation, 3 times per year , 3-person mission of 5-days each at average cost of $519 per person-per days, inclusive of transportation costs, rounded up to be budgeted at **$116,923** |
| 4 | 72100 | Subcontracts for study on alternative mercury-free production technologies (**$46,154**) and on revision of standards for the inspection and maintenance of mercury-free products and rules on use of mercury-free products (**$61,538**) |
| 5 | 72500 | Standard costs of materials and supplies for workshops and meetings **$10,770** |
| 6 | 74200 | Cost for:  (a) Interpretation and translation for workshops and meetings (**$30,000**);  (b) Printing and publications (**$8,769**) |
| 7 | 74500 | Costs of materials and supplies, and expenses on communication and coordination activities required to support conducting researches and investigations in the field, organizing meetings and workshops, liaison and interaction with subcontractors, over the 5-year project duration (**$4,308**) |
| 8 | 75700 | Costs for workshop and seminar required for  (a) Review and revision on policy frameworks, 5 one-day workshops per year (total 25 workshops) with 10 participants at $60/day per participant, sub-total **$15,000**,  (b) Costs of a group of 5 experts to participate in the same meeting (5 one-day workshops per year, total 25 workshops) for the review relevant materials during the preparation of policy framework at $172/day per expert costs, sub-total $21,500. Total of (a) and (b) rounded up to be budgeted at **$36,923** |
| **Component 2. Demonstration of technology transfer and investment for (i) supporting enterprises in phasing out the production of mercury-containing medical devices; (ii) the application of mercury-free devices in medical facilities, and (iii) enhanced knowledge base for the risk assessment and sound management of obsolete mercury devices, contaminated materials/wastes, and contaminated areas on premises** | | |
| 9 | 71300 | Local consultant to provide technical support to demonstration enterprises, medical facilities, demonstration provinces/cities to prepare plan for and implement sound chemical management of mercury and mercury waste. 8 weeks at $1,923/week, rounded up to budget of **$15,385** |
| 10 | 71600 | Travel costs to support selected demonstration provinces/cities, 5 persons for 5 days at average transportation and lodging costs of $492.32/day per person, **$12,308** |
| 11 | 72100 | Subcontracts to:  (a) Provide technical expertise to guide and support enterprises to complete transformation to mercury-free production through conducting risk assessment of the alternative technologies to be adopted and to implement sound management of mercury stockpile, mercury wastes and contaminated areas, document knowledge and experience gained from demonstration, and assist in the supervision and evaluation of demonstration enterprises (**$100,000**);  (b) Implement demonstration activities at 6 selected enterprises, including conducting a risk assessment of the alternative technology to be used taken into consideration avoiding retrenchment. Where no viable alternatives are identified, the demonstration enterprises will develop and implement a Restructuring Plan to reduce and mitigate adverse impacts of retrenchment on workers (**$9,216,923**);  (c) Conduct assessment of environmental and health impacts of medical institutions (**$92,307**);  (d) Provide technical support to the demonstration provinces/cities on demonstration activities and document and promote experience of demonstration results and sound chemicals management, conduct supervision and evaluation (**$76,923**);  (e) Competent entity to conduct monitoring and evaluation of the demonstration activities at enterprise and medical institutions (**$215,385**);  (f) Entrust demonstration provinces to select no less than 6 model medical institutions to undertake and document demonstration and promotion experience at county-level, conduct training and publicity on mercury-free devices at targeted medical institutions, and carry out monitoring and evaluation functions (**$450,000**);and  (g) The demonstration provinces/cities to select no less than 6 demonstration medical institutions to complete replacement of at least 60% of mercury-containing medical devices and carry out sound chemicals management (**$2,367,692**). |
| 12 | 72400 | Standard costs for general miscellaneous expenses for the demonstration producers, medical facilities and demonstration provinces/cities, **$13,692** |
| 13 | 72500 | Standard costs of materials and supplies for appointment, authorization and demonstration activities for and by demonstration enterprises, medical institutions and demonstration provinces/cities **$6,000** |
| 14 | 74200 | Costs for design, compilation and printing of reports by the demonstration entities for training, knowledge sharing, publicity and promotional activities **$10,000** |
| 15 | 74500 | Costs for organization, communication, collaboration and coordination activities to support the demonstration activities at demonstration provinces/cities and manufacturing enterprises, application and promotion of mercury-free medical devices at medical institutions, and sound management of obsolete mercury devices and contaminated wastes. **$20,000** |
| 16 | 75700 | Standard Costs for meetings, workshops and seminars to assess demonstration provinces/cities, two one-day meetings with 7 participants at $110/day per participant ($1,540) and fee for participation of about 5 experts for each meeting at $184.5/day per expert ($1,845). **Total $3,385** |
| **Component 3. Development of long-term guidance and tools for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers, and mercury-contaminated areas** | | |
| 17 | 71300 | Three (3) Local consultants to prepare risk management strategy, technical guidelines and training materials for sound management for  (a) Medical device manufacturing enterprises. 24 weeks at $1,923/week, rounded up to budget of **$46,154**;  (b) Application and promotion of mercury-free medical devices at medical institutions, 24 weeks at $1,923/week, rounded up to budget of **$46,154**, and  (c) provide technical support to demonstration enterprises and medical institutions including conducting private sector risk assessment, to prepare risk management strategy, technical guides and training materials to implement sound chemicals management plan including a Spill Prevention Management Plan, 46 weeks at $2,000/week, rounded up to budget of **$92,308** |
| 18 | 71600 | Standard domestic travel costs to support ESM consultants on investigations, 2 persons at average travel costs of $461 per trip per person, total 5 times. Rounded up to the budget of **$4,615** |
| 19 | 72100 | Subcontracts to:  (a) Conduct inventory of mercury waste and contaminated sites (**$107,692**);  (b) Design training materials for sound chemicals management targeting for different target groups (**$30,769**);  (c) Develop the guidance and carry on risk assessments of contaminated sites at the piloted/demonstration companies/facilities aiming for interim storage areas (**$215,385**);  (d) Pilot of interim storage areas for sound chemicals management and safe disposal of mercury waste (**$450,000**);  (e) Demonstration provinces/cities to organize demonstration medical institutions to implement replacement of mercury-containing medical devices and sound management of wastes, and document knowledge and experience for replication at other medical institutions (**$253,846)**;  (f) Demonstration producing enterprises to implement sound management of mercury and mercury wastes (**$138,462**) |
| 20 | 74500 | Expenses relating to communication, coordination, organization and materials support to local consultants, manufacturing enterprises and medical institutions, including support in organizing meetings, workshops and training sessions over the 5-year project duration **$3,846** |
| 21 | 75700 | Standard meeting and workshop costs to facilitate demonstration activities and document of knowledge and experience of demonstration results of production enterprises and medical institutions. Six one-day meetings with 7 participants at about $113.55/day per participant (**$4,769**) and fees for about 5 participating experts at $200/days per expert per meeting (**$6,000**) |
| **Component 4. Knowledge Sharing & Management, Monitoring and Evaluation** | | |
| 22 | 71300 | Costs of Project Gender Office and National Stakeholder Advisor for 16 weeks each at $1,923 per week, rounded up to $30,769 each, rounded up to total **$61,539** |
| 23 | 71600 | Travel costs for:  (a) international experts’ mission and international knowledge sharing workshops (**$178,461**);  (b) domestic travel costs of fees of 4 experts and 5 technical personnel from producers to participate in workshops/meetings at average costs of $950/ for experts and$470.80 for technical personnel total **$6,154**;  (c) Travel costs for training, publicity, technical knowledge sharing, evaluation for 5 participants for an average of 5-day duration, total **$31,000**;  (d) Annual monitoring and evaluation for 5 years, 5 persons at average travel costs of $1,000 per annual mission per person, total **$25,000**;  (e) International evaluator for MTR and TE at $5,000 each; (total **$10,000**) and  (f) National evaluator at MTR and TE at $2,500 each (total **$5,000**) |
| 24 | 72100 | Subcontract to conduct performance and effectiveness evaluation, **$60,000** |
| 25 | 74100 | Costs of interpretation and translation to support production of training materials and publications by the demonstration enterprises and medical facilities and support to MTR and TE, **$29,000** |
| 26 | 74200 | Development, design and printing of training materials, promotion materials and publications, including materials for demonstration production enterprises and medical institutions **$92,308** |
| 27 | 74500 | Expenses on communication, organization and coordination activities to support knowledge management, public awareness, and training workshops, over the 5-year project duration **$1,538** |
| 28 | 75700 | Standard costs for meetings, workshops and seminars include  (a) International knowledge sharing workshop with participation of WHO, international and domestic experts for South-South cooperation platform, covering costs meeting facilities, fees of 10 invited experts, 2 interpreters, and printed materials (**$24,616**);  (b) Training workshops on technical tools and guidelines, awareness, knowledge and experience sharing, two 1-day workshops per year, with 50 participants for each workshop **$29,230**;  (c) Inception workshop, annual project progress and knowledge sharing meeting, one-day meeting with 50 participants, translation, interpretation and printing costs (**$26,154**) |
| 29 | 71200 | International consultants to conduct MTR and TE at daily rate of $680 , 25 workdays each for MTR and TE **$34,000** |
| 30 | 71300 | National consultants to conduct MTR and TE at daily rate of $430, 30 workdays each for MTR and TE, rounded up to be budgeted at **$26,000** |
| **Project Management** | | |
| 31 | 71600 | Travel costs for project implementation, technical and administrative guidance, monitoring and supervision for 5 years, 3-person mission at average travel costs of $718 per annual mission per person, total **$10,770** |
| 32 | 71800 | Costs of 260 weeks each (over 5 years) of Project Manager/Coordinator, Project Assistance and Project Finance Assistant to manage day-to-day implementation of project activities, calculated at $975, $650 and $740 per week respectively, rounded up to be budgeted at **$615,385** |
| 33 | 72200 | IT equipment, 2 printers and 3 computers **$7,500** |
| 34 | 72400 | Standard costs including postage, courier, telephone and connectivity charges, building maintenance etc. **$5,000** |
| 35 | 72500 | Office supplies for duration of project period (5 years), including other office support, printing supplies, electronic media, and supplies for publications **$10,000** |
| 36 | 73100 | Costs relating to rent of office space, utilities, building operational and maintenance expense for PMU for 5-years **$65,000** |
| 37 | 74200 | Standard project communication strategy and printing costs, **$15,385** |
| 38 | 74500 | Expenses on organization and coordination to support project implementation, supervision and monitoring activities over the 5-year project duration **$1,960** |
| 39 | 74100 | Annual audit costs, total **$29,000** |

***Note:*** *Budget based on local costs and calculated in local currency, using exchange rate to convert budget at US dollars will result in rounding up to the closest budget figures when expressed in US$.*

# Legal Context

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of the People’s Republic of China and UNDP, signed on 29 June 1979. All references in the SBAA to “Executing Agency” shall be deemed to refer to “Implementing Partner.”

This project will be implemented by the Foreign Environmental Cooperation Center (FECO) (“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.

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

# Risk Management

1. Consistent with the Article III of the Standard Basic Assistance Agreement (SBAA), 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:
2. 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;
3. assume all risks and liabilities related to the Implementing Partner’s security, and the full implementation of the security plan.
4. 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.
5. 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 list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml>.
6. 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.

1. 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:
   1. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;
   2. 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;
   3. 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;
   4. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and
   5. 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.
2. 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.
3. 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>).
4. 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.
5. 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 project sites, relevant personnel, information, and documentation.
6. 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. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.
7. 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](http://www.undp.org).
8. 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.
9. 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.

1. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, 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 or corruption, 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.

1. 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.
2. 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.
3. 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.

# Mandatory Annexes

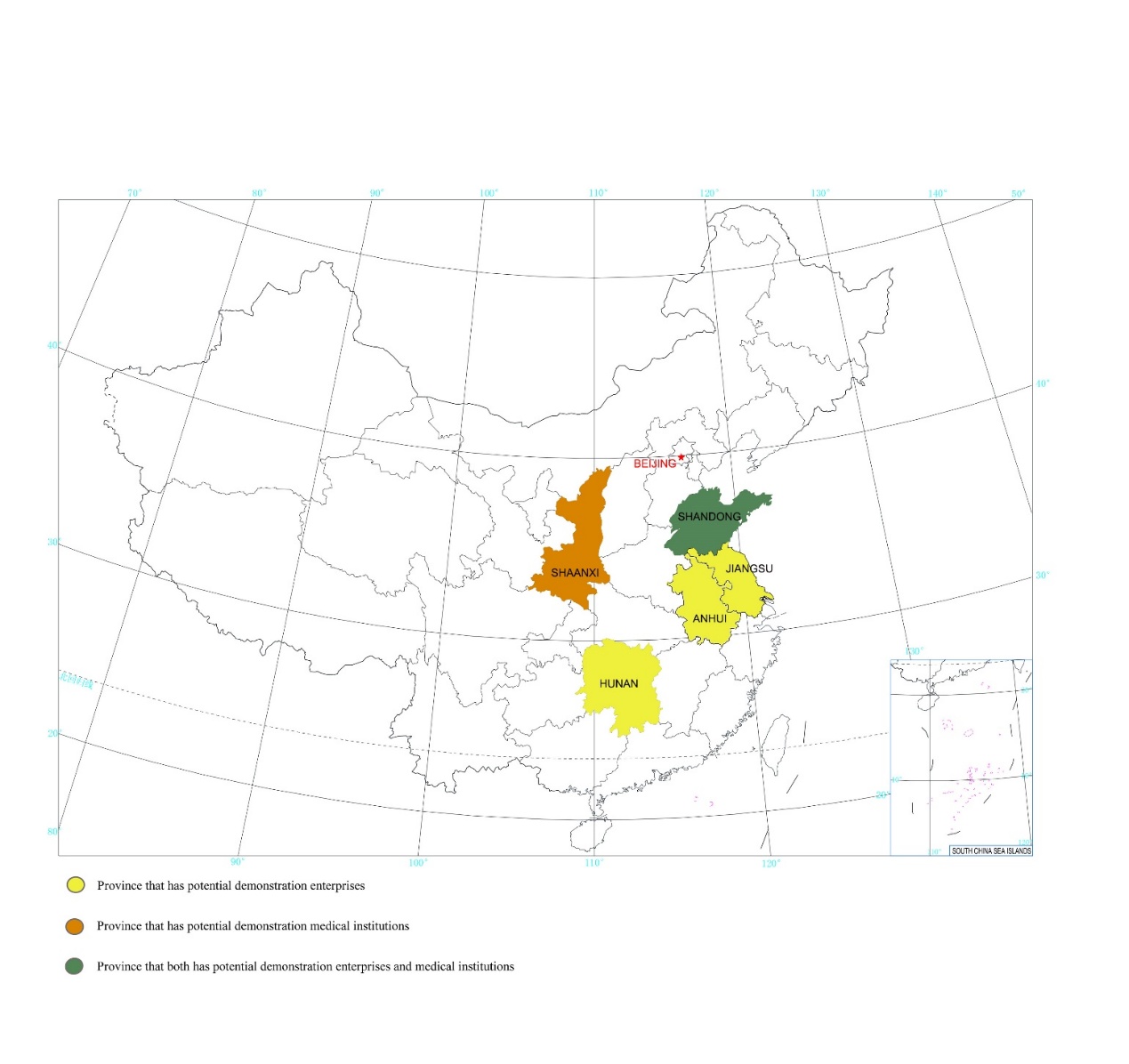
1. GEF Budget Template
2. Project Map and geospatial coordinates of the project area
3. Multiyear Workplan
4. Monitoring Plan
5. Social and Environmental Screening Procedure (SESP)
6. UNDP Atlas Risk Register
7. Overview of technical consultancies/subcontracts
8. Stakeholder Engagement Plan
9. Gender Analysis and Gender Action Plan
10. Procurement Plan
11. Letters of financial commitments
12. GEF Core indicators
13. GEF Taxonomy
14. [Partners Capacity Assessment Tool and HACT assessment](https://popp.undp.org/SitePages/POPPSubject.aspx?SBJID=452&Menu=BusinessUnit&Beta=0)
15. UNDP Project Quality Assurance Report

## Annex 1: GEF Budget Template

(TBWP is attached as a separate Excel file)

## Annex 2: Project map and Geospatial Coordinates of project sites

Project Map. The map shows the locations of potential demonstration manufactures of mercury-containing medical thermometers and sphygmomanometers, and potential demonstration medical institutions.



Anhui Province: 114°54′～119°27′E，29°41′～34°38′N[[11]](#footnote-11)

Jiangsu Province: 116°21’ ～121°56’ E, 30°45’ ～35°08’N[[12]](#footnote-12)

Hunan Province: 108°47′～114°15′E、24°38′～30°08′N[[13]](#footnote-13)

Shaanxi Province: 105°29′～111°15′E，31°42′～39°35′N[[14]](#footnote-14)

Shandong Province: 114°48′～122°42′E, 34°23′～38°17′N[[15]](#footnote-15)

*Source: the map is painted based on the Standard Map Service provided by the Ministry of Natural Resources of the People’s Republic of China.*

Disclaimer: The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries

## Annex 3: Multi Year Work Plan

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Outcomes** | **Outputs** | **Year 1** | | | | **Year 2** | | | | **Year 3** | | | | **Year 4** | | | | **Year 5** | | | |
| Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 |
| **Component 1**: Integrated policy, regulatory framework, quality standards, fiscal tools, action plans and associated capacities, to support the phase out of mercury-containing medical thermometers and sphygmomanometers under the Minamata Convention | **Outcome 1.1** Cross Ministerial cooperation established to jointly develop and implement the necessary policy, regulations, action plans, tools and guidelines to phase production and to reduce the use, to manage waste of obsolete devices, and to promote the uptake of mercury-fee medical devices | **Output 1.1**: Inter-ministerial Committee established, identified policy and enforcement capacity gaps addressed |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output 1.2**: policy and regulatory frameworks, etc. developed |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output 1.3**: Proposals on policy and regulatory frameworks, green procurement standards and action plans developed |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output 1.4**: Green Finance Framework developed and mercury-free procurement subsidization scheme created |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Component 2**. Demonstration of technology transfer and investment for (i) supporting enterprises in phasing out the production of mercury-containing medical devices; (ii) the application of mercury-free devices in medical facilities, and (iii) enhanced knowledge base for the risk assessment and sound management of obsolete mercury devices, contaminated materials/wastes, and contaminated areas on premises | **Outcome 2.1** Enterprises 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 75 metric tons of mercury. | **Output 2.1** Production lines converted to mercury-free production and phase out of 75 metric tons achieved |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output2.2** use of mercury-free devices and sound management of obsolete mercury-containing medical devices demonstrated, 60% of baseline mercury-containing medical devices replaced |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Component 3.** Development of long-term guidance and tools for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers, and mercury-contaminated areas | **Outcome 3.1** Production enterprises and medical facilities implemented appropriate strategies, tools and guidance to assure long-term sound management of mercury-containing medical devices and mercury contaminated areas | **Output 3.1** Guidance tools for inventory of mercury-contaminated sites at piloted enterprises developed |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output 3.2** Risk manage-ment strategy, technical guidance and training materials developed for production facilities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output 3.3** Risk manage-ment strategy, technical guidance and training materials developed for medical facilities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Component 4.** Knowledge Sharing & Management, Monitoring and Evaluation | **4.1** Tools forKnowledge sharing developed, activities and experiences about policy, technical knowledge and lessons learned for the project shared. Disaggregated information on stakeholder’s activities and experiences under the project gathered and fed into the Monitoring and Evaluation processes of the Project.  . | **Output 4.1** Project Communication Strategy created and effective KM and M&E delivered |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output 4.2** Awareness raised manufacturers, medical facilities and public on sound management of chemicals, knowledge gathered and shared, learning tools created |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| **Output 4.3** M&E tools delivered as required and adaptive management actions implemented |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Annex 4: Monitoring Plan

This Monitoring Plan and the M&E Plan and Budget in Section VI of this project document will both guide monitoring and evaluation at the project level for the duration of project implementation.

| **Monitoring** | **Indicators** | **Targets** | **Description of indicators and targets** | **Data source/ Collection Methods[[16]](#footnote-16)** | **Frequency** | **Responsible for data collection** | **Means of verification** | **Risks / Assumptions** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project objective**  Establishing the enabling environment to accelerate the transfer to the production of mercury-free medical devices, and to lay the foundation for market acceptance and growth for mercury-free devices in medical facilities, in order to meet associated phase-out deadlines under the Minamata Convention on Mercury. | **Indicator 1**  # direct project beneficiaries disaggregated by gender (individual people) | **100,000** beneficiaries (50,000 female, 50,000 male) by MTR.  And  **300,000** beneficiaries (150,000 female, 150,000 male) at the end of the project | # direct project beneficiaries disaggregated by gender (individual people) | Baseline data from PIF and PPG reports, collected through desk studies, investigation, studies, interviews and on-site visits.  For verification, data to be collected from training reports and progress reports | Annually  Reported in DO tab of the GEF PIR | Project Manager,  Project Manage-ment Offices | Consultant report,  Training reports and Progress reports | In both the manufacturing sector and the medical facilities, there are more female workers than male that may be disadvantaged, significant attention and actions need to target this group to generate equitable social and economic benefits |
| **Indicator 2**  Sub indicator 9.2: Reduction of 75 metric tons of mercury;  Sub-indicator 9.4: One country with legislation and policy implemented to control mercury and waste  Sub-indicator 9.5: at least 1 non-mercury thermometer, and 1 non-mercury sphygmomanometer technology piloted. | **Reduction of 75 metric tons of mercury**;  China has enhanced legislation and policy implemented to control mercury and waste;  At least 1 non-mercury thermometer, and 1 non-mercury sphygmomanometer technology piloted. | GEF Core Indicators  9 Reduction, disposal / destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products metric tons of toxic chemicals reduced); policies and legislations reviewed, and proposal for establish-ment, revision, amendment | Baseline data from PIF and PPG reports, collected through desk studies, investigation, studies, interviews and on-site visits.  Data to be collected from regular progress reports | Annually.  Reported in DO tab of the GEF PIR | Project Manager,  Project Manage-ment Offices,  Demons-tration enterprise | Enterprise progress reports,  Consultant reports ,  MTR and Terminal Evaluation reports | In 2019 about 200 metric tons of mercury was consumed in 18 thermometer producers and 35 metric tons in 5 sphygmomanometer producers in China. However, due to the Covid-19 situation, demand in 2020 for medical devices including the mercury-containing medical devices has seen significant increase, the situation also offers an opportunity to raise awareness and promoting acceptance in the wider application of mercury-free devices, and practice sound chemicals management |
| **Project Outcome 1.1**  Cross ministerial cooperation established to jointly develop and implement the necessary policy, regulations, tools, action plans and guidelines, in coordination with appropriate private sector partners, to phase out the production and consumption of mercury-containing medical devices, to reduce the use of primary mercury in medical devices, to manage waste of obsolete devices, and to promote the uptake of mercury-free medical devices | **Indicator 3**  Number of proposals on policy, regulations, standards, technical guidelines, strategies for strengthening the national legal framework to support the production transformation, wide application of mercury-free thermometers and sphygmomanometers, and sound management of mercury, interim storage areas and mercury waste | By MTR, at least 2 proposals, and by TE at least 6 proposals to develop / enhance policies, regulations, standards, tools and associated capacity and guidelines in the control, monitoring and enforcement of sound management of mercury, interim storage and waste, and uptake and application of mercury-free products in the medical facilities promoted | Cross ministerial cooperation established to jointly review, develop /enhance and implement the necessary policy, regulations, action plans, tools and guidelines | Baseline data from PIF and PPG reports, collected through desk studies, investigation, studies, interviews and on-site visits.  For verification, data to be collected from meeting and workshop reports as well as project progress reports | Annually,  Reported in DO tab of the GEF PIR | Project Manage-ment Office / Project Manager | Training and meeting reports, consultant reports, and periodic project progress reports | Delayed or not clearly defined cross ministerial cooperation.  Although China has issued regulatory framework on reducing and restricting the production and application of mercury-containing medical devices and their management, regulatory gaps were identified in 1) the interim storage of mercury and the sound management of obsolete mercury and contaminated sites,  2) the inspection, maintenance and calibration of mercury-free alternatives, and  3) the uptake and application of mercury-free products in medical facilities. |
| **Project Outcome 2.1**  Enterprises 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 75 metric tons of mercury. | **Indicator 4**: Enterprises are capacitated to convert their production lines to mercury-free production in line with 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 75 metric tons of mercury. | Demonstration enterprises (4 mercury-containing thermometer producers and 2 mercury-containing sphygmomanometer producers) completed conversion of production lines in line with legally mandated national phase-out planning guidelines, and to soundly manage remaining mercury, stockpiled devices and/or contamina-ted areas on premises resulting in the phase-out of 30 metric tons by MTR and 75 metric tons of mercury at end of project. | 4 mercury-containing thermometer producers and 2 mercury-containing sphygmomanometer producers will piloting in this project which aim to reduce 30 metric tons by MTR and 75 metric tons of mercury.at end of project. | Baseline data from PIF and PPG reports, collected through desk studies, investigation, studies, interviews and on-site visits.  For verification, data to be collected and verified through periodic progress reports from the demonstra-tion producers and reports of consultants | Annually,  Reported in DO tab of the GEF PIR | Project Manage-ment Office  Project Manager, and  Demonstration enterprises | Progress reports of demonstration enterprise and reports of consultant | Insufficient technical capacity or delay of enterprises in implementing conversion activities to change over production lines in line with legally mandated national phase-out planning guidelines, and to soundly manage remaining mercury, stockpiled devices and/or contaminated areas on premises.  However, demonstration enterprises are familiar with mercury-free production technologies and ban of mercury-containing medical devices from 1 January 2026 will encourage smooth and early conversion |
| **Indicator 5**  Percentage of replacement to mercury-free devices in the demonstration medical facilities | At least 6 demonstration medical facilities completed the replacement of 60% of mercury-containing medical thermometers and sphygmomanometers, gained experience and capacity to use and maintain mercury-free devices, trained to soundly manage of obsolete mercury devices and related wastes, and share experience in promoting wide application of mercury-free devices. | Quantity of mercury-containing medical thermometers and sphygmomanometers used at the 6 demonstration medical facilities being replaced with application of mercury-free devices, 30% replacement by MTR and 60% replacement by end of project. | Baseline data from PIF and PPG reports, collected through desk studies, investigation, studies, interviews and on-site visits.  Data to be collected and verified through progress report demonstra-tion medical facilities and reports of consultants | Annually,  Reported in DO tab of the GEF PIR | Project Manager,  Project Manage-ment Offices, and  Demonstration medical facilities | Progress report from demonstration medical facilities and reports of consultant | Currently, medical facilities lack capacity to use and maintain mercury-free devices, and to soundly manage broken or obsolete mercury devices and related wastes, as well as resistance on the use of mercury-free devices due to accuracy and reliability issues.  There are currently strict controls on mercury and mercury waste, and the Covid-19 situation offers an opportunity to change over to use of mercury-free devices and hasten its adaptation |
| **Project Outcome 3.1**  Production entities and medical facilities have the appropriate strategies, tools and guidance to i) Identify, monitor, and remediate mercury contaminated sites; ii) Ensure the safe handling and/or disposal of residual mercury and obsolete devices; and (iii) replicate all actions across relevant sectors | **Indicator 6**  Number of persons in production enterprises and medical facilities trained and internal strategies, tools and guidelines developed or adopted to guide environmentally sound management of mercury, interim storage, waste and contaminated sites, and empowered to assist in the national replication to all actions across relevant sectors | A total of 1,500 persons (1,000 female and 500 male) by MTR and 4,000 person (2,800 female, 1,200 male) by end of project are strengthened with tools and guidance to have strategies developed and to actually implementing environmentally sound management of mercury, interim storage, waste and contaminated sites.  Internal strategies, tools and guidance (at least 2 by TR and 6 at end of project) updated or adopted to undertake environmentally sound management. | Production entities (4 mercury-containing thermometer producers and 2 mercury-containing sphygmomanometer producers) and 6 medical facilities will have the appropriate strategies, tools and guidance through this project to assure long-term sound management of mercury-containing medical devices and mercury contaminate areas. | Baseline collected at PIF and PPG phase through desk studies, investigation, studies, interviews and on-site visits  Data to be collected and verified through progress reports from the demonstra-tion producers and medical institutions and reports of the consultants. | Annually.  Reported in periodic and annual progress reports.  Reported in DO tab of the GEF PIR | Project Manager,  Project Manage--ment Offices,  Demonstration enterprise and medical facilities | Consultant reports | Production entities, medical facilities and general public may lack interest to use mercury-free medical devices due to accuracy and reliability issues.  As production of mercury-containing medical devices will be ban as of 31 December 2025, and the current increased demand due to the Covid-19 situation, it will offer an opportunity for wider application through raising awareness and promotion activities, leading to increase demand an |
| **Project Outcome 4.1**  Tools forKnowledge sharing developed, activities and experiences about policy, technical knowledge and lessons learned for the project shared. Disaggregated information on stakeholder’s activities and experiences under the project gathered and fed into the Monitoring and Evaluation processes of the Project. | ***Indicator 7***  Number of workshop and person trained in the Gender Action Plan and Project Communication Strategy and number of people benefited from knowledge sharing and public awareness raising activities.  Application of standard UNDP/GEF M&E and adaptive management processes in response to project oversight needs and MTR findings. | 1,500 direct beneficiaries (1,000 female and 500 male) by MTR and 4,000 direct beneficiaries (2,800 female and 1,200 male) in total are trained through 10 workshops and 100,000 beneficiaries (50,000female, 50,000 male) by MTR and 300,000 beneficiaries (150,000 female, 150,000 male) awareness raised on policy, technical knowledge and lessons about phase-out of mercury-containing medical thermometers and sphygmomanometers, the application of mercury-free devices and sound management of mercury, interim storage and waste | Knowledge, experience shared to raise awareness for sound management of chemicals | Baseline data from PPG phase. To be collected and verified by training, workshop and progress reports. | Annually,  Reported in DO tab of the GEF PIR | Project Manager, Project Management Office | Training, workshop reports and reports of consultant | Production entities, medical facilities and general public may lack interest to use mercury-free medical devices due to accuracy and reliability issues. As production of mercury-containing medical devices will be ban as of 31 December 2025, and the current increased demand due to the Covid-19 situation, will offer an opportunity for wider application through raising awareness and promotion activities.  Effective and well-planned knowledge sharing and promotional activities is critical to achieve results |
| Establish the inter-ministerial Committee with a focus on increasing women’s involvement | # of women in the inter-ministerial Committee | At least 10% of women member by MTR and 25% at end of project | Number of women members in the established Inter-ministerial Committee | Data prior to establishment of the inter-ministerial Committee. Data to be collected and verified from meeting reports | Annually,  Reported in DO tab of the GEF PIR | Project Manager, Project Gender Officer | Meeting report, project progress report, consultant reports | Bureaucratic government process may hinder the fair representation of female members. However, government has strong gender mainstreaming effort in place. |
| Develop training programs focusing on the displaced women workers being trained on producing mercury-free thermometers and/or sphygmomanometers, and involve women in development of the training programs | # and % of displaced women trained | At least 50% by MTR and 100% at end of project | Number of women being directly addressed | Baseline data from PPG. Data to be collected and verified from progress report of demonstration enterprises | Annually,  Reported in DO tab of the GEF PIR | Demonstration enterprises. Project Gender Officer. Project Manager | Progress report, reports from Project Gender Officer and consultant | Enterprises may resist the fair representation of female workers’ participation. The Project Gender Officer will play an important and effective role to sensitize management to adopt gender mainstreaming actions. |
| Develop training programs with a focus on clinic male and female nurses being trained on proper disposal of obsolete and broken mercury-thermometers and sphygmomanometers and scientific use mercury-free thermometers and sphygmomanometers, and involve more women in the program development | Percentage of clinic male and female nurse at the demonstration medical facilities trained | At least 50% by MTR and 100% at end of project | Number of women being directly addressed | Baseline data from PIF and PPG reports  Data to be collected and verified from progress report of demonstration medical facilities | Annually,  Reported in DO tab of the GEF PIR | Demonstration medical facilities,  Project Gender Officer, and  Project Manager | Progress report, reports from Project Gender Officer and consultant | Medical facilities may resist the fair representation of female workers’ participation.  The Project Gender Officer will play an important and effective role to sensitize management to adopt gender mainstreaming actions. |

## Annex 5: UNDP Social and Environmental Screening Procedure (SESP)

**Project Information**

|  |  |
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| ***Project Information*** |  |
| 1. Project Title | Demonstration of phase-out of mercury-containing medical thermometers and sphygmomanometers and promoting the application of mercury-free alternatives in medical facilities in China |
| 1. Project Number (i.e. Atlas project ID, PIMS+) | Atlas Project ID: 00116374, UNDP-GEF PIMS ID number: 6279 |
| 1. Location (Global/Region/Country) | China |
| 1. Project stage (Design or Implementation) | Design (endorsement stage) |
| 1. Date | 06/04/2021 |

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

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| **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*** |
| Based on Article 25, of the UN Human Right Declaration “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family….” A healthy environment without toxic chemicals is a pre-condition for the full enjoyment of human right. This project seeks to reduce the impact and release of mercury by working with enterprises, small to large, producing mercury containing medical devices, which in turn are used in different grades medical institutions across China, to help phase out production of mercury containing devices, and to promote production and uptake of non-mercury devices. |
| ***Briefly describe in the space below how the project is likely to improve gender equality and women’s empowerment*** |
| Gender dimensions will be a critical component of this project. In the manufacturing of mercury-containing thermometers and sphygmomanometers, there are more female workers than male workers employed. For the use of mercury-containing thermometers and sphygmomanometers in medical services, nurses, who are predominantly female, use mercury-containing thermometers and sphygmomanometers on a daily basis at triage. Therefore, these females are exposed more often to mercury when these mercury-containing medical devices break during use. Recognizing that the level of exposure to mercury and its related impacts on human health are determined by social and biological factors, women, children and men might be exposed to different kinds, levels and frequency of mercury. Therefore, gender mainstreaming will be an integral part of this project. Particularly component 1 and national strategies developed under that component will consider related gender and gender disaggregated health risks and other issues, with appropriate stakeholder associations and expertise. The awareness raising in component 4 will also pay more attention to women to help them be well prepared for the protection from mercury-exposure. A specific gender analysis for this project has been conducted during the PPG stage in close consultation with the UNDP gender advisor to ensure that all gender related activities are aligned with the [UNDP Gender Equality Strategy (2018-2021)](https://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/undp-gender-equality-strategy-2018-2021.html), which was prepared in conjunction with the UNDP Strategic Plan and is operationalized in parallel with it. UNDP’s Gender Equality Strategy highlights the pivotal signiﬁcance of gender equality and women’s empowerment and reaffirms that sustainable human development will not be fully achieved unless women and girls are able to contribute on an equal basis with men and boys to their societies. The project will thus contribute to **SDG 5: Gender Equality and Women Empowerment**.  The following are key indicators which include a gender dimension:   * Sex-disaggregated number of direct project beneficiaries for which the risks of mercury exposure has been reduced (GEF Core Indicator 11), * Sex-disaggregated number of jobs preserved/created to ensure production of non-mercury devices, uptake of non-mercury devices in the medical field and environmentally sound handling of mercury and obsolete mercury-containing devices, * Number of trainings carried out in line with the Gender Action Plan, * Sex-disaggregated number of people reached through awareness raising events on the human and environmental risks of mercury, environmentally sound ways to reduce mercury exposure (e.g. through safe handling of obsolete and/or broken devices), and ways to effectively use non-mercury technologies. |
| ***Briefly describe in the space below how the project mainstreams sustainability and resilience*** |
| The project is designed to respond to the requirements of the Minamata Convention on Mercury and reduce the risks of mercury on human health and the environment by demonstrating the phase-out of mercury in the manufacturing of medical thermometers and sphygmomanometers. The project also aims to ensure the uptake of mercury-free alternatives in demonstration medical facilities. The project will complement and enhance implementation of China’s National Strategy and Action plan for the Implementation of the Minamata Convention. In order to halt production of mercury producing devices and uptake of non-mercury technology, these outputs can be used to inform national sectoral planning, and upscale action nationwide. This proposed GEF Project also closely corresponds to the on-going United Nations Development Assistance Framework (UNDAF) 2016-2020 as expressed in the Country’s UNDAF document signed by both UNDP and the Government of China in 2015. This document provides details of UNDP assistance for “More people enjoy a cleaner, healthier and safer environment as a result of improved environmental protection and sustainable green growth.”  In fact, the project will contribute to several SDGs including:   * **SDG 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture** by decreasing the use of mercury and their release into the environment, indirectly halting and reducing their build-up in the food chain. * **SDG 3: Ensure healthy lives and promote well-being for all at all ages** by reducing the use of mercury and POPs in China, and minimize their release, to ultimately protect human and environmental health. * **SDG 12: Ensure sustainable consumption and production patterns** through the reduction of the release of mercury by introducing alternative processes and technologies that are mercury-free and in line with best available technology guidelines. * **SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development** through decreasing the use and release of mercury, preventing them from entering water sources, and reducing their build-up in the marine ecosystem.   The project is also fully aligned with the GEF7 Chemical and Waste Focal Area Strategy, Program 1 “Industrial Chemical Programs”, as it seeks to eliminate or significantly reduce POPs substances or mercury. The project will address chemical waste at the end of life, chemicals that are used or emitted from processes or products, and waste management. |
| ***Briefly describe in the space below how the project strengthens accountability to stakeholders*** |
| The project design will necessitate close interaction and participation 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 will be incorporated into the sectoral plan within China’s long-term National Strategy and Action Plan for the Implementation of the Minamata Convention, 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. |

**Part B. Identifying and Managing Social and Environmental Risks**

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| **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.  Related to:   * Human Rights; P.2 * Accountability; P.14 | I=2  L=1 | **Low** | It is recognized that China holds an important baseline regulatory framework consisted by by-laws, guidelines and voluntary standards in relation to mercury management and use of mercury-based products.  It also noted that Government Officers are subject of regular trained and are aware of the baseline instruments.  The project propose a complementary and streamlined set of instruments in Component 1, thus Officials, responsible for enforcing legislation at mercury-containing medical device industries slated for mercury phase out, will require adequate further capacity building to be also delivered by the project for implementing them properly.  Thus, this risk is LOW. | | Through Component 1, Activity 1.1.1, Activity 1.2.1 will 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. Although this risk is LOW, the project will undertake these activities as incremental support resulting from the improved Regulatory and Institutional Frameworks. | | | |
| **Risk 2: Small or medium sized manufacturers and health care facilities are not involved in decision-making regarding development of policy and regulatory frameworks and green procurement standards and do not have equal access to financing through the Green Finance Framework**  Related to:   * Accountability; P.13, P.14 | I = 3  L = 3 | **Moderate** | If not aware of these potential financing instruments, small and medium sized manufacturers may not be able to feasibly convert their manufacturing process to become mercury-free and health facilities will not be incentivized to switch to mercury-free thermometers and sphygmomanometers. These groups will thus become marginalized and not benefit equally from the project. | | Stakeholder engagement will be undertaken to ensure fair representation of small and medium sized manufacturers of mercury medical devices who may otherwise be marginalized from participating in any financing schemes and be at a disadvantage once the final phase out of mercury device production for domestic markets commences at the end of 2025 (Activities 1.3 and 1.4). A Stakeholder Engagement Plan (SEP) has been prepared (ProDoc Annex 5) to incorporating 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 quality-controlled conversion of production lines. It will also create a procurement subsidization scheme 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. | | | |
| **Risk 3: Potential risk to enterprise viability and workers’ employment, particularly women, in the course of the transition to production of non-mercury devices, in particular.**  Related to:   * Gender Equality and Women Empowerment; P.9 * Accountability; P.13, P.14 * Standard 7: Labour and Working Conditions; 7.1, 7.5 | I = 3  L = 4 | **Moderate** | Given the fact that the project focuses on changing production processes in plants to switch to production of non-mercury medical devices, there is some business risk for enterprises, and by extension to job security for workers. By transitioning technology out of mercury devices, it is expected that high technology devices will be used, meaning more specialized expertise (jobs) will be needed/created, while less skilled workers, the majority of whom are women, that currently work in the mercury-based lines could lose the jobs. | | The project is designed to help with the transition to non-mercury medical devices, since there will be mandatory end of production of mercury devices for export by the end of 2020 and complete shut- down of production for domestic markets by the end of 2025. The project is therefore inherently addressing the risk of loss of income for businesses from mandatory shut down of mercury device manufacture under Minamata Convention compliance implementation, by offering capacity for production of non-mercury equipment, and preserving livelihoods. Nevertheless, stakeholder engagement throughout project implementation will ensure that enterprises that may be affected by the project all benefit from this support through capacity building and awareness raising on green financing available (Activities 1.3.1 and 1.4.1). A Stakeholder Engagement Plan has been prepared for that purpose.  A risk assessment will be undertaken for the alternative technology (Activity 2.1.1) to be used taking into consideration avoiding retrenchment. The industry will consult with trade unions or other workplace representatives over the proposed redundancies on measures to avoid or reduce redundancies, the method of selection and mitigating the effects, integrating outcomes into the final restructuring plan. This includes potentially training qualified existing staff on other roles or skills that may be needed at the industry. Where no viable alternatives are identified, a Restructuring Plan will be developed to reduce and mitigate adverse impacts of retrenchment on workers. At a minimum, the Restructuring Plan will include the following:   * Ensuring that any collective dismissals are carried out in accordance with the provisions of national law and applicable collective agreements. * Ensuring that the criteria for selection for redundancy are objective, fair and transparent and aim to be gender-neutral; and implement a procedure which provides individuals with the right to challenge their selection. * Ensuring that all outstanding back pay, social security benefits and pension contributions and benefits are paid to those affected by retrenchment in a timely manner. * In the case of large-scale redundancies, provide the UNDP with a copy of the restructuring plan in advance of any dismissals. | | | |
| **Risk 4:****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**  Related to:   * Gender Equality and Women’s Empowerment; P.10 | |  | | --- | | I = 3 | | L = 2 | | **Moderate** | The Gender Analysis found a disproportionate number of women in the area of nursing in particular, and fair representation amongst the cleaning staff. In addition, at the enterprises visited, the majority of workers for production of mercury-containing thermometers were women, as were over a half of workers for the mercury-containing sphygmomanometers. | | The Gender Action Plan has addressed potential risks and included measures to mainstream gender in all project components, with specific focus on encouraging women representation in the following:   * Inter-ministerial committee for National Implementation Plan * Development of policy and regulatory frameworks, quality control standards, monitoring and management systems, and capacity-building programs * Capacity building of medical staff to use and maintain mercury-free devices, and to soundly manage obsolete mercury devices and related wastes * Cooperation with WHO to share knowledge about the replacement of mercury thermometers and sphygmomanometers in health care * Training on sound management of residual mercury stocks and obsolete mercury containing devices, and the remediation of contaminated sites on production sites and in medical facilities | | | |
| **Risk 5: Risk of release and worker/community exposure during decommissioning, transport and storage of waste mercury-related equipment, devices and elemental mercury in the course of the project**  Related to:   * Standard 1: Biodiversity Conservation and Sustainable [Natural](#SustNatResManGlossary) Resource Management; 1.1, 1.7 * Standard 3: Community Health, Safety and Security; 3.2, 3.4, 3.5 and 3.6 * Standard 7: Labor and Working Conditions; 7.6   Standard 8: Pollution Prevention and Resource Efficiency; 8.1, 8.2 and 8.3 | 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. | | As part of the private sector risk assessment that will be undertaken, the project will ensure that the interim storage facilities at the selected enterprises (Activity 2.1.1 and Activity 3.3.1) are referring to the Minamata Convention’s Guidelines [on the environmentally sound interim storage of mercury](http://www.mercuryconvention.org/Portals/11/documents/forms-guidance/English/Guidelines_Environmentally-sound-interim-storage_Nov2018.pdf) 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 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.   Regarding the contaminated sites, an Environmental Risk Assessment will be undertaken referring to the [UNEP/Minamata Convention Guidelines on the Management of Contaminated Sites](http://www.mercuryconvention.org/Portals/11/documents/forms-guidance/English/Guidance_Contaminated_Sites_EN.pdf) which will require the identification and characterization of the scope (e.g., extent of contamination, proximity to human populations, depth to groundwater, proximity to surface water or sensitive habitats), analysis of the hazard level and toxicity, analysis of exposure and analysis of risks to determine the level of management and remediation possible. | | | |
| **Risk 6: Risk of flooding of mercury device interim storage facilities**  Related to:   * Standard 2: Climate Change Mitigation and Adaptation; 2.1, 2.2 * Standard 3: Community Health, Safety and Security; 3.3 | I = 3  L = 2 | **Moderate** | Increased weather events due to climate change may pose a risk on facilities where stockpiles of mercury medical devices are stored prior to disposal. | | As mentioned earlier, the project, through the environmental audit of the interim storage facilities, will take into consideration flood risks when locating and designing storage facilities to minimize the risk of inundation. | | | |
| **Risk 7: Increased GHG emissions from alternative processes to eliminate the use of Mercury**  Related to:   * Standard 2: Climate Change Mitigation and Adaptation; 2.4 | I = 3  L = 3 | **Moderate** | The process needed to transition to non-mercury medical devices is more technologically advanced than the current one, which relies heavily on labor. Therefore, the GHG emissions may be higher under the new process. However conversion activities can also imprint opportunities to phase-in more efficient technologies and processes which could reduce GHG emissions. | | When selecting the process for the transition of industries (Activity 2.1.1), the level of GHG emissions of the considered alternatives will be one of the criteria to be evaluated for best environmental practice and SES requirements will be followed where applicable. | | | |
| **Risk 8: Resettlement or economic displacement or damage to agricultural lands indirectly resulting from the project’s identification of contaminated sites that require remediation in pilot sites through co-financed activities**.    Related to:   * Standard 5: Displacement and Resettlement; 5.1, 5.2 * Standard 1: Biodiversity Conservation and Sustainable [Natural](#SustNatResManGlossary) Resource Management; 1.1, 1.7 | I = 4  L = 2 | **Moderate** | The project will engage with six (6) local manufacturers of medical devices – located in six different sites - that currently use Mercury in their products.  The project will provide technical assistance to develop mercury-free technologies and will develop guidelines to support these 6 manufacturers to identify if their sites – and neighboring lands – could be contaminated with mercury due to their baseline industrial activities.  Although the project itself will not be responsible for remediating any contaminated sites, the project’s guidance and support on identification of these sites may lead to other entities undertaking these remediation activities.  An public manifestation process was carried out based on defined criterion for the selection of the 6 industries.  On top of documentation review, verification against adherence to local environmental and labor laws, all sites were visited by the Project team. It is noted no Ethnic minorities and/or Indigenous Population are present in those sites.  In addition, legal documentation provided during the selection process and site verification also confirmed that No cultural heritage exists in these sites. | | An appropriately scoped ESMF will be developed to manage this risk and all E/S risks associated with these specific co-financed activities. The risk management strategy that will be developed as part of Activity 3.2.2 and will be part of the cooperation agreement / contracts to be signed with each demonstration company per site.  The management strategy carries the appropriate Environmental Impact Assessment (EIA; required under national law for this co-financing activity) and will address all relevant SES requirements for the land identified as contaminated in Activity 3.1.1. This will be further described in the forthcoming ESMF, including the extent to which consistency with the SES is necessary under the policy for these co-financed activities that fall outside the project’s framework.  These will include, amongst other measures, consultations with affected persons in line with the Stakeholder Engagement Plan. | | | |
| **Risk 9: Working conditions that do not meet national labor laws and international commitments and exposure to health and safety risk within the demonstration enterprises and hazardous waste disposal enterprises**  Related to:   * Standard 7: Labor and Working Conditions; 7.1, 7.2, , 7.5, 7.6 | I = 4  L = 2 | **Moderate** | As mentioned earlier,workers in the manufacturing and medical sector already have some sensitivity and knowledge on safe handling of mercury, therefore lowering the risk associated with the decommissioning aspect of the work. It is important to note that Forced Labour is illegal in China through articles in the Penal Law of 2011 and Labour Contract Law of 2007. | | Prior to engaging any enterprise, in particular the demonstration enterprises that manufacture medical thermometers (Activity 2.1.1) and sphygmomanometers, a private sector risk assessment will be conducted. This will be done through a visit to the facility and ensuring that occupational health and safety measures are applied (through an Occupational Risk Assessment) and that the interim storage facilities where mercury will be stored, prior to disposal, are referring to the Minamata guidelines and that the necessary “Safety Certification” has been obtained from local authorities. If not already available at the enterprises, an Occupational Health and Safety Plan that determines the measures to be adopted (such as ventilation and wearing personal protective equipment) will be prepared and implemented.  In addition, the demonstration enterprises will confirm that they have ensured the hazardous waste disposal enterprises they engaged/will engage are duly registered and authorized to conduct such business. | | | |
| **Risk 10: Health and safety risk to workers during refurbishment of demonstration enterprises (through co-financed activities).**  Related to:   * Standard 7: Labor and Working Conditions; 7.1, 7.24, 7.5, 7.6 | I = 3  L = 2 | **Moderate** | The project will engage with six (6) local manufacturers of medical devices identified through a public selection process in which proof documentation was provided as well as field verification by UNDP and Implementing Partner teams that verified the company is compliant with national laws that prohibit use child and forced labor.  Although refurbishment of demonstration enterprises is not part of the project, they are co-financed activities that are essential for its success and therefore the risk on workers’ health and safety have been considered. | | As noted above, an appropriately scoped ESMF will be developed to manage this risk and all E/S risks associated with these specific co-financed activities.  The contractor engaged in the refurbishment activities will be required to submit and implement a worker health and safety plan in line with Local Regulations as well as referring to International Standards and the Guidelines of the Minamata Convention (for BAT/BEP). . The project will approve this plan and ensure that it is being implemented. These risk management actions will be conducted in line with UNDP´s SES Policy. | | | |
|  | **QUESTION 4: What is the overall project risk categorization?** | | | | | | | |
|  | | | | | | | |
| ***Low Risk*** | | | **☐** | |  | | |
| ***Moderate Risk*** | | | **X** | | The screening has identified 10 risks related to this project, one categorized as Low (Risk 1) and nine categorized as Moderate. **As result, the overall risk categorization for this project is determined to be Moderate.**  Majority of risks are being managed through the project’s design: including a Stakeholder Engagement Plan (ProDoc Annex 8) as well as a Gender Action Plan (ProDoc Annex 9) have already been prepared.  Companies pre-selected by the project to implement the demonstration activities will only formally engage with the project upon meeting national legislation on SES (by developing and approving with local authorities their individual EIAs) and an ESMF to address Risks 8 and 10 will be developed before ProDoc Signature (or during the first year of the project implementation) covering the co-financed activities listed that are not administered by the Project.  In addition, during project implementation and per the project’s design, a Spill Prevention and Management Plan and an Occupational Health and Safety Plan will be prepared and implemented. If retrenchment is found to be unavoidable for certain industries, a Restructuring Plan will be developed and implemented.  Finally, interim storage facilities where mercury-containing devices will be stored prior to disposal will be subject to an environmental audit. A Grievance Redress Mechanism will be set up for the project (per the Stakeholder Engagement Plan). | | |
| ***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”)*** | | | **X** | |  |  | ***Status? (completed, planned)*** |
| *if yes, indicate overall type and status* | | |  | | **X** | Targeted assessment(s)  Gender analysis  Stakeholder analysis  Occupational Risk Assessment  Environmental Audit | Completed  Completed  Planned  Planned |
|  | | **☐** | ESIA (Environmental and Social Impact Assessment) |  |
|  | | **☐** | SESA (Strategic Environmental and Social Assessment) |  |
| ***Are management plans required? (check if “yes)*** | | | **X** | |  |  | |
| *If yes, indicate overall type* | | |  | | **X** | Targeted management plans  Gender Action Plan  Stakeholder Engagement Plan  Occupational Health and Safety Plan  Spill Prevention and Mgt. Plan  Restructuring (Jobs) Plan | Completed  Completed  Planned  Planned  If needed |
|  | | **☐** | ESMP (Environmental and Social Management Plan which may include range of targeted plans) |  |
|  | | **X** | ESMF (Environmental and Social Management Framework)  Risk 8 and Risk 10  (EIAs from Industries) | Planned |
| ***Based on identified risks, which Principles/Project-level Standards triggered?*** | | |  | | **Comments (not required)** | | |
| ***Overarching Principle: Leave No One Behind*** | | |  | |  | | |
| ***Human Rights*** | | | **☐** | |  | | |
| ***Gender Equality and Women’s Empowerment*** | | | **X** | |  | | |
| ***Accountability*** | | | **X** | |  | | |
| ***1. Biodiversity Conservation and Sustainable Natural Resource Management*** | | | **X** | |  | | |
| ***2. Climate Change and Disaster Risks*** | | | **X** | |  | | |
| ***3. Community Health, Safety and Security*** | | | **X** | |  | | |
| ***4. Cultural Heritage*** | | | **☐** | |  | | |
| ***5. Displacement and Resettlement*** | | | **X** | |  | | |
| ***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*** | ***Date*** | ***Description*** |
| QA Assessor |  | 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 |  | 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 |  | 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. |

### 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](https://info.undp.org/sites/bpps/ses_toolkit/default.aspx) 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? [[17]](#footnote-17) | *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? | *Yes* |
| 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 |
| **Sustainability and Resilience:** Screeningquestions 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**](#SustNatResManGlossary) **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* | Yes |
| 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? | Yes |
| 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?[[18]](#footnote-18) | No |
| 1.13 utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)[[19]](#footnote-19) | No |
| 1.14 adverse transboundary or global environmental concerns? | No |
| **Standard 2: Climate Change and Disaster Risks** |  |
| *Would the potentially involve or lead to:* |  |
| 2.1 areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunami or volcanic eruptions? | Yes |
| 2.2 outputs and outcomes sensitive or vulnerable to potential impacts of climate change?  *For example, through increased precipitation, drought, temperature, salinity, extreme events* | Yes |
| 2.3 direct or indirect increases in [vulnerability to climate change](#CCVulnerabilityGlossary) impacts or disasters now or in the future (also known as maladaptive 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? | Yes |
| **Standard 3: Community Health, Safety and Security** |  |
| *Would the 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? | Yes |
| 3.3 harm or losses due to failure of structural elements of the project (e.g. collapse of buildings or infrastructure)? | Yes |
| 3.4 risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health? | Yes |
| 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)? | Yes |
| 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)? | Yes |
| 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)? | Yes |
| 5.3 risk of forced evictions?[[20]](#footnote-20) | 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[[21]](#footnote-21)** |  |
| *Would the project potentially involve or lead to:* |  |
| 6.1 areas where indigenous peoples are present (including project area of influence)? | *No* |
| 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 ethnic minorities/indigenous peoples by the country in question)?  *If the answer to screening question 6.3 is “yes”, then the potential risk impacts are considered significant and the project would be categorized as either Substantial Risk or High Risk* | *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? | Yes |
| 7.2 working conditions that may deny freedom of association and collective bargaining? | Yes |
| 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? | Yes |
| 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 |
| **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](#TransboundaryImpactsGlossary)? | 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*](http://ozone.unep.org/montreal-protocol-substances-deplete-ozone-layer/32506)*,* [*Minamata Convention*](http://www.mercuryconvention.org/)*,* [*Basel Convention*](http://www.basel.int/)*,* [*Rotterdam Convention*](http://www.pic.int/)*,* [*Stockholm Convention*](http://chm.pops.int/) | No |
| 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 |

## Annex 6: UNDP Risk Register

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Description** | **Risk Category** | **Impact & Likelihood** | **Risk Treatment / Management Measures** |
| 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 | Operational  Organizational  Regulatory | I=2  L=1  Low | Through Component 1, Activity 1.1.1, Activity 1.2.1 will 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. Although this risk is LOW, the project will undertake these activities as incremental support resulting from the improved Regulatory and Institutional Frameworks. |
| 2 | Small or medium sized manufacturers and health care facilities are not involved in decision-making regarding development of policy and regulatory frameworks and green procurement standards and do not have equal access to financing through the Green Finance Framework | Regulatory  Financial  Strategic | I=3  L=3  Moderate | Stakeholder engagement will be undertaken to ensure fair representation of small and medium sized manufacturers of mercury medical devices who may otherwise be marginalized from participating in any financing schemes and be at a disadvantage once the final phase out of mercury device production for domestic markets commences at the end of 2025 (Activities 1.3 and 1.4). A Stakeholder Engagement Plan (SEP) has been prepared (ProDoc Annex 5) to incorporating 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 quality-controlled conversion of production lines. It will also create a procurement subsidization scheme 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. |
| 3 | Potential risk to enterprise viability and workers’ employment, particularly women, in the course of the transition to production of non-mercury devices, in particular. | Social and Environmental  Strategic | I=3  L=4  Moderate | The project is designed to help with the transition to non-mercury medical devices, since there will be mandatory end of production of mercury devices for export by the end of 2020 and complete shut- down of production for domestic markets by the end of 2025. The project is therefore inherently addressing the risk of loss of income for businesses from mandatory shut down of mercury device manufacture under Minamata Convention compliance implementation, by offering capacity for production of non-mercury equipment, and preserving livelihoods. Nevertheless, stakeholder engagement throughout project implementation will ensure that enterprises that may be affected by the project all benefit from this support through capacity building and awareness raising on green financing available (Activities 1.3.1 and 1.4.1). A Stakeholder Engagement Plan has been prepared for that purpose.  A risk assessment will be undertaken for the alternative technology (Activity 2.1.1) to be used taking into consideration avoiding retrenchment. The industry will consult with trade unions or other workplace representatives over the proposed redundancies on measures to avoid or reduce redundancies, the method of selection and mitigating the effects, integrating outcomes into the final restructuring plan. This includes potentially training qualified existing staff on other roles or skills that may be needed at the industry. Where no viable alternatives are identified, a Restructuring Plan will be developed to reduce and mitigate adverse impacts of retrenchment on workers. At a minimum, the Restructuring Plan will include the following:  Ensuring that any collective dismissals are carried out in accordance with the provisions of national law and applicable collective agreements.   * Ensuring that the criteria for selection for redundancy are objective, fair and transparent and aim to be gender-neutral; and implement a procedure which provides individuals with the right to challenge their selection. * Ensuring that all outstanding back pay, social security benefits and pension contributions and benefits are paid to those affected by retrenchment in a timely manner.   In the case of large-scale redundancies, provide the UNDP with a copy of the restructuring plan in advance of any dismissals. |
| 4 | 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 | Social and Environmental  Strategic | I=3  L=2  Moderate | The Gender Action Plan has addressed potential risks and included measures to mainstream gender in all project components, with specific focus on encouraging women representation in the following:   * Inter-ministerial committee for National Implementation Plan * Development of policy and regulatory frameworks, quality control standards, monitoring and management systems, and capacity-building programs * Capacity building of medical staff to use and maintain mercury-free devices, and to soundly manage obsolete mercury devices and related wastes * Cooperation with WHO to share knowledge about the replacement of mercury thermometers and sphygmomanometers in health care   Training on sound management of residual mercury stocks and obsolete mercury containing devices, and the remediation of contaminated sites on production sites and in medical facilities |
| 5 | Risk of release and worker/community exposure during decommissioning, transport and storage of waste mercury-related equipment, devices and elemental mercury in the course of the project | Social and Environmental  Operational  Health | I=4  L=2  Moderate | As part of the private sector risk assessment that will be undertaken, the project will ensure that the interim storage facilities at the selected enterprises (Activity 2.1.1 and Activity 3.3.1) are referring to the Minamata Convention’s Guidelines [on the environmentally sound interim storage of mercury](http://www.mercuryconvention.org/Portals/11/documents/forms-guidance/English/Guidelines_Environmentally-sound-interim-storage_Nov2018.pdf) 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 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.   Regarding the contaminated sites, an Environmental Risk Assessment will be undertaken referring to the [UNEP/Minamata Convention Guidelines on the Management of Contaminated Sites](http://www.mercuryconvention.org/Portals/11/documents/forms-guidance/English/Guidance_Contaminated_Sites_EN.pdf) which will require the identification and characterization of the scope (e.g., extent of contamination, proximity to human populations, depth to groundwater, proximity to surface water or sensitive habitats), analysis of the hazard level and toxicity, analysis of exposure and analysis of risks to determine the level of management and remediation possible. |
| 6 | Risk of flooding of mercury device interim storage facilities | Social and Environmental  Operational  Health | I=3  L=2  Moderate | As mentioned earlier, the project, through the environmental audit of the interim storage facilities, will take into consideration flood risks when locating and designing storage facilities to minimize the risk of inundation. |
| 7 | Increased GHG emissions from alternative processes to eliminate the use of Mercury | Social and Environmental  Regulatory  Strategy | I=3  L=3  Moderate | When selecting the process for the transition of industries (Activity 2.1.1), the level of GHG emissions of the considered alternatives will be one of the criteria to be evaluated for best environmental practice and SES requirements will be followed where applicable. |
| 8 | Resettlement or economic displacement or damage to agricultural lands indirectly resulting from the project’s identification of contaminated sites that require remediation in pilot sites through co-financed activities | Social and Environmental  Regulatory | I=4  L=2  Moderate | An appropriately scoped ESMF will be developed to manage this risk and all E/S risks associated with these specific co-financed activities. The risk management strategy that will be developed as part of Activity 3.2.2 and will be part of the cooperation agreement / contracts to be signed with each demonstration company per site.  The management strategy carries the appropriate Environmental Impact Assessment (EIA; required under national law for this co-financing activity) and will address all relevant SES requirements for the land identified as contaminated in Activity 3.1.1. This will be further described in the forthcoming ESMF, including the extent to which consistency with the SES is necessary under the policy for these co-financed activities that fall outside the project’s framework.  These will include, amongst other measures, consultations with affected persons in line with the Stakeholder Engagement Plan. |
| 9 | Working conditions that do not meet national labor laws and international commitments and exposure to health and safety risk within the demonstration enterprises and hazardous waste disposal enterprises | Social and Environmental  Regulatory  Health | I=4  L=2  Moderate | Prior to engaging any enterprise, in particular the demonstration enterprises that manufacture medical thermometers (Activity 2.1.1) and sphygmomanometers, a private sector risk assessment will be conducted. This will be done through a visit to the facility and ensuring that occupational health and safety measures are applied (through an Occupational Risk Assessment) and that the interim storage facilities where mercury will be stored, prior to disposal, are referring to Minamata guidelines and that the necessary “Safety Certification” has been obtained from local authorities. If not already available at the enterprises, an Occupational Health and Safety Plan that determines the measures to be adopted (such as ventilation and wearing personal protective equipment) will be prepared and implemented.  In addition, the demonstration enterprises will confirm that they have ensured the hazardous waste disposal enterprises they engaged/will engage are duly registered and authorized to conduct such business. |
| 10 | Health and safety risk to workers during refurbishment of demonstration enterprises | Social and Environmental  Regulatory  Health | I=3  L=2  Moderate | As noted above, an appropriately scoped ESMF will be developed to manage this risk and all E/S risks associated with these specific co-financed activities. The contractor engaged in the refurbishment activities will be required to submit and implement a worker health and safety plan in line with Local Regulations as well referring to International Standards and Guidelines of the Minamata Convention (for BAT/BEP). The project will approve this plan and ensure that it is being implemented. These risk management actions will be conducted in line with UNDP´s SES. |
| 11 | The COVID-19 Pandemic may inhibit the smooth implementation of this project, especially the sharing of the foreign experiences | Operational  Health | I=2  L=2  Low | Government of China at different levels has taken rigorous measures to prevent COVID-19. Besides, since temperature check are frequently performed, the conveniences of mercury-free thermometers are more preferred compared to mercury-containing medical thermometer. This can also promote the implementation of this project.  As China has instituted strict measures and has been able to contain the epidemic during its peak spreading period. Together with increased population being vaccinated, domestic cases gradually zeroed out and the national economy has returned to the right track under the guidance of national health policies.  The project plans to carry out continuous monitoring and assessment of the impact of COVID-19 on the progress of project implementation, and undertake appropriate adaptive management. Project management and implementation supervision can be undertaken through various means such as online and telephone interactions, international experiences may be shared through web seminars. |

## Annex 7: Overview of Project Staff and Technical Consultancies

| **Consultant** | **Time Input** | **Tasks, Inputs and Outputs** |
| --- | --- | --- |
| **For Project Management** | | |
| **Local / National contracting** | | |
| Project Manager / Coordinator  Rate: $975/week | 260 weeks / over 5 years | The Project Manager (PM), together with the Lead Technical Advisor 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. PM has the authority to implement the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The PM is responsible for the day-to-day management and decision-making for the project. The PM’s prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.  Duties and Responsibilities   * Provide direction and guidance to project team(s)/responsible party(ies); * Liaise with the Project Board to assure the overall direction and integrity of the project; * Identify and obtain any support and advice required for the management, planning and control of the project; * Responsible for project administration; * Plan the activities of the project and monitor progress against the project results framework and the approved annual work plan; * Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors’ work; * Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required; * Manage requests for the provision of financial resources by UNDP through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures; * Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports; * Be responsible for preparing and submitting financial reports to UNDP 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; * Capture lessons learned during project implementation; * Prepare annual work plan for the following year; and update the Atlas Project Management module if external access is made available. * Prepare the inception report no later than one month after the inception workshop. * Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR. * Prepare the GEF PIR and submit the final report to the Project Board; * Based on the GEF PIR and the Project Board review, prepare the AWP for the following year; * Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans; * Monitor and track progress against the GEF Core indicators; * Ensure the mid-term review process is undertaken as per the UNDP guidance, and submit the final MTR report to the Project Board; * Identify follow-on actions and submit them for consideration to the Project Board; * Ensure the terminal evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Board. |
| Project Assistant  Rate: $650/week | 260 weeks / over 5 years | Duties and Responsibilities  Under the guidance and supervision of the Project Manager, 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, TAC, UNDP, project consultants and other PMU staff; * Provide PMU-related administrative and logistical assistance. |
| Project Finance Assistant  Rate: $740/week | 260 weeks / over 5 years | Duties and Responsibilities   * Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager; * Review project expenditures and ensure that project funds are used in compliance with the Project Document and Government of China financial rules and procedures; * Validate and certify FACE forms before submission to UNDP; * Provide necessary financial information as and when required for project management decisions; * Provide necessary financial information during project audit(s); * Review annual budgets and project expenditure reports, and notify the Project Manager if there are any discrepancies or issues; * Consolidate financial progress reports submitted by the responsible parties for implementation of project activities; * Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports. |
| **For Technical Assistance** | | |
| **Outcome 1.1** | | |
| **Local / National contracting** | | |
| National Technical Advisor  Rate: $2,000/week | 46 weeks / over 5 years | Under close supervision of Lead Technical Advisor and Project Manager (PM) the National Technical Advisor (NTA) will play an important role and be responsible for stakeholder engagement through implementation of the plan, and to validate resource requirements and associated budget. The NTA will be a specialist in mercury related works, with knowledge in the field of policy and planning, technical transfer and investment, mercury monitoring, green procurement and current mercury status in the Chinese medical institutions. The NTA will work closely with the National Stakeholder Advisor, Project Gender Officer, Project Safeguards Officer and other specialists to conduct capacity building related to the project and also support a working group for improved capacity building and work with that group to:   * Provide technical guidance for the overall conduct of the project; * Contribute to the development of a capacity development strategy and action plan for increasing management effectiveness. * Conduct training need assessment and develop training plan covering also governmental officials such as inspection officers. * Work closely with other project specialists to conduct relative work and support technical suggestions; * Coordinate the development and institutionalisation of knowledge management system enabling learning from, and upscaling of, pilot/individual project activities; * Monitor project progress and responsible for the production of progress reports ensuring that they meet the necessary reporting requirements and standards; * Work with the M&E officer to support mid-term and terminal evaluations of the project; including management responses; * Visit project sites as and when required investigate the status of project-related industry on the ground and validate written progress reports. |
| **Outcomes 2.1 and 3.1** | | |
| Project Safeguards and Environmental Sound Management Officers (2)  Rate: $1,923/week | One officer for 8 weeks under Outcome 2.1 and another for 46 weeks under Outcome 3.1, over 5 years | Duties and Responsibilities   * Monitor progress in development/implementation of the project ensuring that UNDP’s SES policy is fully met and the reporting requirements are fulfilled; * Oversee/develop/coordinate implementation of all safeguard and environmental sound management (ESM) related plans; * Conduct private sector risk assessment t, prepare technical guidelines and implement sound chemicals management plan including a Spill Prevention Management Plan; * 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; * Ensure environmental and social risks are identified, avoided, mitigated and managed throughout project implementation; * Monitor progress in implementation of the project ESM Implementation Program ensuring that targets are fully met and the reporting requirements are fulfilled; * Review the ESM Implementation Program annually, and update and revise corresponding implementation programs as necessary; * Contribute to the development of official guidelines for risk management strategy and environmental sound management technical guidance * Work with the M&E officer, Stakeholder Advisor and Gender Officer to ensure reporting, monitoring and evaluation fully address the safeguard issues of the project. |
| ***Outcome 4.1: KM and M&E*** | | |
| National Stakeholder Advisor  Rate: $1,923/week | 16 weeks / over 5 years | Duties and Responsibilities   * Oversee/develop/coordinate implementation of all stakeholder-related work; * Monitor progress in the implementation of the project Stakeholder Engagement Plan ensuring that targets are fully met and the reporting requirements are fulfilled; * Review the Stakeholder Engagement Plan annually, and update and revise corresponding management plans as necessary; * Work with the M&E officer, Project Gender Officer and Safeguards Officer to ensure reporting, monitoring and evaluation fully address the stakeholder issues of the project. |
| Project Gender Officer  Rate: $1,923/week | 16 weeks / over 5 years | Duties and Responsibilities   * Oversee/develop/coordinate implementation of all gender-related work; * Monitor progress in implementation of the project Gender Action Plan ensuring that targets are fully met and the reporting requirements are fulfilled; * Review the Gender Action Plan annually, and update and revise corresponding management plans as necessary; * Work with the M&E officer, Stakeholder Advisor and Safeguards Officer to ensure reporting, monitoring and evaluation fully address the gender and stakeholder issues of the project |
| **International / Regional and global contracting** | | |
| International Mercury-containing Medical Devices Phase-out Strategy Advisor  Rate: $ 2,000/week | 23 weeks / over 5 years | In close coordination with the Project Manager (PM), will provide international perspective, strategic guidance, safe substitution experience and technical inputs on the replacement of mercury-containing products. The Advisor will be a specialist in designing and developing strategy about substituting mercury-based medical devices in medical institutions, in close collaboration and in conjunction with WHO and associated international agencies, and will support the implementation of activities under following outputs, including:   * For Outputs 1.2 and 1.4, the Advisor will provide international best practice and experience of substituting mercury-based medical devices production in manufacturing facilities, including policy and regulatory frameworks, quality control standards, monitoring, management and financing systems of mercury-free alternative production, mercury wastes and contaminated sites, etc.. The Advisor will also conduct a gap analysis in this area and make suggestions for policy and regulatory measures improvement; * For Output 2.1.1, the Advisor will provide international best practice, experience and technical guidance to demonstration enterprises and the industry in the conversion to production of mercury-free devices to achieve reduction of 75 metric tons of mercury by project completion; * For Output 2.2.1, the Advisor will provide international experience, practice and technical guidance to build capacity at medical institutions on the application and maintenance of mercury-free medical devices, and to sound management of obsolete mercury devices and related wastes; Contribute to the implementation of Project Implementation Training Development Plan to raise focal competencies of doctors and nurses in medical institutions, including how to use mercury-free thermometers and sphygmomanometers correctly, calibrate and maintain mercury-free thermometers and sphygmomanometers, etc. * For Outputs 3.1 and 3.2, support and contribute to conducting inventory of mercury contaminated sites at enterprises; risk management strategy, technical guidance and training materials. |

## 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 “Demonstration of phase-out of mercury-containing medical thermometers and sphygmomanometers and promoting the application of mercury-free alternatives in medical facilities in China.”

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 Foreign Environmental Cooperation Center (FECO) of the Ministry of Ecology and Environment (MEE), 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.

**Abbreviations and Acronyms**

APR Annual Project Report

AWP Annual Work Plan

CNY Chinese yuan

EA Executing Agency

EIA Environmental Impact Assessment

GEF Global Environment Facility

IA Implementing Agency

IMC Inter-ministerial Committee

M&E Monitoring and evaluation

MEE Ministry of Ecology and Environment

MoF Ministry of Finance

MTR Midterm Review

NDRC National Development and Reform Committee

NPD National Project Director

PIF Project Identification Form

PIMS Project Information Management System

PIR Project Implementation Review

PIU Project Implementation 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

1. **Introduction**
2. 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**

1. 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 Demonstration of production phase-out of mercury-containing medical thermometers and sphygmomanometers and promoting the application of mercury-free alternatives in medical facilities in China (the project).

**Scope of the plan**

1. 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.
2. **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.
3. 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 China.
4. **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 project site, or live in the areas of the project influence/impacts.

**Methodology and methods**

1. 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, FECO 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 2020. 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**

1. 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 and guidelines on engagement with indigenous peoples (2012), GEF Policy on Gender Equality (2017), and UNDP Social and Environmental Standards (2019).
2. **Stakeholder Analysis**
3. 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 China. 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 3.

**Table 3: Summary of Key Stakeholder Analysis**

| **Key Stakeholders** | **Mandate Relevant to the project** | **Roles in the project** |
| --- | --- | --- |
| **National level administrative authorities** | | |
| Ministry of Finance (MoF) | MoF manages loans (grants) from multi- and bi-lateral development organizations and foreign governments. | GEF Operational Focal Point (OFP). Coordination and implementation of GEF projects in China. The MoF was briefed on project development and will endorse the final Project Document. |
| National Development and Reform Commission (NDRC) | NRRC is responsible for promotion of the strategy of sustainable development through its lead role in the five-year planning process.  NDRC makes proposal on strategy, plan, and relevant policies on using foreign funds. | NDRC will be a key partner in project mainstreaming efforts related to its lead role in the adjustment of industrial structure |
| Ministry of Ecology and Environment (MEE) | Supervise and administer to ensure the attainment of national emission reduction targets；  Supervise efforts to prevent environment pollution; Formulate and implement regulations for pollution of the air, water, sea, soil, noise, light, odor, solid waste, chemicals, and vehicles;  Guide and coordinate educational campaigns over ecological environmental protection; Formulate and implement educational campaign outlines for ecological environmental protection; Promote societal and public participation in environmental protection efforts;  Responsible for implementing Minamata Convention in China | Advise and supervise the project development relate to management of mercury-polluted production sites and disposal of obsolete mercury-containing equipment |
| Foreign Environmental Cooperation Centre (FECO), Ministry of Ecology and Environment, China | Provide key technical support to MEE for implementing Minamata Convention in China | As the executing agency of the project, FECO is responsible for the project design, advise and supervise the project implementation. |
| National Health Commission of PRC | Makes proposal on the demonstration and expansion medical facilities to apply mercury-free medical devices. | Join the project inter-Ministerial Committee to jointly develop and implement the necessary policy, regulations, action plans, tools and guidelines, relevant to mercury-free devices use and scientifically disposal of obsolete mercury-containing medical devices  Advise the demonstration and expansion medical facilities to apply mercury-free medical devices, and dispose obsolete mercury-containing medical devices. |
| State Administration for Market Regulation | Responsible for comprehensive management of market. Develop regulations and policies on marketing | Join the project inter-Ministerial Committee to jointly develop and implement the necessary policy, regulations, action plans, tools and guidelines, relevant to trade and phase out of mercury-free thermometer and sphygmomanometer production;  Advise the demonstration enterprises to implement the policies and regulations made by the Cross Ministerial Cooperation, and to trade and phase out mercury-containing medical devices production |
| 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. |
| 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 Commissions | 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 obsolete mercury-containing medical devices. |
| Provincial and/or local environmental management department | Carry out management of ecological and environmental protection and supervise the implementation | Supervise the demonstration enterprises and medical institutions to implement the policies and regulations made by the Cross Ministerial Cooperation, ecological and environmental protection, and the phase-out of mercury-containing medical devices production |
| **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 China. |
| 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 |
| **Other stakeholders** | | |
| Mercury mining enterprises | Mining and trade mercury commercially | Reduce mining mercury to stop providing mercury to the demonstration mercury-containing medical devices enterprises |
| 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 |
| 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 |
| CSOs | Have their focuses and special interests on mercury pollution. | 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 in the influential area of the mercury-polluted sites;  Living surrounding the demonstration medical facilities;  Communities of project publicity on application of mercury-free thermometers and sphygmomanometers | Participate in design of dealing with mercury-stock in the demonstration enterprises, and/or participate in design of disposal scheme of obsolete mercury-containing medical devices in the medical facilities  Targets of the project publicity on application of mercury-free thermometers and sphygmomanometers |
| 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.

1. 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 4.

**Table 4: 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 China is lower than that of men, which means that women have relatively less opportunity to be employed. his 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.

1. **Stakeholder Engagement Plan**
2. Based on the stakeholder analysis, stakeholders were consulted and surveyed during the project preparation, which were shown in Table 5. 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 6: Stakeholder Engagement during Project Implementation.

**Stakeholder engagement during the project preparation**

1. Due to the pandemic of the COVID-19, the stakeholder consultations during the preparation phase were mainly done online or by email, via phone call, etc. Since the PPG team started working on the project, several online meetings on identifying key stakeholders, their roles, interests, and responsibilities, were conducted led by FECO and UNDP; survey questionnaires were discussed, improved, and finalized; seven mercury-containing thermometer production enterprises, three mercury-containing sphygmomanometer production enterprises were surveyed for two runs, and seventeen medical facilities were surveyed during the PPG stage. (Table 5)

**Table 5: 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 enterprises are all private. The enterprises produced over 80% of the total mercury-containing thermometers and about 85% of the mercury-containing sphygmomanometers in China in 2019 | Collect information on production of mercury-containing and mercury-free thermometers and sphygmomanometers in the PRC, management situation of mercury stock, etc. | * Jiangsu Yuyue Medial Equipment Co. Ltd. (Chenyu Company) * Dong'a-hua Medical Technology Co., Ltd. (Dong’e Company) * Anhui Fangda Medical Equipment Co., Ltd (Fangda Company) * Hongjiang Zhengxing Medical Instrument Factory (Hongjiang Company) * Wuxi Medical Instrument Factory Co., Ltd (Wuxi Company) * Shaanxi medical instrument factory (Shaanxi Company) * Jiangsu Huachen Medical Instrument Co., Ltd (Huachen Company) * Jiangsu Yuyue Medical Equipment & Supply Co., Ltd. (Yuyue Company) * Jiangsu Yuanyan Medical Equipment Co., Ltd. (Yuanyan Company) | March-June 2020 | Situation of the enterprises: productivity of mercury-containing and mercury-free medical devices, management situation of mercury stock, etc. |
| Meeting of PPG members with UNPD and FECO | * 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 * FECO * PPG Lead consultant * PPG National technical consultant * PPG Gender and stakeholder specialist * PPG Mercury Waste Handling and Management Specialist * PPG Industry Information, Policy and Technology Specialist * Others | April 7, 2020 | * Clear understanding of the project * identification of the key stakeholders |
| Second run of questionnaire survey of the enterprises | Further understand situation of enterprises producing mercury-containing thermometers and mercury-containing sphygmomanometers | * Chenyu Company * Dong’e Company * Fangda Company * Hongjiang Company * Wuxi Company * Shaanxi Company * Huachen Company * Yuyue Company * Yuanyan Company | 15 Apr-15 May, 2020 | Situation of the enterprises: updated situation of production of mercury-containing and mercury-free medical devices, willingness to phase out, women and men, Han and ethnic minority workers etc. |
| Meeting of PPG members with the EA | Methods and tools developed for consultation of the key stakeholder | * FECO team * PPG National technical consultant * PPG Gender and stakeholder specialist * PPG Mercury Waste Handling and Management Specialist * PPG Industry Information, Policy and Technology Specialist * PPG Medical Information, Policy and Technology Specialist Others | May 8 2020 | Finalization of survey questionnaire for surveying relevant medical facilities  Sampling and survey methods agreed |
| Questionnaire survey of medical facilities | Questionnaire and survey outline | * 25 medical facilities in Beijing City, Guangxi Zhuang Autonomous Region, Jiangxi and Jiangsu Province | May – July 2020 | Situation of the medical facilities: use of mercury-containing medical devices, willingness to apply mercury-free devices, women and men medical staff, etc. |
| Meeting of exchange experience on promote mercury-free products in medical institutions | Interchange experience on promoting replacement mercury-containing devices in hospital | * FECO * Experts in medical apparatus and instruments from different hospital that has taken some actions to promote mercury-free products * PPG project design team | Sep 11 2020 | Some lesson learned on promoting replacement mercury-containing devices in hospital which make for project design. |
| 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 * FECO * PPG Lead consultant * PPG International Training Specialist * PPG SESP Specialist * PPG National technical consultant * PPG Gender and stakeholder specialist * PPG Mercury Waste Handling and Management Specialist * PPG Industry Information, Policy and Technology Specialist * PPG Medical Information, Policy and Technology Specialist * Others | Sep 21 2020 | The initial consensus reached on the Project Document |
| Meeting of technical feasibility on Galinstan-in-glass thermometers | * Further understanding the technical feasibility on exchanging mercury-containing thermometers to Galinstan-in-glass ones | * FECO * CAMDI * PPG Lead consultant * PPG Mercury Waste Handling and Management Specialist * R&D experts on Galinstan-in-glass thermometers | Jan 19 2021 | The initial consensus reached on the technical feasibility on exchanging mercury-containing thermometers to Galinstan-in-glass ones |
| Validation Workshop Meeting | * Achieve consensus on the designed activities and risk management of the Project Document by key stakeholders. | * UNDP * FECO * PPG project design team * All the potential demonstration enterprises * Local administration unit with the potential demonstration medical institutions within their administrative scope * Experts from related medical institutions and scientific research institutes * Others | Feb 25 2021 | The key stakeholders reach a consensus on Project Document. |

**Stakeholder engagement during the project implementation**

1. 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 6: Stakeholder Engagement during Project Implementation).

**Table 6: 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，Han and Ethnic minorities | GEF agency (UNDP), GEF partner (FECO), PMO, | Disclosed on websites of the UNDP, and FECO | Before the project implementation | The project 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 residents in the communities surrounding (within 500 m）the mercury contaminated sites of waste and obsolete mercury-containing medical thermometers and sphygmomanometers | PMO  The demonstration enterprises | The relevant communities | Ditto | The project 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 | GEF agency (UNDP).  GEF partner (FECO),  PPG Team | Online | Before finalization of project document and CEO Endorsement Request | PPG budget |
| 1. **Engagement in project implementation** | | | | |  |  |
| Competitive bidding for the demonstration enterprises | Select the most suitable enterprises | All the enterprises interested in the demonstration | PMO | 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 selection criteria and the local situation | Select the most suitable medical facilities | All the medical facilities interested in the demonstration | PMO 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, FECO, the PMO | TBD | Project Inception Period | The project budget |
| **For Component 1: Integrated policy, regulatory framework, quality standards, fiscal tools, action plans and associated capacities, to support the phase out of mercury-containing medical thermometers and sphygmomanometers under the Minamata Convention** | | | | | | |
| 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, FECO, the PMO | TBD | During the project implementation | The project budget |
| 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 | Ditto | TBD | Ditto | 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 thermometers and sphygmomanometers 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 | Ditto | TBD | Ditto | The project budget |
| **For Component 2. Demonstration of technology transfer and investment for (i) supporting enterprises in phasing out the production of mercury-containing medical devices; (ii) the application of mercury-free devices in medical facilities, and (iii) enhanced knowledge base for the risk assessment and sound management of obsolete mercury devices, contaminated materials/wastes, and contaminated areas on premises** | | | | | | |
| Demonstration of mercury-containing production phase-out | Mercury-containing medical thermometer and sphygmomanometer production phased out | The project demonstration enterprises with women and men participants | The PMO,  the demonstration enterprises | Location of the enterprises | During the project implementation | The project budget |
| Demonstration of application of mercury-free thermometers and sphygmomanometers | Mercury-free thermometers and sphygmomanometers application demonstrated | The selected medical facilities who will demonstrate application of mercury-free thermometers and sphygmomanometers | The PMO, the demonstration medical facilities | Location of the medical facilities | During the project implementation | The project budget |
| Expanded application of mercury-free thermometers and sphygmomanometers | Mercury-free thermometers and sphygmomanometers application expanded | Potential medical facilities who have willingness to apply mercury-free thermometers and sphygmomanometers | The PMO, the demonstration medical facilities, and the expansion medical facilities | Location of the medical facilities | During the project implementation | The project budget |
| **For Component 3. Development of long-term guidance and tools for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers, and mercury-contaminated areas** | | | | | | |
| Information collection | Develop inventory of mercury contaminated sites at pilot enterprises producing mercury-containing medical thermometers and sphygmomanometers | All enterprises who are producing mercury-containing medical thermometers and sphygmomanometers | FECO, the PMO | TBD | During the project implementation | The project budget |
| 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 | FECO, the PMO | 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 | FECO, the PMO | TBD | During the project implementation |  |
| **For component 4: Knowledge Sharing & Management** | | | | | | |
| Workshop, online communication, etc. | Increase stakeholders’ awareness and share 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 | Demonstration enterprises: men and women staff | PMO  Communication staff and/or specialist | Website, media, and other ways | During the project implementation | Project budget |
| 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 | PMO  Communication staff and/or specialist | Website, media, and other ways | During the project implementation | Project budget |
| 1. **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 | The PMO | 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: | PMO, monitoring staff | Suitable places and/or channels identified during the monitoring | Ditto | Project budget for Component 2 |
| * Consultation with academic and research institutions, relevant governments, and other stakeholders | Experiences and suggestions from the stakeholders obtained for effectively implementation of the project | Relevant academic,  Research institutions etc. | PMO, monitoring staff | Suitable places and/or channels identified during the monitoring | Ditto | Project budget for M&E |
| 1. **Mid-term review and terminal evaluation** | | |  |  |  |  |
| Consultation with relevant stakeholders | Evaluation done effectively and adaptive management instituted | Key project stakeholders | PMO, 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, FECO and PMO | Disclosed on websites of the GEF, UNDP, the FECO | 4 weeks after the evaluation reports finalized | Project budget for M&E |
| 1. **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 | PMO, relevant project agencies | Disclosed on websites of the project and/or FECO | 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 | PMO, 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 | PMO, relevant project agencies | same way replying to the request | Within 2 weeks after received the request | Project budget for communications |
| 1. **Grievance redress mechanism** | | |  |  |  |  |
| Step 1: affected people submit grievance if any to the contacts of demonstration enterprises or medical facilities | express grievance | People or organizations submitted grievance | Relevant demonstration agency | Written grievance | Any time during the project implementation | Project budget for M&E |
| Step 2: demonstration agencies address the grievance | Address grievance | People or organizations submitted grievance | PMO, 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 PMO | Address grievance | People submitted grievance | PMO | 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 | PMO  The administrative authorities | Suitable ways |  |  |

## Annex 9: Gender Analysis and Gender Action Plan

**Executive Summary**

The objective of this gender analysis and mainstreaming plan is to provide a framework for the project implementation team to ensure women and men will be equally involved in the project, and receive equitable social and economic benefits.

This gender analysis and mainstreaming plan was developed in accordance with the UNDP Gender Equality Strategy 2018-2021, UNDP Social and Environmental Standards (2014)[[22]](#footnote-22), the UNDP Guidance Note on Gender Analysis[[23]](#footnote-23), GEF 2020 Strategy, GEF Policy on Gender Equality (2017), GEF policy on Environmental and Social Safeguards (2015), GEF Policy on Public Involvement in GEF Projects (2012) and Guidelines for the Implementation of the Public Involvement Policy (2014).

The plan was developed based upon consultations with the stakeholders, review of available documents, collection of secondary data, and analysis of the data collected.

Overall strategy of the plan is to ensure female residents’ equal participation in and benefit from the project as male ones. With support of gender focal points assigned by each of the PIUs, to collect detailed sex-disaggregated data on project beneficiaries and participants.

The following key strategies are proposed to promote gender equality during the project implementation:

* Establishment of gender-sensitive corporate environment for the project implementation
* Formulation of the project management committee and other relevant decision-making groups with enough consideration on increasing women’s involvement
* Integration of gender in the development of relevant policy frameworks
* Inclusion of all the displaced women’s reemployment policies and plans in the project phase-out guidelines
* Medical capacity development programs prioritize male and female clinic nurses in scientifically use of mercury-free thermometers and mercury-free sphygmomanometers
* The project publicity target toward women, who are key persons using thermometers at home
* Collection of sex-disaggregated data on the project implementation

**Abbreviations and Acronyms**

APR Annual Project Report

AWP Annual Work Plan

CNY Chinese yuan

CTA Chief Technical Advisor

DPC Direct Project Cost

EA Executing Agency

FECO Foreign Environmental Cooperation Center

GDP Gross Domestic Product

GEF Global Environment Facility

GMAP Gender mainstreaming action plan

Ha Hectare

IA Implementing Agency

M&E Monitoring and evaluation

MEE Ministry of Ecology and Environment

MTR Midterm Review

NGO Non-Governmental Organization

PIF Project Identification Form

PM Project Manager

PPG Project Preparation Grant (for GEF)

PSC Project Steering Committee

SMART Specific, Measurable, Achievable, Relevant and Time-bound

SRF Strategic Results Framework

TBD To Be Determined

TE Terminal Evaluation

TOR Terms of Reference

UNDP United Nations Development Programme

UNDP CO UNDP Country Office

USD United States Dollar

1. **INTRODUCTION**
2. The GEF-financed, UNDP-supported project of “*Demonstration of production phase-out of mercury-containing medical thermometers and sphygmomanometers and promoting the application of mercury-free alternatives in medical facilities in China*” (the project) is in its preparation stage. A Project Preparation Grant (PPG) has been secured to formulate the full-sized project.
3. The objective of the Project is to establish the enabling environment to accelerate the transfer to the production of mercury-free medical devices, and to lay the foundation for market acceptance and growth for mercury-free devices in medical facilities, in order to meet associated phase-out deadlines under the Minamata Convention on Mercury. UNDP is the GEF Implementing Agency. The Foreign Environmental Cooperation Center (FECO) of the Ministry of Ecology and Environment of the People’s Republic of China (MEE China) is the project executing entity.
4. In line with the gender equality policies, strategies, guidance, and standards of both UNDP and GEF, a Gender Mainstreaming Action Plan (GMAP) was developed, which analyses relevant gender situation in China, and develops the major strategies and actions to promote women’s and men’s equal participation in and benefit from the project considering different roles, needs, priorities, power, and responsibilities of between women and men.

**1.1 Objective of the Gender Mainstreaming Action Plan**

1. The objective of this gender analysis and mainstreaming plan is to provide the project implementation team a framework for ensuring women and men equally involved in the project receiving culturally adequate social and economic benefits.

**1.2 Methodology for development of the plan**

1. This gender mainstreaming action plan was developed in accordance with the GEF 2020 Strategy, GEF Policy on Gender Equality (2017), the GEF’s Gender Equality Action Plan (2014), GEF policy on Environmental and Social Safeguards (2019), GEF Policy on Public Involvement in GEF Projects (2012) and Guidelines for the Implementation of the Public Involvement Policy (2014)， UNDP Gender Equality Strategy 2018-2021, UNDP Social and Environmental Standards (2019), the UNDP Guidance Note on Gender Analysis.
2. The plan was developed based upon surveys of relevant project documents, consultations with seven mercury-containing thermometer production enterprises, three mercury-containing sphygmomanometer production enterprises, seventeen medical facilities, analysis of secondary data, and discussions with UNDP, FECO, and other members of the project preparation grant (PPG) team[[24]](#footnote-24).
3. **GENDER SITUATION ANALYSIS**

**2.1 Gender Situation in the PRC**

**2.1.1 Gender Situation in General**

1. Gender equality is the basic state policy of the People’s Republic of China (the PRC). Legally, women and men have equal social, political, and economic rights. The PRC recognizes the importance of gender equality and devotes great efforts on promoting gender quality. Significant advances in gender equality have been made since the founding of the PRC. Despite this progress however, gender inequality in practice continues to persist in many forms such as disparity in women’s political representation and participation. According to the World Economic Forum issued Global Gender Gap Report 2020, gender gaps in management and decision making were still big in the PRC.
2. **Global Gender Gap Index.** It is known from the World Economic Forum (WEF) Global Gender Gap Reports-2020 that China’s rank of Global Gender Gap Index went down from 63rd in 2006 to 106th in 2019. There was a huge gender gap in the political empowerment. Gender gap in the economic participation and opportunities was also big, especially that female legislators, senior officials and managers were much less than male ones (Figure 1). This implies that efforts to promote gender equality during the project implementation is needed and women’s inclusion in the project decision making is necessary. It also important to fully consider women’s situation in the relevant project related policies development.
3. **Gender gap in participation opportunities.** Gender gap in training opportunities was bigger than the gaps in economic participation and opportunities. Training opportunities for women were still less than men (Table 7). This implies that the project trainings should target toward women.

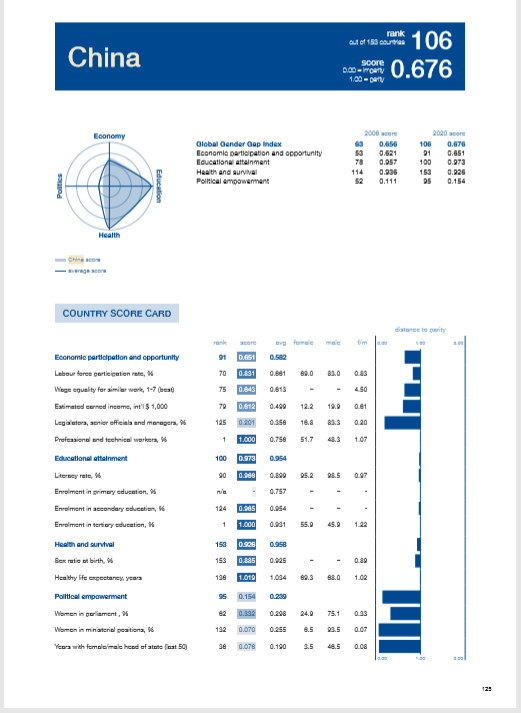
**Table 7: Employment in Yunnan in 2018**

|  |  |
| --- | --- |
|  | **Female （%）** |
| Total employees | 45.1 |
| Employees in urban institutions | 37.5 |
| Employees in state-owned enterprises | 37.2 |
| Newly-added skilled employees | 40.3 |
| Rural technical personnel | 40.2 |
| Senior professional staff in public institutions | 24.1 |
| Farmers participated in vocational trainings | 38.6 |
| People participated in non-farming skill trainings | 33.0 |

Source: Ou Xiaoou. CNwomen.com.cn. <http://www.cnwomen.com.cn/2019/12/17/99185274.html>

1. **Labor force participation:** data from the fifth and sixth National Population Censuses show that although the labor force participation (LFP) rates of both men and women were declining, women’s LFP rate was declining with a faster pace. The LFP rate has been falling for both women and men, but the gender gap in the LFP rate has been increasing since 2000.[[25]](#footnote-25) Since the market-oriented economic reforms, Chinese women’s LFP rate has declined. Especially after the privatization of state-owned enterprises in the 1990s, women’s LFP rate dropped by a large margin. Women have far fewer job opportunities than men in the labor market[[26]](#footnote-26). This implies that the project should pay great attention to women workers displaced due to the project.

Figure 3: Gender Gaps in China 2019



**2.1.2 Situation in Thermometer and Sphygmomanometer Production**

1. **Mercury-containing thermometer production.** By 2020 there were 18 companies who had licenses to produce mercury-containing thermometers. The companies are mainly located in Zhejiang, Anhui and Shandong provinces, with a total production of around 200 million mercury-thermometers in 2020. Seven of the companies were surveyed by the PPG team between March and July 2020. The seven companies produced over 50% of the total mercury-containing thermometers. It is from the survey that the majority of the workers (77.2%) for production of mercury-containing thermometers were women (Table 8). Production conversion to mercury-free medical devices will retrench the workers including women. It is responsibility of the demonstration companies to ensure reemployment of the retrenched staff. Without the project support, the women workers might have less opportunity to be reemployed. Therefore, the demonstration companies should pay more attention to the displaced women workers.

**Table 8: People in the Mercury-containing Thermometer Production (2019)**

|  | **Total (person)** | **Women (%)** | **Ethnic minority (%)** |
| --- | --- | --- | --- |
| Management staff | 45 | 70.0 | 2.2 |
| Production workers | 1,098 | 77.2 | 1.9 |
| **Total** | **1,143** | **76.5** | **1.9** |

Sources: survey on seven enterprises between April-July 2020.

1. **Mercury-containing sphygmomanometer production.** Number of companies who produced mercury-containing sphygmomanometers decreased in past years. It fell from 8 companies in 2016 to 5 companies who had licenses to produce mercury-containing sphygmomanometer in 2019. The companies were mainly located in Jiangsu and Shandong provinces. Of the five companies, Jiangsu Yuyue Medical Equipment & Supply Co., Ltd. (Yuyue) produced 70% of the total mercury-containing sphygmomanometers.
2. Of the five companies, three were surveyed by the PPG team between April-July 2020. The three companies produced about 85% of the total mercury-containing sphygmomanometers. It is from the survey that there were total 56 people including 51.8% of women working for the mercury-containing sphygmomanometers production in the three companies (Table 9). Similar to the demonstration mercury-containing thermometer production companies, it is responsibility of the demonstration mercury-containing sphygmomanometer companies to place great efforts to the women workers’ reemployment and to ensure the retrenched staff’s reemployment,

**Table 9: People in the Mercury-containing Sphygmomanometers Production (2019)**

|  | **Total (person)** | **Women （%）** | **Ethnic minorities（%）** |
| --- | --- | --- | --- |
| Management staff | 9 | 44.4 | 0 |
| Production workers | 47 | 53.2 | 0 |
| **Total** | **56** | **51.8** | **0** |

Sources: survey on three companies between March-July 2020.

**2.1.3 Gender Situation in Medical Facilities**

***In the People’s Republic of China***

1. There were a total of 997,433 healthcare facilities in the People’s Republic of China (the PRC) in 2018, which include 33,009 hospitals at county level and the above, 943,639 healthcare agencies at township level and the below (Table 10).

**Table 10: Healthcare Institutions in China (#) (2018)**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Total** | **Hospitals** | **Primary healthcare institutions** | | | | **Specialized public institutions** | **Others** |
| **Total** | **Township centers** | **Community centers** | **Village clinics** |
| 997,433 | 33,009 | 943,639 | 35,461 | 34,997 | 622,001 | 18,033 | 2,752 |

Source: China Health Statistics Yearbook-2019

1. Health systems in China show some gender differences such as labor division and associated hierarchies, with women frequently concentrated in specific segments of the health care. Women are less likely than men to be in senior professional, managerial and policy making positions.
2. It is from the statistics that the majority of **technical healthcare staff** in China are female. Table 11 gives the information in 2018. It indicates that of the total 9,529,179 technical medical employees, 71.8% were women. Of the 3,607,156 doctors, 46.2% were female. Of the 547,658 nurses, 97.7% were women. More female nurses are working in lower-level medical institutions. Of the nurses working in township healthcare institutions, 98.5% were female. Of the nurses working in urban communities, 99.3% were female. These imply that women’s capacity is crucial to application of mercury-free medical devices in the future in general and for the project in particular.
3. **Women proportion in the total management staff** is less than women’s share in the technical staff. As Table 11 shows that 53.9% of the management staff in the healthcare facilities were women, which was 17.9 percentage points lower than 71.8%, the women’s proportion in the total technical staff. This to some degree indicates that more efforts need be made to promote women’s participation in the project related activities and to women’s involvement in the decision making of the project.

**Table 11: Technical and Management Healthcare Staff in China (2018)**

| **No.** |  |  | **Technical healthcare staff** | | | **Management** |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Total** | **(a)  doctors** | **(b)  nurses** | **staff** |
| 1 | Hospitals at higher levels | person | 6,129,201 | 2,053,527 | 3,020,813 | 361,216 |
|  | Of which, women | % | 74.1 | 45.3 | 97.3 | 57.0 |
| 2 | Township healthcare centers | person | 1,151,278 | 466,049 | 340,952 | 43,109 |
|  | Of which, female | % | 63.4 | 40.6 | 98.5 | 40.7 |
| 3 | Community healthcare centers | Person | 499,296 | 209,392 | 189,207 | 23,455 |
|  | Of which, female | % | 75.2 | 56.9 | 99.3 | 60.2 |
| 4 | Others | Person | 1,749,404 | 878,188 | 547,658 | 101,265 |
|  | **Total** | **person** | **9,529,179** | **3,607,156** | **4,098,630** | **529,045** |
|  | **Of which, women** | **%** | **71.8** | **46.2** | **97.7** | **53.9** |

Source: China Health Statistics Yearbook-2019

1. **Medical staff’s knowledge on alternative mercury-free medical devices**. It is known from many surveys[[27]](#footnote-27) that one of the main reasons for low incentive of healthcare workers using the alternative mercury-free thermometers and mercury-free sphygmomanometers is that the healthcare workers do not have enough knowledge on and skills in applying the devices, which often lead to unstable and inaccurate performance results. It should greatly facilitate application of mercury-free thermometers and mercury-free sphygmomanometers that provision of sufficient training to healthcare staff on relevant knowledge and skills.

***In the surveyed medical establishments***

1. The PPG team surveyed 25 medical institutions at various levels in four provinces/region/municipality between April-July 2020. It is known from the survey that women account for the majority of the staff (Table 12). The departments who use thermometers and sphygmomanometers the most vary across the institutions, from Emergency Department to Departments of Obstetrics, Pneumology, and so on. It implies that the project trainings related to application of mercury-free medical devices should target toward departments who will use mercury-free thermometers and mercury-free sphygmomanometers the most in the demonstration medical facilities if resources are limited during the project implementation.
2. Of the staff in the departments who use thermometers the most in the surveyed medical institutions, 53.8% of the clinicians were female and 94.0% of the clinic nurses were female. Of the staff in the departments who use sphygmomanometers the most in the surveyed medical institutions, 53.3% of the clinicians were female and 93.40% of the clinic nurses were female. That is, female clinicians and female nurses are the major body who will apply mercury-free thermometers and mercury-free sphygmomanometers. For the purpose of application of mercury-free medical devices, female staff should be the major targets of the project trainings related to application of mercury-free thermometers and mercury-free sphygmomanometers.
3. It is also worth attention that percentages of female clinicians and female nurses vary across medical institutions. Relatively, more female clinicians are in county-level hospitals than in the others. Female clinicians working at village clinics are much less than in other medical institutions. Nearly all nurses in the departments of county-level and the below are female (Table 12). This indicates that the project should take different measures to target its trainings related to application of mercury-free medical devices toward the clinic staff who have demand. For example, to set up a minimum quota for female clinicians in village clinics to participate in the project trainings. While for other medical facilities to target departments first, and then require women’s equal participation in the project trainings.

**Table 12: Staff in the Surveyed Medical Institutions (2019)**

| **Type of the institution** |  | **Hospitals above county level** | **County-level hospitals** | **Township level hospitals** | **Village clinics** | **Total** |
| --- | --- | --- | --- | --- | --- | --- |
| Institutions surveyed | # | 7 | 6 | 6 | 6 | 25 |
| Total staff in the institutions | person | 28,049 | 7,638 | 582 | 18 | 36,287 |
| Of which, female | % | 65.1 | 70.2 | 66.8 | 27.8 | 66.2 |
| Total clinic staff in the institutions | person | 18,895 | 5,639 | 428 | 18 | 24,980 |
| Of which, female | % | 70.2 | 75.2 | 68.5 | 27.8 | 71.2 |
| Departments in the institutions using thermometers the most |  | Emergency, Obstetrics, Orthopaedics  Pneumology | Obstetrics, Neurology, Infection diseases, Social services | General, Nursing, Inpatient, Pediatric | Village clinics |  |
| Clinicians in the departments | person | 295 | 50 | 48 | 15 | 408 |
| Of which, female | % | 52.9 | 73.0 | 43.6 | 26.7 | 53.3 |
| Clinic nurses in the departments | person | 575 | 132 | 79 | 1 | 787 |
| Of which, female | % | 91.8 | 100.0 | 100.0 | 100.0 | 94.0 |
| Other staff in the departments | person | 88 | 65 | 26 | 2 | 181 |
| Of which, female | % | 57.5 | 100.0 | 38.5 | 0.0 | 69.4 |
| Departments in the institutions using sphygmomanometers the most |  | Emergency, Hematology, Orthopedics,  Pneumology | Hemodialysis, Nephrology, Neurology, Pneumology | Cardio-cerebrovascular, general’s office, Inpatient, | Village clinics |  |
| Clinicians in the departments | person | 254 | 39 | 52 | 15 | 360 |
| Of which, female | % | 64.5 | 38.2 | 21.2 | 26.7 | 53.8 |
| Clinic nurses in the departments | person | 510 | 101 | 69 | 1 | 681 |
| Of which, female | % | 91.5 | 98.0 | 100.0 | 100.0 | 93.4 |
| Other staff in the department | person | 78 | 12 | 26 | 2 | 118 |
| Of which, female | % | 60.2 | 100.0 | 38.5 | 0.0 | 58.5 |

Sources: the surveyed medical facilities between April-July 2020.

**2.1.4 Gender Situation relating Mercury Medical Facilities at Household Level**

1. There were about 465 million households in China in 2018[[28]](#footnote-28). One survey done in 2013 shows that 92.5% households have thermometers[[29]](#footnote-29). Currently each household might have one mercury-thermometer due to the Covid-19. That is, about 400 million mercury-thermometers are kept by individual households. It is usually women using the thermometers because women usually take care of ill members of their families. Therefore, the project publicities on application of mercury-free medical devices in individual households should target toward women.

**2.2 Gender Gap and Potential Gendered Impacts**

1. It is known from above analysis on gender situation in China, in the mercury-containing thermometer production enterprises, and in the surveyed medical facilities that gender disparities related to application of medical devices mainly exist in areas of knowledge, employment, and involvement in decision-making. Women continue to face challenges in equal access to training, employment, participation, and decision making.
2. Without adequate and appropriate consideration of the gender gaps and taking effective gender-responsive measures in design and implementation of the project, women would be continuously with limited participation, limited access to trainings and decision making, and other benefits and services, which are the three gender gaps most strategic and relevant to GEF-programming[6].

**2.3 Gender-responsive theory of change**

1. The majority of medical technical staff especially clinic nurses are women. Women’s equal engagement in the project design and implementation such as participation in trainings, technical and/or skills will enhance women’s capacity and empower women technically. Women’s capacity of applying mercury-free medical devices is the foundation for achieving the project objective of applying mercury-free in medical facilities.
2. Women are key persons using thermometers and sphygmomanometers at home. The project publicity targets toward women will increase women’s awareness and skills in applying mercury-free thermometers and sphygmomanometers.
3. Equal involvement of women in the project consultation can greatly facilitate equal opportunities for women to express themselves, to voice their needs, priorities, ideas, and opinions, and equally integrate women’s concerns in the project design, which will lay a foundation for the project to develop and take culturally-appropriate and responsive measures to minimize or eliminate barriers to women’s engagement and to maximize women’s contribution to the project. Meanwhile, it also equally benefits women.
4. Engaging more women in the project-related decision making, such as in development of the project related policies, is not only women’s rights. More importance, integrating women’s perspective into the project decision-making will greatly make contribution toward project’s social, economic and environmental impacts, and make the project results sustainable.

**2.4 Barriers to Women’s Engagement**

1. Traditional habit that men workers engagement first is a barrier for women workers equal participation in trainings on production of mercury-free medical devices. Women’s available time is another barrier to engagement in demonstration production enterprises and in demonstration medical facilities. Women are often busy with their jobs and domestic chores, especially female clinicians and female clinic nurses who are very busy with their work. Using participatory approaches to identify proper training time and training location is crucial for women’s participation. Some actions are proposed in the gender mainstreaming action plan (GMAP) to overcome the barriers and facilitate women’s equal participation in the project.

**2.5 Gender Mark**

1. The project has potential to generate outputs that greatly advance gender equality, and further make contribution to realize the project results and objective. According to the UNDP gender marker definition, gender mark of the project is GEN2 gender marker.

**Table 13: UNDP Gender Marker**

|  |  |
| --- | --- |
| **UNDP Gender Marker** | **Coding Definition** |
| 0 (GEN0) | Outputs that are ‘not expected to contribute noticeably’ to gender equality |
| 1 (GEN1) | Outputs that will contribute ‘in some way’ to gender equality, but not significantly |
| 2 (GEN2) | Outputs that have gender equality as a ‘significant’ objective |
| 3 (GEN3) | Projects/outputs that have gender equality as a ‘principal’ objective |

**2.6 Consistency with UNDP and GEF Policies and Strategies**

1. UNDP prioritizes gender mainstreaming as the main strategy to achieve gender equality. Faster progress is achieved in reducing gender inequality and promoting women’s empowerment is one of the six signature solutions proposed in the UNDP Strategic Plan 2018-2021. Development of this gender mainstreaming action plan (GMAP) is in line with the UNDP Strategic Plan. Development of the GMAP follows the core operation principle of strengthening its focus on gender mainstreaming and women’s empowerment of the GEF 2020 Strategy, and is in accordance with the GEF policy on Gender Equality (2017) that requires all GEF Partner Agencies to have established either (a) polity, (b) strategies, or (c) action plans that promote gender equality.
2. The action plan will facilitate gender equality in terms of participation, voice expression, training accessibility, decision-making and building the project with a view to equally benefits for women.
3. Conducting gender analysis, integrating gender responsive activities and measures, including gender sensitive indicators and targets in the results-based framework, using sex-disaggregated indicators, and recruiting gender focal points and gender specialists meet the minimum requirements of the GEF Policy on Gender Equality, the GEF Gender Equality Action Plan, and the UNDP Gender Equality Strategy 2018-2021[[30]](#footnote-30).
4. Equal participation of men and women throughout the project cycle complies with the GEF Policy on Public Involvement in GEF projects.
5. By conducting gender analysis, potential roles, benefits, impacts and risks for women and men can be appropriately assessed and identified if any. By integrating gender responsive activities and measures, possible adverse gender impacts will be mitigated or minimized, and potential positive gender impacts will be maximized. By collecting sex-disaggregated indicators during the project implementation and by including gender responsive indicators and targets in the results-based framework such as 75% of female project direct beneficiaries, progress on gender equality can be monitored and evaluated in time. By including gender focal points and gender specialists, implementation of the project can be directed toward achievement of gender equality.

**2.7 Analysis of Executing Agency’s Capacities**

1. The project executing agency, FECO of the Ministry of Ecology and Environment of the PRC (MEE), has implemented a number of international development projects including UNDP-GEF projects. The agency has high capacity and experience in taking appropriate consideration of gender in implementation of the project.
2. **Gender Mainstreaming Strategies and Action Plan**

**3.1 Gender Mainstreaming Strategies**

1. Recognized differences between roles, knowledge, employment, and involvement in decision-making of men and women, the project will adopt the following strategies to avoid deteriorating gender inequality and promote gender equality:
2. Formulation of the project management committee and other relevant decision-making groups with enough consideration on increasing women’s involvement;
3. Integration of gender element in the development of relevant policy frameworks;
4. Inclusion of all the displaced women’s reemployment policies and plans in the project phase-out guidelines;
5. Medical capacity development programs prioritizing female clinicians and clinic female nurses in scientifically use of mercury-free thermometers and mercury-free sphygmomanometers；and
6. The project publicity targets toward women, who are key persons using thermometers at home.

**3.2 Gender mainstreaming action plan**

1. While general gender mainstreaming strategies will apply across all interventions at the demonstration organizations, the following specific actions are proposed in order to empower women and promote gender equality.

**Table 14: Gender Mainstreaming Action Plan**

| **Actions** | **Indicators** | **Mid-term Target** | **End of project Targets** | **Baselines** | **Responsible agencies** | **Timeline** | **Cost and budget** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Component 1. Integrated policy, regulatory framework, quality standards, fiscal tools, action plans and associated capacities, to support the phase out of mercury-containing medical thermometers and sphygmomanometers under the Minamata Convention**  **Outcome 1.1:** Cross ministerial cooperation established to jointly develop and implement the necessary policy, regulations, tools, action plans and guidelines, in coordination with appropriate private sector partners, to phase out the production and consumption of mercury-containing medical devices, to reduce the use of primary mercury in medical devices, to manage waste of obsolete devices, and to promote the uptake of mercury-free medical devices  **Output 1.1:** Inter-ministerial Committee established (e.g., Environment, Health, Industry, etc.) to support the execution of China’s National Implement Plan for the Implementation of the Minamata Convention and take actions to address the identified policy and enforcement capacity gaps between national regulatory policies and the Convention’s legal requirements for Parties, and to look at modalities for linking mercury consumption reductions from this sector into the primary mining plans within the National Minamata Implementation Plan, to avoid redirection of phased out consumption to other sectors.  **Output 1.2:** Proposals on policy and regulatory frameworks on chemical management, supervision and law enforcement, standards for inspection and maintenance of mercury-free products, and rules on the use of mercury-free products are developed or updated and capacity-building programmes updated or developed to support the monitoring, supervision, regulation and enforcement of the phase-out of mercury in the production of medical thermometers and sphygmomanometers, by collaborating with World Health Organization (WHO) to ensure incorporation of international best practice and experience.  **Output 1.3:** Proposals on green procurement standards and action plans developed to promote the application of and grow the market for mercury-free medical thermometers and sphygmomanometers in medical facilities.  **Output 1.4:** Green Finance Framework developed and mercury-free devices and procurement subsidization scheme created. | | | | | | | |
| * Establish the Inter-ministerial Committee with a focus on increasing women’s involvement (output 1.1) | # of women in the inter-ministerial committee | At least 10% of women member | At least 25% of women member | 0 | Relevant project managers | 2022-2026 | No extra cost |
| * Develop policies on reemployment of all women and men workers displaced due to the conversion from mercury-containing to mercury-free thermometers and sphygmomanometers production (output 1.2) | Policies or relevant sections in the regulatory frameworks | Proposals for at least two policies or two sections in the overall policy | Proposals for six policies or six sections in the overall policy | 0 | Project Board | 2022-2026 | Included in project budget Component 1 |
| * Develop capacity-building policies with a focus on strengthening frontline women nurses’ capacity of using the mercury-free thermometers and mercury-free sphygmomanometers (output 1.3) | Policies or relevant sections in the regulatory frameworks | Proposals for at least two policies or two sections in the framework | Proposals for six policies or six sections in the framework | 0 | Project Board | 2022-2026 | Included in project budget Component 1 |
| * Develop policies on avoiding negative impacts on women and men of disposing obsolete and stock of mercury-thermometers and mercury-sphygmomanometers in production enterprises and medical facilities. (output 1.4) | Policies or relevant sections in the regulatory frameworks | Proposals for at least two policies or two sections in the overall policy | Proposals for six policies or six sections in the overall policy | 0 | Project Board | 2022-2026 | Included in project budget Component 1 |
| **Component 2. Demonstration of technology transfer and investment for (i) supporting enterprises in phasing out the production of mercury-containing medical devices; (ii) the application of mercury-free devices in medical facilities, and (iii) enhanced knowledge base for the risk assessment and sound management of obsolete mercury devices, contaminated materials/wastes, and contaminated areas on premises**  **Outcome 2.1:** Enterprises 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 75 metric tons of mercury.  **Output 2.1:** Production of mercury-free medical thermometers and sphygmomanometers achieved and sound management of obsolete mercury and stocks of mercury devices implemented in four (4) producers of mercury-containing medical thermometers and two (2) producers of mercury-containing sphygmomanometers  **Output 2.2:** Use of mercury-free devices and the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers demonstrated in at least 6 medical facilities. 60% of baseline mercury-containing medical thermometers and sphygmomanometers replaced by mercury-free devices and staff capitated to use and maintain mercury-free devices and to soundly manage obsolete mercury devices and related wastes. | | | | | | | |
| * Each pilot production enterprise formulates a project committee with a focus on increasing women’s involvement in decision-making on phasing out of mercury-thermometers and mercury-sphygmomanometers and disposing obsolete and managing stock mercury device (output 2.1.1) | # and % of women and men in the decision-making group of each pilot production entity | At least 10% of women | At least: 25% of women | 0 | The pilot enterprises | 2022-2026 | No extra cost |
| * Policy formulated prioritizes reemployment of women displaced by the conversion to mercury-free production (output 2.1.1) | Policies or relevant sections in the regulatory frameworks | At least one proposal for policy formulation | At least one proposal for policy formulation | 0 | The pilot enterprises | 2022-2026 | No extra costs |
| * Conduct a socioeconomic assessment to evaluate situation of loss of jobs especially for low skilled workers, and if necessary, prepare and implement a gender responsive livelihood restoration plan to support these workers either through raising their capacity to be able to operate the installed devices or finding them other suitable jobs | A socioeconomic assessment on all the project displaced workers and/or a gender responsive livelihood restoration plan | A socioeconomic assessment on all the project displaced workers conducted and, if necessary, a gender responsive livelihood restoration plan for the workers developed | If necessary, a gender responsive livelihood restoration plan for the workers implemented | 0 | The pilot enterprises |  | Costs of the demonstration enterprises |
| * Develop training programs focusing on the displaced women workers being trained on producing mercury-free thermometers and/or sphygmomanometers, and involve women in development of the training programs (output 2.1.1) | # and % of displaced women trained | 1000 women participated in training | 2800 women participated in training | 0 | The pilot enterprises,  Project Gender Officer | 2022-2026 | Project training budget under Component 4, M&E |
| * Ensure no negative impact of management of obsolete mercury and stocks of mercury devices on women and men workers and residents (output 2.1.1) | # and % of women and men workers and residents safeguard from negatively affected | At least 50% | 100% | 0 | The pilot enterprises | 2022-2026 | No extra cost |
| * Develop training programs with a focus on clinic male and female nurses being trained on proper disposal of obsolete and broken mercury-thermometers and sphygmomanometers and scientific use mercury-free thermometers and sphygmomanometers, and involve more women in the program development (output 2.2.1) | X%[[31]](#footnote-31) of clinic male and female nurse in the total trained | 30% of clinic male and female nurse in the total trainees. | 75% of clinic male and female nurse in the total trainees. | 0 | The pilot medical facilities  Project Gender Officer | 2022-2026 | Project training budget under Component 4, M&E |
| * Ensure no negative impact on women and men workers and residents from disposal of obsolete mercury-containing medical thermometers and sphygmomanometer (output 2.2.1) | # and % of women and men workers and residents safeguard from negatively affected | At Least 50% | 100% | 0 | The pilot medical facilities | 2022-2026 | No extra cost |
| **Component 3. Development of long-term guidance and tools for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers, and mercury-contaminated areas**  **Outcomes 3.1:**: Production enterprises and medical facilities implemented appropriate strategies, tools and guidance to assure long-term sound management of mercury-containing medical devices and mercury contaminated areas  **Output** **3.1.** Guidance tools for inventory of mercury-contaminated sites at piloted enterprises producing mercury-containing medical thermometers and sphygmomanometers developed.  **Output** **3.2**. Risk management strategy, technical guidance and training materials developed for the sound management of residual mercury stocks and obsolete mercury-containing medical thermometers and sphygmomanometers at production enterprises/sites.  **Output 3.3** Risk management strategy, technical guidance and training materials developed for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers in medical facilities. | | | | | | | |
| * Inventory of mercury contaminated sites at pilot enterprises producing mercury-containing medical thermometers and sphygmomanometers indicating number of workers and surrounding residents disaggregated by sex and ethnic (output 3.1) | Workers and residents surrounding the manufacturing sites | Contaminated site at pilot enterprises identity and inventory of workers and residents disaggregated by sex. | # of workers and surrounding residents disaggregated by sex and ethnic | 0 | The enterprises having mercury contaminated sites | 2022-2026 | No extra cost |
| * Include measures/sections to ensure no negative impact on women and men workers and the surrounding male and female residents in the risk management strategy, technical guidance and training materials for the sound management of residual mercury stocks and obsolete mercury containing (output 3.2) | Measures/sections to ensure no negative impact on men and women workers and the surrounding male and female residents | At least one relevant measure developed or sections included in the risk management framework | At least one relevant measure developed or sections included in the risk management framework | 0 | The enterprises | 2022-2026 | No extra cost |
| * Include measures/sections to ensure no negative impact on male and female staff and surrounding residents in the risk management strategy, technical guidance and training materials developed for the sound management of obsolete mercury-containing medical thermometers and sphygmomanometers in medical facilities (output 3.3) | Measures/section to ensure no negative impact on male and female healthcare staff and the surrounding male and female residents | At least one relevant measures developed or sections included in the risk management framework | At least one relevant measures developed or sections included in the risk management framework | 0 | The medical institutions | 2022-2026 | No extra cost |
| **Component 4: Knowledge Sharing & Management, Monitoring and Evaluation**  **Outcome 4.1:** Tools forKnowledge sharing developed sharing and knowledge sharing activities facilitated on experiences about policy, technical knowledge and lessons learned for the project. Disaggregated information on stakeholders activities and experiences under the project gathered and fed into the Monitoring and Evaluation processes of the Project.  **Output 4.1**. Project Communication Strategy created and effective KM and M&E support delivered in differentiated approaches for stakeholders (manufacturing enterprises, medical facilities, mercury mining enterprises, government and international agencies, etc.)  **Output 4.2.** Awareness raised manufacturers, medical facilities and public on sound management of chemicals; knowledge gathered and shared, as well as learning tools created and utilized periodically during the project lifecycle.  **Output 4.3:** Monitoring and Evaluation Tools (PIR, Mid Term and Terminal Evaluations as well as Quarterly Performance Reports and Project Board Reports, budget revisions and financial control and project management tools) delivered as required and adaptive management actions implemented during the project lifecycle. | | | | | | | |
| * The project communication strategy includes key principles on gender equality (output 4.1) | Principle(s) on gender equality | At least 5 principles proposed | At least 5 principles established and implemented | 0 | Project communication officers, Gender focal points, Project Gender Officer | 2022-2026 | No extra cost |
| * Awareness materials, knowledge gathering, sharing and learning tools with gender responsive measures (output 4.2) | Gender-responsive measures | At least 50% of materials include gender responsive measures | 100% of materials include gender-responsive measure | 0 | Project Manager, Gender focal points, Project Gender Officer | 2022-2026 | No extra cost |
| * PIR, Mid Term and Terminal Evaluations include section of gender mainstreaming and gender equality progresses (output 4.3) | Gender section in the reports | All reports containing gender section and sex disaggregated data and information | All reports containing gender section and sex-disaggregated data and information | 0 | The authors | 2022-2026 | No extra cost |
| * Recruit a Project Gender Officer to support project implementation (all outputs) | # of gender specialist | One Project Gender Officer recruited | One Project Gender Officer recruited | 0 | The project PMO | 2022-2026 | Project budget in Component 4, M&E |
| * Designate one gender focal point by PMO, each of the pilot enterprise and medical institution (all outputs) | # of gender focal point | One in PMO, one in each of the pilot enterprise and medical institution | One in PMO, one in each of the pilot enterprise and medical institution | 0 | The pilot enterprises and medical institutions | 2022-2026 | No extra cost |
| * Develop TORs for the gender focal points (all outputs) | # of TOR | 1 for each of the gender focal point | 1 for each of the gender focal point | 0 | Project manager and PMO  Gender expert | 2022-2026 | No extra cost |
| * Develop protocol (questions, information gathering system, etc.) for the gender focal points to collect and report detailed gender information including the project affected people, project beneficiaries, participants of each project activity, and so on (all outputs) | # of the protocol | 1 for each of the gender focal point | 1 for each of the gender focal point | 0 | Ditto | 2022-2026 | No extra cost |
| * Provide training to the management staff and the gender focal points on gender mainstreaming and gender equality (all outputs) to establish a gender-sensitive corporate environment for the project implementation | # of gender training  # of participant | Once at project inception for all PMO staff, gender focal points and relevant people of the pilot enterprises and medical facilities | Once prior to project completion for all PMO staff, gender focal points and relevant people of the pilot enterprises and medical facilities | 0 | Ditto | 2022-2026 | Project budget in Component 4, M&E |
| * Collect sex-disaggregated data wherever appropriate (all outputs) | Sex-disaggregated data | At least, sex-disaggregated project direct beneficiaries, sex-disaggregated data on the project-related trainings | At least, sex-disaggregated project direct beneficiaries, sex-disaggregated data on the project-related trainings | 0 | Project manager, gender focal points  Project Gender Officer | 2022-2026 | No extra cost |
| * Monitor and evaluate implementation of the GMAP (all outputs) | Included in the APRs, MTE, TER | Yearly evaluation undertaken | Report on annual evaluation Included in the APRs, MTE, TER | 0 | Project manager, MTR and TE experts | 2022-2026 | No extra cost |
| * Include gender sensitive indicators in the Project Strategic Results Framework | # and % of the project direct women beneficiaries | 1,500 beneficiaries (1,000 female and 500 male) | 4,000 (2,800 female, 1,200 male) | 0 | PPG experts | PPG stage | No extra cost |

## Annex 10: Procurement Plan

Procurement Plan for the first year of implementation as well as for the duration of the project is attached as a separate Excel file.

## Annex 11: Letter of Financial Commitments

(Two PDF files attached separately)

Annex 12: GEF Core indicators

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Core Indicator 1** | **Terrestrial protected areas created or under improved management for conservation and sustainable use** | | | | | | | | | | ***(Hectares)*** |
|  |  | | | | | *Hectares (1.1+1.2)* | | | | | |
|  |  | | | | | *Expected* | | | | Achieved | |
|  |  | | | | | PIF stage | | Endorsement | | MTR | TE |
|  |  | | | | |  | |  | |  |  |
| Indicator 1.1 | Terrestrial protected areas newly created | | | | | | | | | |  |
| Name of Protected Area | WDPA ID | IUCN category | | | | Hectares | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
|  |  | Sum | | | |  | |  | |  |  |
| Indicator 1.2 | Terrestrial protected areas under improved management effectiveness | | | | | | | | | |  |
| Name of Protected Area | WDPA ID | IUCN category | | Hectares | | METT Score | | | | | |
| Baseline | | | | Achieved | |
|  | | Endorsement | | MTR | TE |
|  |  |  |  | | |  | |  | |  |  |
|  |  |  |  | | |  | |  | |  |  |
|  |  | Sum |  | | |  | |  | |  |  |
| **Core Indicator 2** | **Marine protected areas created or under improved management for conservation and sustainable use** | | | | | | | | | | ***(Hectares)*** |
|  |  | | | | | Hectares (2.1+2.2) | | | | | |
|  |  | | | | | Expected | | | | Achieved | |
|  |  | | | | | PIF stage | Endorsement | | | MTR | *TE* |
|  |  | | | | |  |  | | |  |  |
| Indicator 2.1 | Marine protected areas newly created | | | | | | | | | |  |
| Name of Protected Area | WDPA ID | IUCN category | | | | Hectares | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
|  |  | Sum | | | |  | |  | |  |  |
| Indicator 2.2 | Marine protected areas under improved management effectiveness | | | | | | | | | |  |
| Name of Protected Area | WDPA ID | IUCN category | | | Hectares | METT Score | | | | | |
| Baseline | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | |  |  | |  | |  |  |
|  |  |  | | |  |  | |  | |  |  |
|  |  | Sum | | |  |  | |  | |  |  |
| **Core Indicator 3** | **Area of land restored** | | | | | | | | | | ***(Hectares)*** |
|  |  | | | | | Hectares (3.1+3.2+3.3+3.4) | | | | | |
|  |  | | | | | Expected | | | | Achieved | |
|  |  | | | | | PIF stage | | Endorsement | | MTR | TE |
|  |  | | | | |  | |  | |  |  |
| Indicator 3.1 | Area of degraded agricultural land restored | | | | | | | | | |  |
|  |  |  | | | | Hectares | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| Indicator 3.2 | Area of forest and forest land restored | | | | | | | | | |  |
|  |  |  | | | | Hectares | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| Indicator 3.3 | Area of natural grass and shrublands restored | | | | | | | | | |  |
|  |  |  | | | | Hectares | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| Indicator 3.4 | Area of wetlands (including estuaries, mangroves) restored | | | | | | | | | |  |
|  |  |  | | | | Hectares | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| **Core Indicator 4** | **Area of landscapes under improved practices (hectares; excluding protected areas)** | | | | | | | | | | ***(Hectares)*** |
|  |  | | | | | Hectares (4.1+4.2+4.3+4.4) | | | | | |
|  |  | | | | | Expected | | | | Expected | |
|  |  | | | | | PIF stage | | Endorsement | | MTR | TE |
|  |  | | | | |  | |  | |  |  |
| Indicator 4.1 | Area of landscapes under improved management to benefit biodiversity | | | | | | | | | |  |
|  |  |  | | | | Hectares | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| Indicator 4.2 | Area of landscapes that meet national or international third-party certification that incorporates biodiversity considerations | | | | | | | | | |  |
| Third party certification(s): | | | | | | Hectares | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  | |  | |  |  |
|  | |  | |  |  |
| Indicator 4.3 | Area of landscapes under sustainable land management in production systems | | | | | | | | | |  |
|  |  |  | | | | Hectares | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| Indicator 4.4 | Area of High Conservation Value Forest (HCVF) loss avoided | | | | | | | | | |  |
| Include documentation that justifies HCVF | | | | | | Hectares | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  | |  | |  |  |
|  | |  | |  |  |
| **Core Indicator 5** | **Area of marine habitat under improved practices to benefit biodiversity** | | | | | | | | | | ***(Hectares)*** |
| Indicator 5.1 | Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations | | | | | | | | | |  |
| Third party certification(s): | | | | | | Number | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  | |  | |  |  |
|  | |  | |  |  |
| Indicator 5.2 | Number of large marine ecosystems (LMEs) with reduced pollution and hypoxial | | | | | | | | | |  |
|  |  |  | | | | Number | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| Indicator 5.3 | Amount of Marine Litter Avoided | | | | | | | | | | |
|  |  |  | | | | Metric Tons | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| **Core Indicator 6** | **Greenhouse gas emission mitigated** | | | | | | | | | | ***(Metric tons of CO₂e )*** |
|  |  | | | | | Expected metric tons of CO₂e (6.1+6.2) | | | | | |
|  |  | | | | | PIF stage | Endorsement | | MTR | | TE |
|  | Expected CO2e (direct) | | | | |  |  | |  | |  |
|  | Expected CO2e (indirect) | | | | |  |  | |  | |  |
| Indicator 6.1 | Carbon sequestered or emissions avoided in the AFOLU sector | | | | | | | |  | |  |
|  |  |  | | | | Expected metric tons of CO₂e | | | | | |
| PIF stage | | Endorsement | | MTR | TE |
|  | Expected CO2e (direct) | | | | |  | |  | |  |  |
|  | Expected CO2e (indirect) | | | | |  | |  | |  |  |
|  | Anticipated start year of accounting | | | | |  | |  | |  |  |
|  | Duration of accounting | | | | |  | |  | |  |  |
| Indicator 6.2 | Emissions avoided Outside AFOLU | | | | | | | | | |  |
|  |  |  | | | | Expected metric tons of CO₂e | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  | Expected CO2e (direct) | | | | |  | |  | |  |  |
|  | Expected CO2e (indirect) | | | | |  | |  | |  |  |
|  | Anticipated start year of accounting | | | | |  | |  | |  |  |
|  | Duration of accounting | | | | |  | |  | |  |  |
| Indicator 6.3 | Energy saved | | | | | | | | | |  |
|  |  |  | | | | MJ | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| Indicator 6.4 | Increase in installed renewable energy capacity per technology | | | | | | | | | |  |
|  |  | Technology | | | | Capacity (MW) | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| **Core Indicator 7** | **Number of shared water ecosystems (fresh or marine) under new or improved cooperative management** | | | | | | | | | | ***(Number)*** |
| Indicator 7.1 | Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation | | | | | | | | | |  |
|  |  | Shared water ecosystem | | | | Rating (scale 1-4) | | | | | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| Indicator 7.2 | Level of Regional Legal Agreements and Regional Management Institutions to support its implementation | | | | | | | | | |  |
|  |  | Shared water ecosystem | | | | Rating (scale 1-4) | | | | | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| Indicator 7.3 | Level of National/Local reforms and active participation of Inter-Ministerial Committees | | | | | | | | | |  |
|  |  | Shared water ecosystem | | | | Rating (scale 1-4) | | | | | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| Indicator 7.4 | Level of engagement in IWLEARN through participation and delivery of key products | | | | | | | | | |  |
|  |  | Shared water ecosystem | | | | Rating (scale 1-4) | | | | | |
| Rating | | | | Rating | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| **Core Indicator 8** | **Globally over-exploited fisheries Moved to more sustainable levels** | | | | | | | | | | ***(Metric Tons)*** |
| Fishery Details | | | | | | Metric Tons | | | | | |
| PIF stage | | Endorsement | | MTR | TE |
|  | |  | |  |  |
| **Core Indicator 9** | **Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products** | | | | | | | | | | ***(Metric Tons)*** |
|  |  | | | | | Metric Tons (9.1+9.2+9.3) | | | | | |
|  |  | | | | | Expected | | | | Achieved | |
|  |  | | | | | PIF stage | | PIF stage | | MTR | TE |
|  |  | | | | | *75* | | *75* | |  |  |
| Indicator 9.1 | Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type) | | | | | | | | | |  |
| POPs type | | | | | | Metric Tons | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| Indicator 9.2 | Quantity of mercury reduced | | | | | | | | | |  |
|  |  |  | | | | Metric Tons | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  | | | | | *75* | | *75* | |  |  |
| Indicator 9.3 | Hydrochloroflurocarbons (HCFC) Reduced/Phased out | | | | | | | | | | |
|  |  | | | | | Metric Tons | | | | | |
|  |  | | | | | Expected | | | | Achieved | |
|  |  | | | | | PIF stage | | Endorsement | | MTR | TE |
|  |  | | | | |  | |  | |  |  |
| Indicator 9.4 | Number of countries with legislation and policy implemented to control chemicals and waste | | | | | | | | | |  |
|  |  |  | | | | Number of Countries | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | | *1* | | *1* | |  |  |
| Indicator 9.5 | Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities | | | | | | | | | |  |
|  |  | Technology | | | | Number | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  | *Non-mercury thermometers* | | | | *1* | | *1* | |  |  |
|  |  | *Non-mercury sphygmomanometers* | | | | *1* | | *1* | |  |  |
| Indicator 9.6 | Quantity of POPs/Mercury containing materials and products directly avoided | | | | | | | | | | |
|  |  |  | | | | Metric Tons | | | | | |
|  |  |  | | | | Expected | | | | Achieved | |
|  |  |  | | | | PIF stage | | Endorsement | | PIF stage | Endorsement |
|  |  |  | | | |  | |  | |  |  |
|  |  |  | | | |  | |  | |  |  |
| **Core Indicator 10** | **Reduction, avoidance of emissions of POPs to air from point and non-point sources** | | | | | | | | | | ***(grams of toxic equivalent gTEQ)*** |
| Indicator 10.1 | Number of countries with legislation and policy implemented to control emissions of POPs to air | | | | | | | | | |  |
|  |  |  | | | | Number of Countries | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  |  | | | |  | |  | |  |  |
| Indicator 10.2 | Number of emission control technologies/practices implemented | | | | | | | | | |  |
|  |  |  | | | | Number | | | | | |
| Expected | | | | Achieved | |
| PIF stage | | Endorsement | | MTR | TE |
|  |  | | | | |  | |  | |  |  |
| **Core Indicator 11** | **Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment** | | | | | | | | | | ***(Number)*** |
|  |  |  | | | | Number | | | | | |
| Expected | | | | Achieved | |
|  |  |  | | | | PIF stage | | Endorsement | | MTR | TE |
|  |  | Female | | | | *700* | | *150,00* | |  |  |
|  |  | Male | | | | *300* | | *150,00* | |  |  |
|  |  | *Total* | | | | *1,000* | | *300,000* | |  |  |

Annex 13: GEF 7 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 |  |
|  |  | 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 |
|  |  |  | 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 |
|  |  |  | 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 |  |
|  |  | 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 |
|  |  |  | 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 |  |
|  |  |  |  |

Annex 14: Partner Capacity Assessment Tool and HACT assessment

(Two files attached separately)

Annex 15: UNDP Project Quality Assurance Report

(File attached separately)

1. *Other evidence of government agreement may be accepted in lieu of a signature, unless the programme country government requires a signature.* [↑](#footnote-ref-1)
2. *For NIM projects this is the Resident Representative. For DIM projects in a single country this is the Resident Representative. For global, regional DIM projects this is BPPS.* [↑](#footnote-ref-2)
3. *Baseline, mid-term and end of project target levels must be expressed in the same neutral unit of analysis as the corresponding indicator. Baseline is the current/original status or condition and needs to be quantified. The baseline can be zero when appropriate given the project has not started. The baseline must be established before the project document is submitted to the GEF for final approval. The baseline values will be used to measure the success of the project through implementation monitoring and evaluation.*  [↑](#footnote-ref-3)
4. *Target is the change in the baseline value that will be achieved by the mid-term review and then again by the terminal evaluation.* [↑](#footnote-ref-4)
5. *Provide total number of all direct project beneficiaries expected to benefit from all project activities until project closure. Separate the total number by female and male. This indicator captures the number of individual people who receive targeted support from a given GEF project and/or who use the specific resources that the project maintains or enhances. Support is defined as direct assistance from the project. Direct beneficiaries are all individuals receiving targeted support from a given project. Targeted support is the intentional and direct assistance of a project to individuals or groups of individuals who are aware that they are receiving that support and/or who use the specific resources.* [↑](#footnote-ref-5)
6. *Outcomes are medium term results that the project makes a contribution towards, and that are designed to help achieve the longer-term objective. Achievement of outcomes will be influenced both by project outputs and additional factors that may be outside the direct control of the project.* [↑](#footnote-ref-6)
7. See <https://www.thegef.org/gef/policies_guidelines> [↑](#footnote-ref-7)
8. See <http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/> [↑](#footnote-ref-8)
9. See <https://www.thegef.org/gef/policies_guidelines> [↑](#footnote-ref-9)
10. See <https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default> [↑](#footnote-ref-10)
11. Published by Local Chronicles Office of Anhui Province (<http://106.54.10.148:8083/dfz//static/plugin/pdf/web/hehe.html?bookId=846dc9e44d2a4be887472dc26fcaa039&file=http://106.54.10.148:8083/dfz/book/846dc9e44d2a4be887472dc26fcaa039/0.html&bookName=%E8%87%AA%E7%84%B6%E7%8E%AF%E5%A2%83%E5%BF%97>) [↑](#footnote-ref-11)
12. Announced by Jiangsu Provincial People’s Government (<http://www.jiangsu.gov.cn/col/col31359/index.html>) [↑](#footnote-ref-12)
13. Announced by the People’s Government of Hunan Province (<http://www.hunan.gov.cn/hnszf/jxxx/hngk/sqjs/sqjs.html>) [↑](#footnote-ref-13)
14. Published by Local Chronicles Office of Shaanxi Province (<http://dfz.shaanxi.gov.cn/sxsq/201610/t20161020_679566.html>) [↑](#footnote-ref-14)
15. Announced by the People’s Government of Shandong Province (<http://www.shandong.gov.cn/col/col94094/index.html>) [↑](#footnote-ref-15)
16. Data collection methods should outline specific tools used to collect data and additional information as necessary to support monitoring. The PIR cannot be used as a source of verification. [↑](#footnote-ref-16)
17. 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. [↑](#footnote-ref-17)
18. See the [Convention on Biological Diversity](https://www.cbd.int/) and its [Cartagena Protocol on Biosafety](https://bch.cbd.int/protocol). [↑](#footnote-ref-18)
19. See the [Convention on Biological Diversity](https://www.cbd.int/) and its [Nagoya Protocol](https://www.cbd.int/abs/) on access and benefit sharing from use of genetic resources. [↑](#footnote-ref-19)
20. 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 legal or other protection. Forced evictions constitute gross violations of a range of internationally recognized human rights. [↑](#footnote-ref-20)
21. [↑](#footnote-ref-21)
22. UNDP Social and Environmental Standards (SES), June 2014. [↑](#footnote-ref-22)
23. UNDP, How to Conduct a Gender Analysis, A Guidance Note for UNDP Staff, 2016 [↑](#footnote-ref-23)
24. Due to the COVID-19, the discussions were online instead of face-to-face. [↑](#footnote-ref-24)
25. Bohong Liu, etc. Gender Equality in China’s Economic Transformation, a report, UN Women, 2014. [↑](#footnote-ref-25)
26. Id. [↑](#footnote-ref-26)
27. <http://www.zyzychn.com/NewsPage.asp?id=3831>; <http://news.sciencenet.cn/sbhtmlnews/2012/3/256085.shtm?id=256085> [↑](#footnote-ref-27)
28. Which was calculated based on total population and average size of each household from the China Statistics Yearbook 2018, [↑](#footnote-ref-28)
29. Xiu Ao, Litong Gong, Dongmei Li. Survey on medical devices kept at homes in Daxing District Beijing City. Chronic Pathematology Journal 2013 (8) [↑](#footnote-ref-29)
30. <https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.54.06_Gender_Strategy_1.pdf> [↑](#footnote-ref-30)
31. Roughly equal to the percentage of male nurses in the total nurses [↑](#footnote-ref-31)