

## Integrated Management and Environmentally Sound Disposal of POPs Pesticides and Mercury in Healthcare and Agricultural Sectors in Sri Lanka

### Part I: Project Information

**GEF ID**

10868

**Project Type**

FSP

**Type of Trust Fund**

GET

**CBIT/NGI**

CBIT No

NGI No

**Project Title**

Integrated Management and Environmentally Sound Disposal of POPs Pesticides and Mercury in Healthcare and Agricultural Sectors in Sri Lanka

**Countries**

Sri Lanka

**Agency(ies)**

UNDP

**Other Executing Partner(s)**

Ministry of Environment

**Executing Partner Type**

Government

**GEF Focal Area**

Chemicals and Waste

**Taxonomy**

Chemicals and Waste, Focal Areas, Best Available Technology / Best Environmental Practices, Mercury, Waste Management, Hazardous Waste Management, Pesticides, DDT - Other, Disposal, Sound Management of chemicals and waste, Persistent Organic Pollutants, Unintentional Persistent Organic Pollutants, Open Burning, Influencing models, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Demonstrate innovative approaches, Stakeholders, Civil Society, Community Based Organization, Trade Unions and Workers Unions, Academia, Non-Governmental Organization, Beneficiaries, Local Communities, Communications, Education, Public Campaigns, Behavior change, Awareness Raising, Private Sector, Non-Grant Pilot, SMEs, Large corporations, Type of Engagement, Participation, Information Dissemination, Partnership, Consultation, Gender Equality, Gender Mainstreaming, Gender-sensitive indicators, Sex-disaggregated indicators, Gender results areas, Participation and leadership, Capacity Development, Capacity, Knowledge and Research, Learning, Indicators to measure change, Theory of change, Innovation, Knowledge Exchange, Field Visit, South-South, Peer-to-Peer, Knowledge Generation, Training, Professional Development

**Rio Markers****Climate Change Mitigation**

Climate Change Mitigation 0

**Climate Change Adaptation**

Climate Change Adaptation 0

**Duration**

60 In Months

**Agency Fee(\$)**

478,800.00

**Submission Date**

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
CW-1-1	GET	4,240,000.00	34,374,286.00
CW-1-2	GET	800,000.00	6,485,714.00
Total Project Cost (\$)		5,040,000.00	40,860,000.00

## B. Indicative Project description summary

### Project Objective

To improve the regulatory framework and strengthen national capacities in Agricultural Chemicals and Mercury Management and support the transformation of Healthcare Waste Management Systems.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Strengthen the policy, regulatory and institutional frameworks for the management of POPs, mercury and other Chemicals of Concern (CoC).	Technical Assistance	1.1. Institutional coordination mechanism strengthened. regulatory frameworks for the enforcement of chemicals regulations updated.	1.1.1. Review baseline regulations on chemicals management. New POPs and U-POPs inventories, including their value chains, are updated into the 2015 NIP.  1.1.2. Centralize the Chemicals Control System; Laboratory for POPs and other CoCs is improved, and monitoring of imports is enforced at entry points.  1.1.3. Institutional Coordination Mechanisms strengthened and are operating in efficient manner.  1.2.1.	GET	820,000.00	7,000,000.00



Green procurement standards established, including proposals on bulk procurement and coordinated strategies for replacement of mercury-based medical devices and dental amalgam.

1.2. National conditions to scale up the replacement of medical devices and dispose of wastes of mercury-contained medical devices enabled.

1.2.2.

Finance framework for the procurement of mercury-free medical devices and HCWM disposal equipment developed.

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2. Environmentally sound management disposal of obsolete stocks of agrichemicals POPs, mercury and their wastes	Investment	2.1. Effective Management System for environmentally sound disposal of mercury stocks, mercury-containing wastes, obsolete stocks of POPs-contaminated pesticides and their containers, implemented.	<p>2.1.1. Residual mercury stocks, mercury-contained waste generated from the replacement of mercury-containing medical devices and dental amalgam safely disposed of.</p> <p>2.1.2. Risk Management Strategy developed. Technical Guidance &amp; Training materials prepared for the sound management of wastes containing mercury.</p> <p>2.1.3. Residual/contaminated stocks of POPs pesticides and contaminated plastics/containers assessed, inventoried, and safely managed.</p> <p>2.1.4. Guidance Tools and Guidelines for the inventory of mercury/POPs contaminated sites developed and tested at pilot sites.</p>	GET	2,000,000.00	14,610,000.00
3. Establish Integrated HCWM Systems to prevent and reduce U-POPs emissions and develop effective Business Models for HC facilities in line	Technical Assistance	3.1. HCWM Strategies, and Plans updated and reflecting BAT/BEP to reduce U-POPs emissions and to	3.1.1. Standards and Regulations on HCWM are revised. A HCW Data Management System	GET	1,500,000.00	13,165,000.00

with COVID-19  
recovery efforts.

minimize plastic waste  
generation with  
improved recycling  
practices.

(HCWDMS) is introduced to  
address gaps in the  
monitoring activities.

#### 3.1.2.

National Plan for Harmonized  
Treatment and Disposal of  
HCW in emergencies is  
developed.

3.1.3. Guidelines and  
Standards on green  
procurement of PPE and  
other consumables  
developed.

3.1.4. Technical and  
Economic Assessment (CBA)  
on the whole spectrum of  
HCWM technologies for Sri  
Lanka setting prepared.

3.1.5. Integrated recycling  
programs piloted in five (5)  
facilities

3.2.1. Public-Private  
Partnership (PPP) for a  
Centralized Waste  
Management System that can  
incorporate the de-  
contamination healthcare  
waste facility is piloted.

			3.2.2. A De-centralized non-incineration HCWM Strategy for medium to small scale health care facilities is developed.			
		3.2.	Non-incineration HCWM technologies Business Models developed, baseline treatment systems improved and technical/economical application of low-cost autoclaves demonstrated.	3.2.3. Business Models for de-centralized HCWM systems Piloted in five (5) medium-to-small scale facilities. Technical /financial/economic application of low-cost autoclaves tested and experiences from other GEF HCWM projects are internalized in Sri Lanka		
				3.2.4. Baseline Hybrid Autoclaves operation and maintenance practices, at large scale healthcare facilities, are improved, and their operational Business Models, developed.		
4. Knowledge sharing, management & evaluation	Technical Assistance	4.1.	Project communication and training tools developed. Effective knowledge management delivered.	4.1.1. Effective knowledge management tools delivered. Lessons learned and experiences are shared, effectively supporting the scale up and replication of project results.	GET	480,000.00
						4,100,000.00

4.1.2. Training programs developed. Capacities of Public Officers and healthcare facilities staff on U-POPs and Mercury (avoidance of) releases during the waste disposal activities are strengthened.

4.1.3. Training for Environmental, Monitoring and Customs Officers on the control and monitoring of POPs, Mercury and other CoCs is delivered.

4.1.4. Project Communication Strategy and

Public Awareness Programs are delivered. Stakeholders Engagement Plan and Gender Action Plan implemented.

4.2.1. Monitor Project (Quarterly and annual Reports and Project Board Reports); Apply Evaluation Tools according the project cycle (PIR, MTR and TE).

4.2.2. Implementation Tools (budget revisions, financial control and project management) applied as required and adaptive

management actions  
implemented during the  
project lifecycle

4.2.  
Monitoring and  
evaluation delivered  
during the project  
lifecycle.

	Sub Total (\$)	4,800,000.00	38,875,000.00
Project Management Cost (PMC)			
	GET	240,000.00	1,985,000.00
	Sub Total(\$)	240,000.00	1,985,000.00
	Total Project Cost(\$)	5,040,000.00	40,860,000.00

**C. Indicative sources of Co-financing for the Project by name and by type**

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Recipient Country Government	Department of Chemical Management, Ministry of Environment	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	Department of Chemical Management, Ministry of Environment	Public Investment	Investment mobilized	500,000.00
Recipient Country Government	Central Environmental Authority	In-kind	Recurrent expenditures	1,500,000.00
Recipient Country Government	Central Environmental Authority	Public Investment	Investment mobilized	1,100,000.00
Recipient Country Government	Department of Customs	In-kind	Recurrent expenditures	2,000,000.00
Recipient Country Government	Department of Customs	Public Investment	Investment mobilized	150,000.00
Recipient Country Government	Department of Agriculture	In-kind	Recurrent expenditures	1,235,000.00
Recipient Country Government	Ministry of Health	In-kind	Recurrent expenditures	2,000,000.00
Recipient Country Government	Ministry of Health	Public Investment	Investment mobilized	12,000,000.00
Private Sector	Ceylon Waste Management (Pvt) Ltd	Loans	Investment mobilized	2,000,000.00
Private Sector	Ceylon Waste Management (Pvt) Ltd	In-kind	Recurrent expenditures	9,100,000.00

Private Sector	Asia Recycling (Pvt) Ltd	In-kind	Recurrent expenditures	3,000,000.00
Recipient Country Government	Central Bank of Sri Lanka	In-kind	Recurrent expenditures	600,000.00
Recipient Country Government	Central Bank of Sri Lanka	Loans	Investment mobilized	4,000,000.00
Recipient Country Government	Local Authorities	In-kind	Investment mobilized	100,000.00
GEF Agency	UNDP	Grant	Investment mobilized	1,000,000.00
Recipient Country Government	Local Authorities	In-kind	Recurrent expenditures	75,000.00
<b>Total Project Cost(\$)</b>				<b>40,860,000.00</b>

#### **Describe how any "Investment Mobilized" was identified**

(a) Central Environmental Authority (US \$ 1,100,000): refers to public investment mobilized for the establishment of an Engineered Landfill for piloting the disposal of inert health care waste. (b) Ministry of Health (US \$ 12,000,000): refers to public investment mobilized for the expansion of the healthcare waste management infrastructure and equipment. (c) Ceylon Waste Management (Pvt) Ltd (US \$ 2,000,000): refers to private investment mobilized through a Loan obtained by the company for the expansion of the mercury-contained products waste recycling facility. (d) Central Bank of Sri Lanka (US \$ 4,000,000): refers to the financial mechanism to be established by the project to promote and facilitate replacement of Mercury-based devices and the new autoclaves, to be diverted to private sector units as Loans. (e) Local Authorities (US \$ 100,000): refers to the allocation of land for the establishment of the engineered landfill. (f) Department of Chemical Management, Ministry of Environment (US \$ 500,000): refers to the public investment required for the development of the chemicals (baseline) database. (g) Department of Customs (US \$ 150,000): refers to the public investment required for the incorporating the chemicals (baseline) database into the Single Customs Window module.



**D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds**

<b>Agency</b>	<b>Trust Fund</b>	<b>Country</b>	<b>Focal Area</b>	<b>Programming of Funds</b>	<b>Amount(\$)</b>	<b>Fee(\$)</b>	<b>Total(\$)</b>
UNDP	GET	Sri Lanka	Chemicals and Waste	POPs	3,140,000	298,300	3,438,300.00
UNDP	GET	Sri Lanka	Chemicals and Waste	Mercury	1,900,000	180,500	2,080,500.00
<b>Total GEF Resources(\$)</b>					<b>5,040,000.00</b>	<b>478,800.00</b>	<b>5,518,800.00</b>

E. Project Preparation Grant (PPG)

PPG Required **true**






PPG Amount (\$)				PPG Agency Fee (\$)			
150,000				14,250			
Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
UNDP	GET	Sri Lanka	Chemicals and Waste	POPs	100,000	9,500	109,500.00
UNDP	GET	Sri Lanka	Chemicals and Waste	Mercury	50,000	4,750	54,750.00
Total Project Costs(\$)					150,000.00	14,250.00	164,250.00

Core Indicators

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

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
29.31	0.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
Alpha hexachlorocyclohexane	0.03			
Beta hexachlorocyclohexane	0.03			
DDT	0.01			
Lindane	0.03			
Technical endosulfan and its related isomers	20.41			

**Indicator 9.2 Quantity of mercury reduced (metric tons)**

<b>Metric Tons (Expected at PIF)</b>	<b>Metric Tons (Expected at CEO Endorsement)</b>	<b>Metric Tons (Achieved at MTR)</b>	<b>Metric Tons (Achieved at TE)</b>
8.80			

**Indicator 9.3 Hydrochlorofluorocarbons (HCFC) Reduced/Phased out (metric tons)**

<b>Metric Tons (Expected at PIF)</b>	<b>Metric Tons (Expected at CEO Endorsement)</b>	<b>Metric Tons (Achieved at MTR)</b>	<b>Metric Tons (Achieved at TE)</b>

**Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)**

<b>Number (Expected at PIF)</b>	<b>Number (Expected at CEO Endorsement)</b>	<b>Number (Achieved at MTR)</b>	<b>Number (Achieved at TE)</b>
1			

**Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)**

Number (Expected at PIF)

Number (Expected at CEO Endorsement)

Number (Achieved at MTR)

Number (Achieved at TE)

Indicator 9.6 Quantity of POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)

Metric Tons (Expected at CEO Endorsement)

Metric Tons (Achieved at MTR)

Metric Tons (Achieved at TE)

Indicator 10 Reduction, avoidance of emissions of POP to air from point and non-point sources (grams of toxic equivalent gTEQ)

Grams of toxic equivalent gTEQ  
(Expected at PIF)

Grams of toxic equivalent gTEQ (Expected  
at CEO Endorsement)

Grams of toxic equivalent gTEQ  
(Achieved at MTR)

Grams of toxic equivalent gTEQ  
(Achieved at TE)

Indicator 10.1 Number of countries with legislation and policy implemented to control emissions of POPs to air (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)

Number (Expected at CEO Endorsement)

Number (Achieved at MTR)

Number (Achieved at TE)

1

Indicator 10.2 Number of emission control technologies/practices implemented (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	11,900			
Male	5,100			
Total	17000	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

Targets under Core Indicators 6 and 10 will be determined during PPG stage.

## Part II. Project Justification

### 1a. Project Description

#### (A) Global environmental problems and root causes

##### *(A.1.) POPs Pesticides and contaminated pesticides and other Chemicals products in Sri Lanka*

1. Article 5 of the *Stockholm Convention on Persistent Organic Pollutants* points out that each party shall at a minimum adopt measures to reduce the total releases derived from anthropogenic sources of each of the chemicals included in Annex C to protect the health of the population and environment globally.

2. The health and environmental impacts of POPs chemicals have not been studied adequately in Sri Lanka. Public concerns about impacts of chemicals are emerging based on anecdotal evidence that noncommunicable diseases (NCD) are on the rise in the country and can become a dominant health problem. Sri Lanka's National Health Database identifies that Chronic Kidney Disease (CKD) has 15-21% prevalence in the paddy farming heartland since the 1990s, but it has not been attributed to any of the known causes of CKD like diabetes, hypertension, glomerulonephritis, etc. - being named as CKD of unknown origin (CKDu)<sup>[1]</sup>. The growing numbers of farmers with CKDu needing dialysis and transplantation is considered a national disaster. Studies have indicated that the use of pesticides for over a long period (i.e., two decades) could be a reason for CKDu prevalence in agricultural areas<sup>[2]</sup>. The overuse of pesticides in agriculture is quite common amongst farmers which are applied close to harvest and after harvesting to protect the fresh produce during transport and marketing<sup>[3]</sup>.

In this regard, the NIP (updated in 2015) still lacks further details on bottom-up data related to POPs pesticides, which denotes the need to continue carrying studies to improve knowledge about pesticides in general. It is noted that no official import and use of POPs pesticides had been recorded in the country over decades due to the ban imposed in accordance with the requirement of the *Stockholm Convention*. However, banned chemicals, possibly illegally imported under different HS Codes, and obsolete stocks (which included pesticides and plastics containers contaminated by POPs-pesticides stocks) were discovered in several locations in Sri Lanka, estimated at 41 metric tons. The NIP also highlighted the high potential of the existence of contaminated sites in Sri Lanka (i.e. DDT, cycloids and lindane), which were detected in tea plantations almost two decades after the ban of these chemicals. Finally, twelve court cases have been filed by the office of Registrar of Pesticide (RoP), between 2016-2020, related to the smuggling of banned or severely restricted pesticides into the country (though the total quantity of smuggled pesticide is unknown, still, about 200 metric tons were seized by Sri Lanka Customs and other Control Bodies).

#### *(A.2.) Problem of Mercury in National Context and the issues related to Healthcare Waste Management*

4. Mercury can lead to significant adverse neurological and other health effects in humans, including the unborn child and infants. 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* went into effect on August 16th, 2017, setting 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* 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 and dental amalgams which the import and/or export and manufacture of is forbidden from January 1st, 2021 onwards.

Mercury contamination is a serious threat to Sri Lanka, which depends on aquatic systems for fishing, employing close to 30,000 men in a network that exist mostly in the northcentral and northwest parts of the country. The discharge of agricultural runoff, industrial effluents, and leachate from contaminated landfills/waste dump sites greatly contributed to the accumulation of the pollutants (specifically heavy metals, including mercury) in inland surface water.

6. The healthcare sector, educational institutes, and laboratories are also sources of pollution of mercury, mostly due to use of mercury-containing medical devices and mercury in their processes. Additionally, products such as CFL bulbs were also widely used in Sri Lanka, resulting in mercury-containing wastes being generated and entering the municipal solid waste streams. Up to 1.4% of e-waste in municipal solid waste in Sri Lanka consists of CFL, fluorescent lights or tube lights and other mercury containing products, including electrical switches, and relays (mechanical doorbells, thermostats). Additionally, liquid crystal display (LCD) monitors, audio equipment, laptops or notebook computers, telephones, DVD players, fax machines, photocopiers, which may also constitute PBDEs sources and heavy metals.

The *Minamata Initial Assessment* (MIA, 2019) showed that Sri Lanka inputs an estimated 7,630 kg of Hg/year from various uses in the country. Sri Lankan water systems may be contaminated with mercury by four key sources: (i) wastewater systems/treatment (3,728 kg Hg/year); (ii) use and disposal of products including medical devices (1,253 kg Hg/year); (iii) use and disposal of dental amalgam (146 kg Hg/year); and (iv) informal waste dumping (396 kg Hg/year). Medical blood pressure gauges (873.7 kg Hg/year), laboratory and medical equipment containing mercury (214.4 kg Hg/year), light sources with mercury (73.8 kg Hg/year), mercury based thermometers (87.1 kg Hg/year) and batteries (68.6 kg Hg/year) are considered as the major sources of mercury releases to the environment. In addition, improper burning and incineration of municipal, industrial and hospital waste are key sources of mercury contamination of land/soil in Sri Lanka as well as source of emission of U-POPs.

#### *(A.3.) U-POPs emissions in HCWM aggravated by the COVID-19 Pandemic*



The healthcare sector is recognized as an important source of release of mercury and U-POPs due to unsound disposal practices of waste. Although regulations for internal management of hazardous waste have been put in place by the Government of Sri Lanka, satisfactory implementation has been challenging due to the choice of centralized large scale treatment systems copped with inadequate infrastructure facilities and lack integrated support services for the disposal of these (inert) wastes.

Proper management of municipal solid waste management systems (MSWMS) has always been a challenge in Sri Lanka, and to accept streams of inert (de-contaminated) healthcare waste in the municipal solid waste system adds concerns to the issue: Local authorities, which are primarily responsible for management of municipal solid waste, have generally refused to accept de-contaminated healthcare wastes, partly due to lack of awareness about how the healthcare waste de-contamination process works (which creates concerns about their safety), but also due to the unsatisfactory solutions (uncontrolled dumping, open burning) which were available for solid waste management (the more waste streams are incorporated, the more pressure over informal dumpsites will exist). The situation, while is improving with the introduction of composting, as well as limited biogas generation and incineration, and the creation of some engineered landfills, is still progressing much slower than expectations of public authorities.

- i. The pressure over healthcare and municipal solid waste systems has been further aggravated with the current COVID-19 pandemic. As immediate response to the increasing volume of plastics waste due to the pandemic focus on providing PPEs and other products protect people from surface contamination, these plastics waste end up in dumpsites, landfills, as well as in river streams and oceans. At the same time, infectious and noninfectious healthcare waste generation has also increased beyond the national capacities. Hospitals, which were already lacking sound and adequate HCWM strategies and disposal systems, are further stressed and had to resort to non-controlled measures, even open burning, to reduce the waste volume.
- ii. Also, the national roll-out of COVID-19 vaccination will also increase healthcare waste generation in the medium to long term due to the possibility of annual immunization program. To cope with this, current trends such as uncontrolled burning are to deteriorate, thus dimming the potential for materials recycling including re-usable plastic PPEs, vaccine glass, aluminum vials, and etc. Hence, U-POPs emissions in this sector may likely continue to increase. For example, it was estimated that from the annual 182 g/TEQ of PCDD/PCDF releases in Sri Lanka in 2013, 57g/TEQ (31% of the total) came from healthcare waste burning<sup>[4]</sup>.
- iii. Finally, the NIP was updated in 2015 to review the inventories of PCBs, UPOPs, POPs pesticides and establish the inventories for new POPs (PFOS, its Salts, PFOSF, and PBDEs. NIP data compiled 6 years ago are outdated and do not present a comprehensive picture of POPs situation in Sri Lanka. As an example, additional analysis of the use along their value chains and comprehensive overview of control measures for the new-POPs are urgently needed.

#### **) Barriers that need to be addressed**

- i. There are no POPs manufacturers or mercury containing products in Sri Lanka. POPs and mercury are imported to the country for variety of use (i.e., medical equipment, pesticides, pharmaceuticals, industrial chemicals, and etc.). The Imports and Exports Control Department is responsible to control the international trade and functions under the provisions in the *Import and Export Control Act* (No.1 of 1969). The *Act* also regulates the import of chemicals by demanding a

## Special Import License Scheme (SIL).

- l. Despite the regulations introduced for chemical imports, challenges to the control of POPs imports continue to exist. Poor awareness among the Customs officials, insufficient regulated monitoring procedures and inadequate analytical facilities at the points of import are considered the key reasons that prevent effective detection of banned chemicals smuggling to the country. Conducting laboratorial tests on chemicals and products import before Customs clearance should be the preferred option, but, the current practice is that only suspected consignments are subjected to verification. Thus, strengthening human resources capacities and skills, and improving the laboratory facilities at the Customs are priorities. The main barriers that need to be overcome are:
  - a. Inadequate knowledge, unbalanced capabilities, and outdated facilities to monitor and verify consignments for chemicals import for effective enforcement of regulation(s).
  - b. Unavailability of reliable data and information required for effective coordination across agencies and efficient and transparent decision making for management and control of POPs chemicals.
  - c. Lack of trainings that include POPs chemicals control practices, application of regulations and screening for the Government Officers of the departments of Imports and Exports Control and Customs.
  - d. Need to update inventories of POPs chemicals and products and plan control measures including disposal planning, especially establishing inventories of POPs from 2015 to date.
- i. Stocks of POPs pesticides and mercury wastes have been accumulated beyond national management capabilities. There is a lack of structures or financially viable plans for disposal. Local authorities (sub-national) also lack capacities to carry on the management and monitoring of the (initially) identified stocks of:
  - (i) 8 metric tons of POPs pesticide/POPs-contaminated pesticides;
  - (ii) 12.5 metric tons of POPs contaminated containers/plastics; and
  - (iii) 8.8 metric tons of (residual/waste) mercury from de-commissioned CFL lamps and medical devices.
- u. The Department of Agriculture (DoA), through their Agriculture Extension Officers' network provides technical advice on selection and use of pesticide at the possible extent. Yet, farmers do not seem to rely on the government extension service and get pesticides related advice from the sales agents or the local retailers of the pesticides[5].
- ' . The Government is the main owner of healthcare facilities in Sri Lanka and has set ambitious targets to replace mercury-based devices in their facilities. However, the replacement of mercury-based devices and the elimination of mercury, as well as the sound management of HCW, encompass all entities that own/operate healthcare units (including private sector and NGOs). Therefore, there is a need to leverage private sector co-finance capacities for replacing mercury-based devices and improve their waste management practices. Under the current scenario, the barriers to be removed in the HCWM are:

- a. Lack of specific regulations, guidelines and standards that can enable the coordinated phase-in of high quality mercury-free products in HCWM. At present, the replacement of mercury-based products are de-centralized with no minimum standards to assure quality control and efficacy, which can lead to low quality products affecting services provided).
- b. Improper HCWM in many healthcare facilities across the country that has been aggravated by the COVID-19 pandemic and the lack of a proper national plan and coordinate actions to cope with such situations.
- c. Lack of coordination between different Ministries in charge of healthcare and waste management and public procurement policies.
- d. Inadequate capacities at the subnational levels (local authorities) on addressing healthcare waste management issues.
- e. Lack of a finance scheme to facilitate the procurement of mercury-free products, PPEs, and the de-centralized non-incineration treatment systems to reduce phase-in cost and minimize waste generation impacts.
- f. Lack of large scale, long term, sustainable and harmonized training for public officers and healthcare personnel.
- g. Lack of aligned national and subnational strategies on safe disposal of mercury-contaminated waste and infectious HCW, lack of a strategy that can unlock the recycling of certain types of HCW in a safe manner (such as re-usable PPE plastics and glasses from vaccines), and lack of guidelines and experiences for the identification of contaminated sites.
- h. Lack of technical capacities to deploy and operate non-incineration equipment, such as low-cost autoclaves and/or microwave systems, to facilitate the establishment of the de-centralized HCWM system.
- i. Lack of appropriate business models for the baseline treatment equipment already in use in Sri Lanka, and need to develop Cost-Benefit Analysis and business models replication of low-cost autoclaves in small and medium sized facilities.
- j. Lack of final disposal options for decontaminated waste which can be integrated to the local solid waste management systems.

### **(C) The baseline scenario**

#### *(C.1) Regulatory and Institutional Frameworks*

- i. As Party to the *Stockholm Convention*, Sri Lanka compiled the initial NIP in 2007 to set out strategies and plans for POPs management. The NIP was updated in 2015, when the inventories of the original 12 chemicals were updated and the preliminary inventories for the new POPs were surveyed/estimated until the year 2014. While POPs inventories (pesticides, PCB, PBDE and PFOS and UPOPs) were updated or established up until 2015. There are also POPs chemicals value chains that should have been mapped out, and new POPs inventories that required further updates. Finally, there is a need to identify policy/regulatory gaps for improvement.
- l. The *National Environmental Policy* (2003) is the key guiding policy in Sri Lanka's environment protection framework, while the *National Environment Act* (1980) is the overarching law that mandates the management of the environment across all sectors, including the chemical management. The National Coordination Committee (NCC) for chemical and waste management, first created under the *National Environmental Policy* and set up under the Ministry of Environment (MoE), comprises of key stakeholders, being set up and functions as the high-level policy making mechanism to facilitate the introduction and implementation of the necessary regulations that synergizes with the different Conventions for chemical management.

- i. A Secretariat for Chemical Management set up at the MoE has the overall responsibility of managing POPs-related matter. The Secretariat coordinates the implementation of capacity building and action plans based on national priorities that support the synergistic implementation of the chemicals Conventions. Many institutions and supporting mechanisms were set up (i.e., coordination committees, technical advisory boards, etc.) to support the decision-making process on POPs pesticides and other chemicals in Sri Lanka. However, there are gaps in coordination given the disparities of capacities between these institutions, as well as gaps related to lack of regular update of POPs inventories and the lack of an updated *Environmental Policy* covering new POPs.
- . The *National Environmental Policy*, and the aligning programs of the MoE (such as the *Haritha (Green) Lanka 2017-2022* and the *National Environmental Action Plan (2021-2030)*) are amongst many strategic initiatives that incorporate issues of hazardous chemicals and pollution management. There are several sectors policies and acts that also align with and contribute towards this mandate. These policies and related programs have either directly or indirectly focused on POPs, mercury, and other chemicals pollution management issues in sectors such as agricultural production, mineral production, metalworks, textile, paper, cement, asbestos, leather tanning, rubber processing, food processing and distilleries. However, these Policies and Acts are done on a stand-alone basis and are not holistic incorporated in a logical framework.

#### *(C.2) Ban on POPs Pesticide and POPs Obsolete Stocks*

- i. Prompt initiatives were introduced for agrichemicals management, including ban of the 'Dirty Dozen' pesticides prior to even effecting the *Stockholm Convention*. The import statistics show that most POPs pesticide were imported only until 1994, except for Lindane, whose imports lasted until 2012. Sri Lanka introduced timely legal measures to avoid some of them over two decades on the basis of health and environmental concerns mandated by the *Control of Pesticide Act No 33 of 1980* (amended in 1994, 2011, and 2020 respectively). Yet, the extensive use (and misuse) of pesticides continues to be practiced given its dominant agricultural economy. The country has imported close to 100,000 metric tons of pesticides (insecticides, herbicides, and fungicides) between 2000-2014. The misuse/overuse of pesticides led to bad practices resulting in cross-contamination with stocks of obsolete POPs pesticides in different sites. Additionally, unsound practices also generated huge amounts of plastic waste and containers contaminated by POPs-pesticides. In the baseline scenario, these practices may continue and, if current stocks are not properly managed and disposed, and cross-contamination will continue to stress the national disposal systems.
- i. The Future Policy Award was awarded to Sri Lanka in 2021 in recognition of the introduction of the *Control of Pesticides Act (1980)* and its amendments. This was a special award dedicated to the most effective policy measures for controlling the effects of highly hazardous pesticides on people, especially on children and the environment. Sri Lanka, in line with the current national vision (Vistas of Prosperity and Splendor), made a bold announcement to ban the use of all agrochemicals, including pesticides, starting from the Maha agricultural season, which starts around October 2021. However, a discrepancy between the regulations related to pesticides, the control and monitoring mechanisms set by DOA, and the field practices of farmers still exist and remain to be addressed.

- i. Holcim Geocycle Sri Lanka, a private sector service provider, has the only facility capable for safe disposal of hazardous waste. However, it cannot meet the country's total demand for hazardous waste disposal. The facility has been used for the disposal of part of the stockpiles of obsolete POPs accumulated over the last two to three decades, including 274 metric tons of pesticides and contaminated products; and 4,250 kg of PCBs containing oil. However, an estimated 37.3 metric tons (out of the 42 metric tons reported in the NIP 2015) of solid and 23.4 metric tons of liquid pesticides and laboratory chemicals (including HHPs, POPs pesticides and contaminated products) await safe disposal. Securing an interim storage of the obsolete pesticides until safe disposal is amongst the highest priorities identified by the NIP 2015. Further, unknown quantities of POPs pesticide and POPs contaminated pesticides have been buried in pits, cushioned with simple absorbent and adsorbent material (i.e., sawdust, charcoal) and reactants (i.e., Lime powder) which are require proper assessment and disposal.

#### *(C.3) Data and information sharing*

- i. Communication and information gaps are key challenges for inter-institutional coordination, and the proposed coordination structure needs to be underpinned by effective data and information management/sharing system. At present, each institution has its own database and systems of keeping records, and in the baseline scenario a coordinated mechanism that can harmonize these sources may not be developed. Relevant information is scattered across agencies. Having comprehensive and updated information for decision making is critical to addressing life cycle management of chemicals, to combat illegal trade, and to improve transparency of imports and use.

#### *(C.4) Healthcare sector: mercury management and waste disposal*

- i. The Public Healthcare System provides free and universal healthcare across the island and the service scores higher than the regional countries' average. It comprises of 477 hospitals (84,728 patients' beds) and 515 primary healthcare facilities, including central dispensaries, with 353 medical officers of health areas under the Ministry of Health (MOH). The 90 state indigenous medicine based hospitals across Sri Lanka add 4,009 beds and 141 private hospitals (over 4,200 beds) to the service. There are 797 units consisting of private hospitals (69), medical and dental practices and laboratories.
- ii. The decentralized network of healthcare facilities annually caters to an estimated 60,000 people per Secretariat Division. As such, 19,860,000 people are catered in 331 Divisions, quite a large number compared to total population of 22 million in Sri Lanka which are covered by the healthcare system. The Annual Health Statistics (2017) reports having serviced 6,910,249 inpatients and 55,399,335 outpatients. As these numbers refer to patient visits, and assuming about 10% is close to actual number of patients, potential beneficiaries of environmental benefits of phasing-out mercury-equipment would be around 6.9 million people (who become sick and require assistance).
- i. Recognizing risks posed by the mercury contamination, the MOH, as main user of mercury products, initiated a mercury phase-out plan aiming to be fully implemented by 2021. However, the process has been slow, challenging, and is delayed. The challenges include inadequate skills and knowledge about choosing appropriate mercury free alternative technologies, correct specification, lack of minimum standards, inadequate investment and need of management plans for

the obsolete equipment and wastes. Under the baseline scenario, these problems will continue. Disparities between public and private healthcare units will continue. Lack of finance will continue to be a challenge that will delay the speed of replacement. The lack of central coordination mechanism and standards may risk the quality of medical devices, as a result, stocks of residual and waste mercury will continue to increase without proper management and disposal plans. Without a coordinated training program, healthcare facilities staff and waste workers are at risk of mercury exposure.

- i. The healthcare sector also uses mercury containing bulbs, which is being replaced with non-mercury energy saving alternatives. About 99% of imported mercury-containing lamps over the last decade were fluorescent lamps, out of which over 87% were energy efficient AC-CFL. Asia Recycling (Pvt) Ltd, a subsidiary of Orange Electric, is the main CFL/LFL recycling factory in Sri Lanka. It has the capacity to recycle 30 million bulbs annually. It has worked with the MOH and the CEA to collect obsolete mercury based devices or products. Its recycling plant recycles 100,000 to 150,000 bulbs every month, which is less than 10% of the CFL imported to Sri Lanka monthly. Mercury and phosphorous powder are extracted using dry process and exported to Germany for further separation. At present, 8.8 metric tons of mercury-contained wastes stocks were recovered and the mercury containing wastes are kept at the premises of the factory. However, there are currently no immediate plans for viable disposal, as Sri Lanka lacks the proper interim disposal facility for mercury.
- i. HCW generation is estimated to be 0.346 kg/day, per bed (national hospital); and 0.733/kg per bed (provincial hospital). Only about 10-25% of healthcare waste is considered clinical that includes infectious, chemical and radioactive waste. HCWM as an essential part of healthcare hygiene and infection control is implemented through specific regulations. The national policy on healthcare waste management dated from 2001 explains the HCWM considerations and provides for (i) setting up a national institutional mechanism for policy implementation, (ii) safe HCWM based on regulations and HCWM planning, and, (iii) the implementation and the monitoring of HCWM plans at national and subnational levels by having required legislation, human resources, training and awareness, and budget allocation (The MoH, Nutrition and Indigenous Medicine, 2018).
- . Although the MoH considers HCWM to be a priority for resource allocation, funds allocated are often inadequate to ensure strict implementation of the imposed internal rules and regulations. Out of the estimated 8,669.5 t/year of HCW:
  - a) 3,015.0 t/year are processed using different disposal processes;
  - b) 106.0 t/year are openly and uncontrolled burnt;
  - c) 4,275.5 t/year incinerated under less than ideal or unknown conditions on site;
  - d) 1,273.0 t/year are treated at 20 (twenty) large hospitals using Hybrid Autoclave Systems (Metamizers).
- !. The final disposal of the decontaminated waste continues to be a challenge as local authorities are reluctant to receive these streams in the municipal solid waste management (MSWM) system. The 2019 *National Audit Report on HCWM* pointed out that 70 percent of audited hospitals do not comply with HCWM standards, particularly on solid streams.

- i. It is important to note that the gaps in HCWM are intrinsically linked to gaps in the overall waste management systems, which struggles to safely dispose 10,768 t/day of MSW generated (JICA, 2016). Weak regulatory enforcement and clarity of institutional responsibilities, overlapping mandates, insufficient public awareness, limited capacities and resource constraints of mandated institutions such as local authorities are key issues preventing satisfactory waste management.

#### **(D) Associated baseline projects**

36. Sri Lanka has been a part of the regional initiative on synergistic implementation of *Basel, Rotterdam and Stockholm Conventions*, led by the Stockholm Convention Regional Centre for POPs of India since 2014. The initiative promotes strong inter-institutional coordination, as well as inter-country coordination to address specific issues. Sri Lanka has already in place an institutional coordination structure to respond to this.

37. The Industrial Technology Institute (ITI) is in the process of designing and setting up a database for hazardous chemicals, which will be considered as the starting point of information management. The database is being designed primarily for the requirements of the Chemical Management Department of MoE to facilitate effective and coordinated decision making and support the implementation of regulations. The Chemical Management Department is expected to manage the system, which is designed to meet their requirements, but also allowing consulting access to the Departments of Customs and Imports and Exports; the Board of Investments (BOI); and the Ministry of Industries. However, this “external” consultation will be limited in since there is a lack of proper “rule of law” and the needed scope of coordination.

- i. Two laboratories: (i) Chemical & Microbiological Laboratory of ITI, and (ii) Geocycle laboratories of Holcim (Lanka) Ltd., have established methods to analyze PCBs. Most of the private and public sector services laboratories are equipped with the necessary equipment to detect PCB contained oils of transformers and other equipment. From 2009 through 2014, M/s Holcim Geocycle has undertaken destruction (by co-processing) of 273.68 tons of obsolete pesticides, pesticide contaminated packaging wastes and plant washings possessed by the industry/agricultural sectors.
- i. A Steering Committee for the Minamata Convention (SCMC) has been appointed to facilitate its implementation in Sri Lanka. A sub-committee was appointed by the SCMC to review existing regulations on mercury in ‘fairness creams and cosmetics’, and has identified some gaps and made some recommendations.
- i. The MoE is at the final stages of developing a project proposal to “Strengthen national capacity for phasing-out mercury in added products in Sri Lanka”. The Specific International Programme (SIP) of the Minamata Convention will focus on creating awareness and generating information about alternatives to mercury containing products; develop knowledge products for awareness creating; and awareness and capacity building for the selected target sectors.

- . The World Bank has financed the “Second Health Sector Development Project (2013-2018)” which promoted HCWM across piloted hospitals in Sri Lanka. The percentage of hospitals that have obtained EPL and SWML found to have increased from 5% to 17.3% because of HCWM practices improvement through the project. These are (i) having annual HCWM plans in larger and consolidated district hospitals; (ii) further improving HCWM practices in selected hospitals; (iii) capacity building in HCWM; and (iv) the formalization and approval of the national HCWM policy.
- l. A public-private partnership (ECHELON, 2017) has led to the establishment of a Centralized Clinical Waste Treatment Facility using incineration technology with controlled emissions, following a crisis faced by hospitals in 2013, when the local authorities refused to accept de-contaminated clinical waste. (Sisili Projects Consortium). The Facility reported collecting waste from 280 establishments, amounting to 200t/month, with treatment technology at 14,000 degrees Celsius. The ash produced (8t) was disposed through brick making.
- i. The first engineered sanitary landfill in the country was introduced by the Central Environment Authority (CEA) with technical and financial assistance from the Korean International Cooperation Agency in 2014. Management was assigned to the Local Authority in Dompe Region. Given the issues such as weak technical and management skills of the LA, the CEA now manages the landfill centrally. The second and a larger landfill was constructed mainly to dispose of waste (600-700 t/day) generated in Colombo and suburbs in Aruwakkalu, Puttalam, about 170 km away from Colombo. The capacity of the sanitary landfill is expected to be expanded to reach 1,200t/day upon completion of the next phase, expected in late 2021.

**(E) The proposed alternative scenario (expected outcomes and components of the project);**

- l. The proposed project will work in four (4) areas of intervention to remove the barriers stated above and create long-term solutions in Sri Lanka to:
  - i. Improve institutional capacities to implement regulatory systems for the sound management of POPs, mercury and other CoCs, focusing on strict enforcement of import controls and use of regulated chemicals. It will also develop centralized chemicals database and promote mechanisms to replace mercury-based medical products and phase-out mercury containing products in the healthcare sector, including long term and innovative green procurement and green finance mechanisms.
  - ii. Deploy environmentally sound management strategies and actions for storage/interim storage and disposal of obsolete stocks of POPs pesticides, mercury and their wastes (containing or contaminated by POPs and mercury).
  - iii. Align the immediate response to COVID-19 pandemic to long-term HCWM management systems and strategies; deploy long-term sound management strategies in the healthcare sector; and promote recycling of certain waste streams and reduce U-POPs emission. This includes piloting comprehensive HCWM de-centralized strategies and test (technical and economic feasibility) the use of low-cost autoclaves for treatment of infectious waste at medium to small scale healthcare facilities. The Strategies will also look into ways to incorporate the disinfected waste within the existing solid waste management systems in the country.
  - iv. Gather and share knowledge, support training, replication and scalability of project results, manage, monitor and evaluate the project.



Component 1 - Strengthen the Policy, Regulatory and Institutional Frameworks for the management of POPs, Mercury and other Chemicals of Concern (CoC).

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*Outcome 1.1. Institutional Coordination Mechanism Strengthened. Regulatory Frameworks for enforcement of the Chemicals regulations updated.*

Output 1.1.1. Review baseline regulations on chemicals management. New POPs and U-POPs inventories, including their value chains, are updated into the 2015 NIP.

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- Regulatory review/adaptations will be carried out to allow the “rule of law” of the regulatory framework to be developed and applied in a holistic manner, linking these to the Central Control System under Output 1.1.2. and establishment the legal framework in which the strengthened Coordination Mechanism amongst the relevant institutions under Output 1.1.3. can operate. The regulatory framework on ‘Polluter Pays’ drafted by the Ministry of Environment under the GEF 5314 “*Environmentally Sound Management and Disposal of PCBs Wastes and PCB Contaminated Equipment in Sri Lanka*” will also be reviewed and pushed forward.
  - The 2015 NIP inventories will be updated to feed up the data management system under Output 1.1.2., support the work of the several Officers involved in their monitoring and disposing activities. PCB inventories and databases compiled by GEF Project ID 5314 “*Environmentally Sound Management and Disposal of PCBs Wastes and PCB Contaminated Equipment in Sri Lanka*” will be updated.
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Output 1.1.2. Centralize the Chemicals Control System; Laboratory for POPs and other CoCs is improved, and monitoring of imports is enforced at entry points.

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- The project will partner with the ITI to deploy a centralized digitized information management system, building from on existing initiative of the Chemical Management Department (MoE). This will fill a critical information gap in chemical management in Sri Lanka.
  - The system will be expanded using and linking the various databases. The digitized and streamlined information management system designed using the e-Sri Lanka (e-governance) platform will provide comprehensive access to relevant data and information to all agencies concerned.
  - The Project will upgrade the baseline laboratory facilities at the Customs to enable quick detecting, testing, and verifying imported products, prior to allowing them to be import release (nationalization) for their use in the country. As result, the Departments of Import and Export Control and Customs will become fully equipped and strengthened to carry out checks and verifications at the entry points backed by enhanced capacity and skills.
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Output 1.1.3. Institutional Coordination Mechanisms strengthened and operating in efficient manner

- The project will build capacities and skills across the agencies that participate in the National Coordination Committee (NCC) for Chemicals and Waste Management. This will be done by improving their TOR and proposing new due processes to strengthen the government's ability to regulate, strictly enforce import regulations reducing/preventing misuse of banned and restricted POPs chemicals and related products. Enhanced coordination across many institutions and various levels within institutions will be promoted for better, faster and transparent decisions.

*Outcome 1.2. National conditions to scale up the replacement of medical devices and dispose of wastes of mercury-contained medical devices enabled.*

Output 1.2.1. Green procurement standards established, including proposals on bulk procurement and coordinated strategies for replacement of mercury-based medical devices including dental amalgam.

· Although Draft Sustainable Production and Consumption Policy in Sri Lanka recommends having a National Green Procurement Policy before 2020, this mechanism hasn't been developed yet. Hence, green procurement standards and guidelines proposed to be developed for healthcare sector procurement will contribute towards the initiation of a national green procurement mechanism.

- The project will support the development of proper quality and technical standards to harmonize the mercury-free alternative products. This will provide the platform for the healthcare sector to close the loops, organize a more systematic and coordinated replacement through technical standards, a proposed bulk procurement methodology, and accelerating the replacement activities initiated under the baseline project of the MoH.

- The project will demonstrate the application of green procurement standards to help health sector to consider how to take social and environmental impacts into account during procurement (incrementally to quality, price and related maximum economic benefits considerations), and with the help of PPPs, it will deploy the green procurement guidelines and encourage local supplies to identify sources of eco-friendly products and services and prioritize these for local use.

Output 1.2.2. Finance framework for the procurement of mercury-free medical devices and HCWM disposal equipment developed.

- A Green Finance Framework (GFF) will be developed for the promotion mercury phase-out in healthcare sector. The project will build from positive experiences of different projects (such as GEF IDs 10349, 4611 and 1802) as well as international best practices in the area. The GFF will also help to address other challenges in the deployment of non-incineration HCWM equipment following the CBA and business models to be developed under the component 3. Public and Private Partnership (PPP) schemes will also be promoted as many government and private healthcare will need upfront investment to transform their current inappropriate HCWM practices.
- The project will set out the basis for identification, selection, verification and reporting of the green healthcare projects that are eligible for financing to be available through banks (backed by Green Savings Bonds, etc.) such as the Central Bank of Sri Lanka (CBSL) and private banks.

- The Guidelines for green finance will serve as regulatory tools for sustainable finance in Sri Lanka based on the directives of the CBSL's Road Map for Sustainable Finance (2019). GFF is expected to evolve to channel financial flows towards major goals of low carbon economic growth, pollution reduction , GHG emissions, waste reduction and Natural Resource Management, while the private banks (such as Pan Asia Bank and, Seylan Bank) will strengthen their linkages with international partners to benefit from proceeds of green bonds and to offer green finance options to their clients.

- Additionally, the Sustainable Banking Initiative of Sri Lanka, consisting of 18 private banks (since 2015), is also expected to be incorporated in the GFF framework and its abilities with green bond platforms will also be investigated during the PPG stage. Beneficiaries of the GFF will be mostly private healthcare facilities, private sector engaged in waste management, suppliers HCWM equipment, machinery, local authorities, and suppliers of alternative (green) equipment, tools and services.

#### Component 2 - Environmentally sound management disposal of obsolete stocks of Agrichemicals POPs, Mercury and their wastes

*Outcome 2.1. Effective Management System for environmentally sound disposal of mercury stocks, mercury-containing wastes, obsolete stocks of POPs-contaminated pesticides and their containers, implemented.*

##### Output 2.1.1. Residual mercury stocks, mercury-contained waste generated from the replacement of mercury-containing medical devices and dental amalgam safely disposed of.

- The project will support the Government of Sri Lanka and the relevant private sector stakeholders to dispose of the 8.8 metric tons of mercury and mercury containing wastes already collected, and collect additional quantities of mercury (to be determined in PPG phase) in the pilot facilities. The disposal will occur in a transparent manner to address concerns of other stakeholders such as NGOs and the general public.

##### Output 2.1.2. Risk Management Strategy developed. Technical Guidance & Training materials prepared for the sound management of wastes containing mercury.

- National Strategies will be developed and/or existing guidance provided on safe management of mercury containing medical equipment and dental amalgam, stocks of mercury extracted from obsolete products and mercury containing waste, will be reviewed and updated to incorporate the most recent BEP in the area. Based on guidelines developed/revised, safe management and disposal pilot plans for mercury and mercury-containing products wastes will be developed at the (5) five piloted healthcare facilities

- Management plans for mercury and mercury containing waste from obsolete medical products will be developed including adopting safe (interim) storage solutions and conduct investigations of potential technology solutions to recover and reclaim mercury for other local users such as indigenous medicines. In addition,

- The national HCWM guidelines will be revised to include sound guidance to manage residual mercury stocks and wastes generated from obsolete mercury-containing medical equipment and dental amalgam. Training programs will be designed and carried out to train staff of healthcare facilities in applying the disposal management strategies /plans for residual Hg and Hg-contained products disposal

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Output 2.1.3. Residual/contaminated stocks of POPs pesticides and contaminated plastics/containers assessed, inventoried, and safely managed.

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- The project will dispose of a stock of about 20.5 metric tons of chemicals; which consists of 8,000 liters (approx. 8 metric tons) liquids and approx. 12.5 metric tons of solids, contaminated with obsolete stocks of Endosulfan, which are held by education and higher educational institutions for study and research purposes and currently not stored in ideal conditions (which may reach a total of 41 metric tons of POPs pesticides, contaminated pesticides and containers, to be verified and confirmed during PPG phase).

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Output 2.1.4. Guidance Tools and Guidelines for the inventory of mercury/POPs contaminated sites developed and tested at pilot sites

- In addition, the de-centralized stocks of obsolete POPs pesticides (and POPs contaminated pesticides) will also be carefully assessed and inventoried so the project can support data for informed strategies on the management these pesticide stocks, including the assessment of buried stocks identified in the NIP. A plan for safe disposal of POPs pesticides and contaminated chemicals, and the buried pesticides, if required, will be developed. The project will also develop and introduce guides and standards for decontamination of sites contaminated with POPs pesticides, POPs chemicals and mercury.

*Component 3 - Establish Healthcare Waste Management (HCWM) Systems to effectively prevent U-POPs emissions, and develop Business Models for waste disposal at Healthcare Facilities which are aligned to the national COVID-19 recovery efforts*

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*Outcome 3.1. Update HCWM Strategies and Plans that reflect BAT/BEP which can prevent/reduce U-POPs emissions, minimize plastic waste generation and improve recycling practices.*

Output 3.1.1. Standards and Regulations on HCWM are revised. A HCW Data Management System (HCWDMS) is introduced to address gaps in the monitoring activities.

- Regulations, Standards and practices, at the hospital-level, will be reviewed and updated.

- Data Management System on HCW, using digital solutions to improve implementation and monitoring of waste management process, will be piloted in the 5 healthcare units.

#### Output 3.1.2. National Plan for Harmonized Treatment and Disposal of HCW in emergencies is developed.

- A holistic HCWM Strategy will focus on all aspects of the HCWM by reviewing and (proposing) updates of current Standards and Regulations and established comprehensive Plans for the final disposal of decontaminated HCW, a challenge faced by all the hospitals.
- Activities will promote direct or indirect partnerships with the relevant Local Authorities (LAs) to provide last-mile solutions for disinfected, inert and non-biodegradable healthcare residual waste, as part of the LA's effort to integrate the engineered landfills and generate revenues from SWM.

#### Output 3.1.3. Guidelines and Standards on green procurement of PPE and other consumables developed.

- Strategies to reduce demand of plastic materials and improve recycling of plastics, aluminum and glass materials will be developed and tested (which also consider the impacts of the nationwide COVID-19 vaccination program that is expected to generate large amounts of waste – vials, plastics, etc. - that, in principle, could be recycled).
- Given the increase of waste generated by the healthcare sector - about five folds resulting from the COVID-19 pandemic - and due the high use of polythene and plastics as protective gear and in vaccination, the demonstration of safe HCWM by the project will fill close the gap that healthcare facilities and service providers face in terms the investment and operational costs in line with the Finance Mechanism under the Component 1. The GFF to be developed will play a significant role in green recovery in the healthcare sector to align better to face future challenges confidently with safe HCWM to avoid U-POPs emissions.

#### Output 3.1.4. Technical and Economic Assessment (CBA) on the whole spectrum of HCWM technologies for Sri Lanka setting prepared.

- The project will incorporate both the baseline Hybrid Autoclaves (Metamizers, introduced for 20 large hospitals about 4 years ago that are under sub-optimal use or not even used in some cases) and align the experiences gathered by the GEF Project 4611 (on the use low-cost Autoclaves) and develop Cost-Benefit Assessments (CBA), jointly with PPP interventions, to provide potential Business Cases/Plans that could be applied in different profiles of healthcare units in Sri Lanka, looking towards assure financial sustainability of the HCWM Systems.

#### Output 3.1.5. Integrated recycling programs piloted in five (5) facilities

- The project will support data collection on recycling potential at the piloted facilities. Partnerships with local private sector (including women led MSMEs) will be assessed to improve the collection and recycling networks of de-contaminated materials. Current Guidelines related to HCWM will be updated to facilitate the proper collection and recycling of valuable materials (plastics, glass and aluminum).
- As indirect positive effect of this intervention, the project may yield opportunities to creation of “green jobs” related to HCW recycling, as it will explore alternative income generation opportunities by facilitate the partnership between hospitals, Local Authorities and waste collectors.

*Outcome 3.2. Non-incineration HCWM Business Models are developed. Baseline treatment systems models and practices improved. Technical/economic application of low-cost autoclaves demonstrated.*

Output 3.2.1. Public-Private Partnership (PPP) for a Centralized Waste Management System that can incorporate the de-contamination healthcare waste facility is piloted.

- A Centralized Clinical Waste Treatment Facility (CCWTF), using non-incineration technology, and attached to a landfill, will be established, with support from Ministry of Health and to be operated in a PPP model- The CCWTF will receive and treat contaminated HCW form small and micro health care facilities that are not able to operate, in a sustainable manner, “in house” HCWM equipment. Lessons learned from the baseline CCWTF (incineration facility) will be used to improve the non-incineration CCWTF system.

In addition, the pilot Centralized Clinical Waste Management Facility will be selected under supervision of the Ministry of Provincial Councils and Local Government, Central Environmental Authority and Ministry of Health taking into consideration the following factors:

- (i) Existence of functioning landfill; or vailability of land and financial resources to establish a landfill;
- (ii) Proximity to the pilot servicing healthcare facilities; and
- (iii) The company must not have any legal impediment that could prevent it to engage in public-private partnership schemes or take part of any Legal Agreements under the Project Framework.

Output 3.2.2. A De-centralized non-incineration HCWM Strategy for medium to small scale health care facilities is developed.

- The HCWM Strategy will incorporate both the baseline Metamizers as well enlarge the scope to introduce low-cost autoclaves with the experiences gathered by the GEF Project 4611 in medium to small scale facilities, jointly with PPP interventions and structured with recycling activities.
- There will be no selection process as project will provide technical assistance to all 20 healthcare facilities that own Metamizers in Sri Lanka.

Output 3.2.3. Business Models for de-centralized HCWM systems Piloted in five (5) medium-to-small scale facilities. Technical /financial/economic application of low-cost autoclaves tested and experiences from other GEF HCWM projects are internalized in Sri Lanka.

- The project will develop the Comprehensive Business Plans and gender-sensitive HCWM plans will be developed reflecting the experiences of technical assistance and pilot/demonstration activities with the installation of specific low-cost autoclave equipment and infrastructure for the small/medium scale operation.
- The five (5) pilot sites under Output 3.2.3 are integrated with the activities of Outputs 2.1.2, 3.1.1 and 3.1.5 and will be selected under supervision of the Ministry of Health (MoH). The location/region will be defined during the PPG phase but these will be aligned with the areas where investment from MoH has been allocated in National Budget. The specific selection criterion will be defined in PPG phase, however general criterion would include:

- 1) Having a significant number of small private dispensaries and related services that generate hazardous waste
- 2) Be a medium-to-small sized facility;
- 3) No waste treatment facility;
- 4) Proven capacity to provide required co-finance to the project activities; and
- 5) Legal Entity, Company of healthcare Unit must be owned by public or private sector juristic person to be able to formally engage with the Project.

Output 3.2.4. Baseline Hybrid Autoclaves operation and maintenance practices, at large scale healthcare facilities, are improved, and their operational Business Models is developed.

- Technical Assistance (T.A.) will be provided to all 20 healthcare facilities that currently owns Hybrid Autoclaves (Metamizers) with the purpose to further optimize their operation and help them to develop a viable and self-sustainable Business Model for safe treatment of infected waste. The T.A. will also help them to identify issues and inefficiencies in the use of these large sized Metamizers. Technical training for relevant staff and operators for resolving technical issues such as repairs will also be provided. Experiences will be collected and replicated through Component 4.

Component 4 - Knowledge Sharing, Management & Evaluation

*Outcome 4.1. Project communication and training tools developed. Effective knowledge management delivered.*

Output 4.1.1. Effective knowledge management tools delivered. Lessons learned and experiences are shared, effectively supporting the scale up and replication of project results.

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- Lessons learned and best practices from the project will inform review and update of national guidelines and standards, create harmonized codes of quality and training programs for Public Officers, Healthcare Staff, Waste Workers and other relevant actors on the use of best available techniques (BAT) in healthcare sector, mercury-waste management, application of mercury-free devices and, thus, support the phase-in of alternatives.
- The project will collect experiences and lessons learned from relevant GEF projects implemented (e.g. GEF project IDs 10349, 4611 and 1802) as well as international best practices in the area to compound relevant KM Plans and improve the replication of successful experiences.
- Knowledge management tools will be developed and deployed to reach the estimated workforce of 100,000 workers through replication and upscaling under Components 1, 2 and 3 (reaching all 1,100 healthcare facilities in the country).

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Output 4.1.2. Training programs developed. Capacities of Public Officers and healthcare facilities staff on U-POPs and Mercury (avoidance of) releases during the waste disposal activities are strengthened.

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- The project will provide equitable opportunities for women and men to be trained in improved and safe handling of waste generated at each point including segregation, weighing, or measuring waste fractions and recording. A participatory and mutual learning approach, coupled with expert advice, will be adopted to allow peer to peer exchange and promote innovative bottom-up approaches for HCWM.
- Improved integrated and comprehensive healthcare waste management will benefit about 10,000 waste workers engaged in Local Government level waste management processes and over 6,000 sanitary workers that are working in the healthcare system. These tools will support the dissemination of experiences, lessons learned and best practices.

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Output 4.1.3. Training for Environmental, Monitoring and Customs Officers on the control and monitoring of POPs, Mercury and other CoCs is delivered.

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- The project will work with the Departments of Imports and Exports Control and Customs to bridge the gaps identified and by the NIP 2015 by addressing the lack of knowledge and skills to monitor and verify POPs and POPs containing imports which defy the regulations. Awareness will be raised and training materials and programs will be developed and deployed for the relevant officials on hazardous chemical management

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Output 4.1.4. Project Communication Strategy and Public Awareness Programs are delivered. Stakeholders Engagement Plan and Gender Action Plan implemented.

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- Communication Strategy will be created delivering differentiated approaches for stakeholders benefiting estimated 1,000 employees within the piloted healthcare facilities, but also reaching the general population to support sharing of information about the general replacement of household thermometers, supporting their safe disposal and reducing exposure risk. The project will build from the communications experiences and the baseline knowledge products created under GEF project 5314 *“Environmentally Sound Management and Disposal of PCBs Wastes and PCB Contaminated Equipment in Sri Lanka”* will also be reviewed and pushed forward.
- This component will also be responsible to deploy the Gender Action Plan to be developed in the PPG phase, 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.

*Outcome 4.2. Monitoring and evaluation delivered during the project lifecycle.*

Output 4.2.1. Monitor Project (Quarterly and annual Reports and Project Board Reports); Apply Evaluation Tools according the project cycle (PIR, MTR and TE).

&

Output 4.2.2. Implementation Tools (budget revisions, financial control and project management) applied as required and adaptive management actions implemented during the project lifecycle

- 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.

**(F) Alignment with GEF focal area;**

- i. The project is fully aligned the GEF-7 Program Directions of the Chemicals and Waste Focal Area and will contribute to achieve the GEF-7 indicators in the following:
  - a) GEF Chemicals and Waste focal area, Program 1, “Industrial Chemicals Program,” with a focus on the end of life of products, management of the waste, or waste containing these chemicals, supporting the “Environmentally sound waste management/disposal of mercury/mercury containing waste”.
  - b) GEF Chemicals and Waste focal area, Program 1, “Industrial Chemicals Program,” with a focus on “Introduction and use of best available techniques and best environmental practices to minimize and ultimately eliminate releases of unintentionally produced POPs and mercury from major source categories included in both the Stockholm and Minamata Conventions”.

- c) GEF Chemicals and Waste focal area, Program 2, "Agriculture Chemicals Program," with a focus on disposing of stocks of "agricultural chemicals that are listed as persistent organic pollutants under the Stockholm Convention".
6. The project also considers investment principles of resource efficiency and recycling concepts in upgrading and/or introducing BEP/BAT based approaches to HCWM. Further, project attempts to pool emissions abatement efforts (i.e. industrial, Hg and HCW) by bringing all related information under single digital platform to facilitate more effective coordination (emissions reduction to be estimated during PPG Phase).

#### **(G) Considerations on Impacts from Covid-19 Pandemic to the Project**

47. The COVID-19 pandemic is bringing significant disruption in local and global economies, and this could be one of the most serious economic setbacks in the history. While the impact of the pandemic will vary from country to country, it will most likely increase poverty and inequalities at a global scale, making achievement of SDGs even more urgent.

48. The spread of the COVID-19 is at different stages in the world, with several countries transitioning between second to third waves of infection, and with the aggravation of the Delta Variant which seems to be more infectious (as per WHO), and Sri Lanka faces a challenging situation relative the control of the local outbreak, with controls and a vaccination plan in place. The major risk related to the impact of the COVID-19 to this project protocol relates to its PPG Phase, to be carried out along 2021/2022. It is believed that the vaccinations programme would be being deployment, and this would substantially lower the risks during project implementation, expected to be initiated in 2022/2023.

49. Implementing Agencies and Partners to the project are aware of the risks, and plan to carry out continuous monitoring and assessment of the impacts of COVID-19 on the progress of the project preparation and promote the implementation of the project per the plan through various means, such as online meeting, telephone, if required.

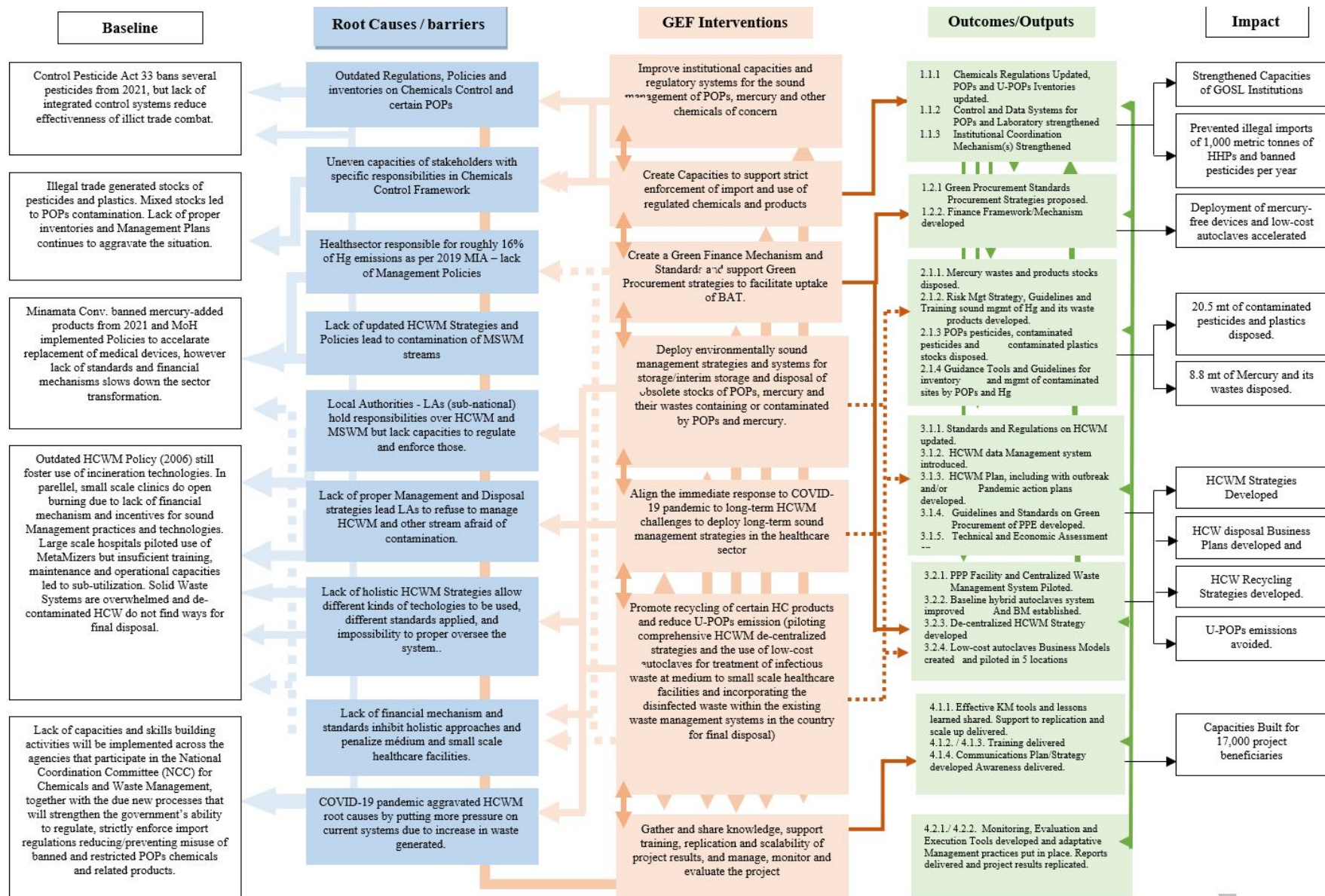
50. In any case, UNDP and the Government of Sri Lanka will consider, during the PPG Phase, the principles of the UN framework for the immediate socio-economic response to COVID-19, as well UNDP's Guidelines on UNDP's integrated response to COVID-19 potential linked and or parallel actions that could help decision-makers look and design beyond recovery, towards 2030, making choices and managing complexity and uncertainty in the green economy area to support the recovery from COVID-19 impacts.

#### **(H) Global environmental benefits (GEFTF)**

- a) Strengthened monitoring and verification capacity at the point of imports to Sri Lanka will prevent the illegal imports of 1,000 metric tons of HHPs and banned pesticides per year.
- b) An annual reduction of the use of 800,000 mercury containing bulbs in the healthcare sector.
- c) Disposal of 8 metric tons of solid POPS-pesticides/contaminated pesticides; and 23.4 metric tons of contaminated plastics containers.
- d) Disposal of 8.8 metric tannest mercury and related waste will be safely disposed.

- e) Collection and disposal of mercury waste at piloted facilities (to be estimated during PPG Phase).
- f) Avoided emission of mercury and U-POPs to the environment to be estimated during PPG Phase.
- g) Capacity building of 1,000 staff at the piloted HealthCare Facilities and 16,000 people working in the waste management sectors (healthcare and municipal solid systems) and at recycling industries, being that 70% estimated to be women.

## Theory of Change



#### (H) Incremental/additional cost reasoning and expected contributions from the baseline, the GEF, and co-financing;

51. The incremental support to be provided by the GEF will be instrumental to complement current baseline initiatives, to coordinate actions that in the baseline scenario are to be diverted or not fully realized, and provide additional support to engage with different stakeholders to holistically tackle the challenges related to the management and disposal of mercury residues and mercury containing wastes (as well as mercury-containing products). Current

institutional and legal frameworks will be reviewed and updated in integrated data management system will be developed to connect the complex network of institutions inserted in the Chemicals Control Framework in the country.

52. The GEF will also support the GOV to developed over-arching HCWM Strategies designed to support the nationwide healthcare system to improve their waste management practices, particularly focusing in de-centralized, low cost and non-incineration solutions for medium to small size facilities owned by Government, Private Sector and NGOs. Without GEF support, the National HCWM Strategy (2003) may be updated in a much slower pace, sub-optimal incineration and even open burning practices may continue at national scale, increasing U-POPs emissions, and the current very limited number of hospitals using different types of large autoclaves will continue to face bottlenecks in the disposal of sterilized solid waste since Local Authorities won't have the means to absorb these types of waste in their solid waste management systems.

53. Past experiences funded by the GEF and supported by UNDP in Africa and Asia (GEF Projects 4611 and 1802) for HCWM will be used as reference for building the pilots in Sri Lankan setting. This project proposal will build from these experiences and provide the adaptive tools for local needs, and ultimately replicate the results in national setting and scale. The project will also take advantage of the baseline regulatory framework on 'Polluter Pays' drafted by the Ministry of Environment under the GEF 5314 *"Environmentally Sound Management and Disposal of PCBs Wastes and PCB Contaminated Equipment in Sri Lanka"*. It will also include the experiences and knowledge products created under the GEF ID 5314 as reference and starting point for the specific communications and capacity building with the private sector stakeholders in Component 4.

54. The GEF additional support will be critical to allow the creation of long term financial schemes and public "green" procurement frameworks to sustain the project results overtime. Currently, mercury-free medical devices and HCW treatment units are procured through stand-alone, diffuse processes with different standards and procurement criterion, which makes difficult to deploy harmonized approaches under a holistic plan, increase the costs and limit the reach of trainings aiming to improve practices given the multitude of types of products being imported. Ultimately, the nationwide efforts to replace mercury-based devices will be stretched overtime since healthcare units won't have more equitable access to financial mechanism to speed up this process, and the waste generated is expected to continue to be management with different - and in sub-optimal -standards, risking environmental pollution and human exposure from these.

55. The 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 public-private partnerships. The project will use GEF funding efficiently and smartly, incorporating long term access to finance and other public revenue streams (if appropriate) for long term support of the project results. GEF Funds will be applied in all four (4) Components of this Project Proposal.

56. Co-financing that will be provided by the Implementing Agency (IA) UNDP, the Government of Sri Lanka, private sector entities, medical facilities and others will focus on:

- (i) Deployment of the green procurement scheme and access to green finance mechanism(s) (Outcome 1.2);
  - (ii) Support capacities in management of Mercury and POPs waste, support the disposal of current stocks of waste and contaminated wastes and oversee the management of potentially contaminated sites (Outcome 2.1);
  - (iii) Pilot HCWM strategies and low-cost non-incineration technologies (Outcomes 3.1 and 3.2); and
  - (iv) support exchange of experiences, information gathering, sharing and awareness raising among stakeholders (Outcome 4.1).
- (l) Innovation, sustainability and potential for scaling up.**

#### Innovation

7. Sri Lanka is a technology-dependent country when it comes to healthcare products and technologies, and deploying low environmental impact technologies to treat healthcare infectious waste the country depends on improving the technical assistance to create local capacities in this area. For this reason, the project will support public and private sector partnerships and engage stakeholders to access the most innovative technologies available worldwide, streamline standards to unlock their imports and use, improve national capacities to allow their use and application in the field, and investigate national schemes to allow the rapid uptake (either by bulk and public procurement schemes or special credit lines to private sector stakeholders).
8. The project will introduce a modern digitized solution to the problem of inadequate sharing and access to reliable data and information on chemicals management. A data and information management system that digitally link institutional databases to each other will use the government's e-governance or e-Sri Lanka as the common platform, it will ensure accessibility to all relevant Parties. Enhanced coordination across many institutions and various levels within institutions that have specific responsibilities related to chemical management will lead to better, faster and transparent decisions as stakeholder inputs will be provided in a more informed and confident manner.
9. The project will build from the baseline Laboratory installed at Customs and will introduce state of art equipment and devices used internationally to detect POPs chemicals directly and in products. The Departments of Import and Export Control and Customs will be confident to carry out checks and verifications due to enhanced capacity and skills. Strict enforcement of import regulations will regulate imports of POPs chemicals and containing products.

#### Sustainability and Potential to Scale Up

60. The project sustainability and scale up are expected to be achieved with the development of the long-term green finance mechanisms and green procurement standards that will support local facilities in Sri Lanka to expedite and scale up the replacement of mercury-containing medical devices and products in line with the baseline national Policies set by the MoH. In addition, the green finance will enlarge the scope of the replacement activities and cover the deployment of non-incineration disposal units upon the technical and economical demonstration to be implemented in Component 3. The green procurement mechanism is also expected to unlock the initiation of a national green procurement mechanism covering other aspects of public procurement by connecting stakeholders through PPPs and encourage local supplies to identify sources of eco-friendly products and services and prioritize these for long term local use.

61. The improvement of the regulatory framework and strengthening of national capacities through relevant policy adjustments and increased stakeholder awareness will sustain the phase-out of the imports of mercury-containing medical devices and support to sustain the project results. Lessons learned, knowledge management tools and awareness of experiences will be implemented in parallel to the other Components to assure constant follow of information and “real time” replication of activities for those stakeholders that wish to carry on activities taking advantage of the Green Finance even before the project is completed. Cost effective technologies will be promoted throughout this project to ensure engagement and awareness of the private sector stakeholders.

#### **(J) Climate Risk Screening**

62. Sri Lanka is a small island nation lying between 6°N and 10°N latitude and 80°E and 82°E longitude in the Indian Ocean, with a land area of approximately 65,000 square kilometers (km<sup>2</sup>). The island consists of a mountainous area in the south-central region and a surrounding coastal plain. The climate of Sri Lanka is wet and warm, ideal for forest growth; almost all the nation's land area was at one time covered with forests. Over the last century, more than two-thirds of this forest cover, rich in biodiversity, has been removed to accommodate human use.

63. Due to a combination of political, geographic, and social factors, Sri Lanka is recognized as vulnerable to climate change impacts, ranked 100th out of 181 countries in the 2017 ND-GAIN Index. The World Bank's Climate Risk Country Scenario for Sri Lanka (2020) developed models that show a trend of consistent warming regardless of emissions scenario utilized. While projections for rainfall are highly variable, trends do show a likely increase in rainfall, and specifically for its central region throughout the century.

64. Sri Lanka faces moderate disaster risk levels, ranked 97th out of 191 countries by the 2019 INFORM Risk Index. Sri Lanka has moderate exposure to flooding (ranked 56th), including riverine and flash flooding. Sri Lanka also has some exposure to tropical cyclones and their associated hazards (ranked 45th). Drought exposure is slightly lower (ranked 76th). Sri Lanka's overall ranking on the INFORM risk index is somewhat mitigated by its comparatively high coping capacity score. Landslide hazard is present in many parts of Sri Lanka, but is not explicitly captured by the INFORM Risk Index.

65. One of the main risks directly influenced by the Climate Screening refers to the risk of flooding of interim storage facilities for mercury. This risk is assessed as “Moderate” by UNDP SESP and the project will address this risk in its design by: adopting international standards and further Guidelines under the Minamata Convention when selecting the site and companies to accommodate such interim facilities.

66. Additionally, current HCW incineration practices implemented by a relative high number of healthcare facilities do demand large units of energy and are expected to generate relevant GHG emissions. The project will support deployment of low cost and more efficient non-incineration technologies that have the potential to reduce these emissions. Detailed quantification of GHG emission (baseline and after project intervention) will be done during the PPG Phase.

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[1] World Bank Group and Asian Development Bank, 2020, Climate Risk Country Profile, Available at <https://www.adb.org/sites/default/files/publication/653586/climate-risk-country-profile-sri-lanka.pdf>

[1] S Rajapakse, M C Shivanthan and M Selvarajah, 2016, *Chronic kidney disease of unknown etiology in Sri Lanka. International Journal of Occupational and Environmental Health* , pp. 259-264

[2] Seneviratne, J. K. a. R., 2017. Beginning of a journey: unraveling the mystery of chronic kidney disease of unknown aetiology (CKDu) in Sri Lanka. *Globalisation and Health*

[3] M T Padmaranjani et al. 2014, *Assessment of Pesticide Usage in UP-country Vegetable Farming in Sri Lanka*, Colombo: Hector Kobbekaduwa Agrarian Research and Training Institute

[4] Ministry of Mahaweli Development & Environment, Sri Lanka, 2017. *Updated inventory of Dioxins & Furans in Sri Lanka - 2015*, Colombo: Government of Sri Lanka

[5] Ministry of Mahaweli Development and Environment , 2017. *Updated Inventory of POPs Pesticides in Sri Lanka - 2015*, Colombo, government of Sri Lanka



### 1b. Project Map and Coordinates

**Please provide geo-referenced information and map where the project interventions will take place.**





Map No. 4172 Rev.3 UNITED NATIONS  
March 2008

Department of Field Support  
Cartographic Section

Pilot/Demonstration locations will be identified during the PPG Phase.

## 2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

57. Stakeholders had been actively engaged in the PIF stage and will continue to be engaged in all project, phases:

- i) During PPG Phase, through consultations to collect data and support activities fine tuning, to endorse the Project Document and its Strategies;
- ii) During implementation phase, in engagement activities designed in the Stakeholders Engagement Plan;
- iii) Participation in project monitoring Mid-term Review and Terminal Evaluation; and
- iv) Participating in the Grievance Redress Mechanism (if applicable).

58. Effective stakeholder engagement is critical to success of GEF-financed projects. For this reason, a Stakeholder Engagement Plan (SEP) will be developed during the PPG Phase to ensure inclusive, effective, and efficient engagement of key stakeholders throughout the lifecycle and to improve project performance and impact by enhancing recipient country ownership of, and accountability for, project outcomes; and to make 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.

59. The main stakeholders identified and engaged in this PIF stage, and expected to also be engaged into the project preparation phase, are:

- a) The Ministry of Environment (MoE): as the focal agency for the management of chemicals related to Stockholm and Minamata Conventions as well as the related Basel Convention on Transboundary Movement of Hazardous Waste in Sri Lanka;

- b) The Ministry of Agriculture (MoA): as the focal point for Rotterdam Convention on Prior Informed Consent Procedure and responsible for Policy Setting and Enforcement;
- c) The Central Environmental Authority (CEA), under the MoE: as the technical focal point for industrial chemicals listed by the convention together with the Registrar of Pesticides managing the pesticides identified under the Conventions;
- d) The Customs Department: who controls the exports and the imports in line with the Customs Ordinance no 17 of 1869;
- e) Ministry of Health (MoH): responsible for Policy setting and the main owner and manager of Healthcare Facilities in the country, is a main user of mercury products, initiated a mercury phase-out, aiming to implement it fully by 2021.
- f) Local Authorities (LAs) under subnational Governments: responsible for local execution and management of solid waste management structures in Sri Lanka;
- g) Holcim Geocycle, Sri Lanka: a private sector service provider has the only facility Sri Lanka for safe disposal of hazardous waste;
- h) Asia Recycling (Pvt) Ltd (a subsidiary of Orange Electric): the main CFL/LFL recycling factory in Sri Lanka which has the capacity to recycle 30 million bulbs annually and is investing to become able to collect mercury based devices or products that became obsolete because of the phase out mercury in healthcare sector.
- i) The National Cleaner Production Centre (NCPC): an active NGOs works closely with government in chemical management, conducted a study in agriculture sector.
- j) Other Private Sector, NGOs and CSOs that own, operate, manage or are to be impacted by the Policies, Strategies and Activities sponsored by this project proposal.

### 3. Gender Equality and Women's Empowerment

**Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).**

57. Globally, it is estimated that 70% of all the healthcare workers are women[1] . Women have high representation in the healthcare sector in Sri Lanka too, engaging as nurses, attendants, cleaning staff, etc. As such, women also generally face increased risks of exposure which may be associated with greater socioeconomic consequences too.
58. Hospital staff with higher exposure to risks are attendants who work on wards and inside the medical establishment and the sanitary workers who collect waste from points of generation. While distinguishing between these two categories is not always easy in smaller facilities, most of them are invariably women (~ 80-90%)[2] . Therefore, women will greatly benefit from the project in terms of improved health and safety of working conditions.
59. In addition, the participation of women in the waste management sector is also expected to be relevant, particularly in the areas of recycling. Women is also present in higher posts at public and private sector and will play a critical role in the institutional and regulatory related activities under the Component 1.
60. However, it is also acknowledging that several barriers to female production workers, female medical staff and female residents exist and may affect their engagement in the project. Women workers' engagement in trainings on use of mercury-free thermometers and mercury-free sphygmomanometers etc.
- In Sri Lanka, women make up higher proportion of employees in public and private health sector too with 62% of all health and social workers, and therefore proper prioritization and targeted activities in management strategies, awareness creation, skills development and participatory decision making actions are required. Female staff in these areas usually lack recognition, adequate training, technical skills, resources and options required to adhere to standards. Therefore interventions promoted by the project should aim to improve the baseline gender status and minimize risks for female, even more important in the current context of COVID-19 pandemic.
- In addition, as the project will also promote recycling of different types of HCW streams management through segregation (i.e. Paper, plastics, glass etc.), local women entrepreneurs will be encouraged to participate in recycling opportunities, this focused activity related to awareness, training and skills enhancement opportunities will be required. Public awareness programmes on POPs and mercury toxicity and reducing related risks will also include/target women, especially as there are large number of working women in industry/small industry, both as employees and self-employed, who unknowingly expose themselves to risks
61. Therefore, a specific Gender Action Plan (GAP) will be prepared during the PPG phase to further collect gender sensitive data at the targeted sectors, review baseline in relation to Gender, and develop gender sensitive strategies to be incorporated within the revised national guidelines, regulatory frameworks and during the implementation of the demonstration/pilot activities. The proposed gender action plan will recognize women's contribution in health sector and HCWM and is anticipated to include (but not limited to) aspects of:
- a) Strengthening women's active participation in teams and opportunity for and recognition of leading specific functions or responsibilities for specific operations in HCWM value chains/Hg phaseout;



- b) Planning/ producing knowledge products and planning/delivering training programmes;
- c) Training/awareness programmes to include specific concerns of women and/or targeted training and knowledge products for women using women friendly approaches;
- d) Facilitating discussions on specific risks for women and their families and promoting risk reduction measures.

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[1] M. Boniol Et. Al, 2019, Gender equity in the health workforce: Analysis of 104 countries; WHO available at:  
<https://apps.who.int/iris/bitstream/handle/10665/311314/WHO-HIS-HWF-Gender-WP1-2019.1-eng.pdf?ua=1>

[2] Ministry of Health UNDP, 2021, Rapid Assessment of HCWM in Sri Lanka; (from the detailed casestudies of selected hospitals in the East developed in 2020 as an input to the, assessment)

**Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes**

**closing gender gaps in access to and control over natural resources; No**

**improving women's participation and decision-making; and/or Yes**

**generating socio-economic benefits or services for women. Yes**

**Will the project's results framework or logical framework include gender-sensitive indicators?**

**Yes**

#### 4. Private sector engagement

**Will there be private sector engagement in the project?**

Yes

**Please briefly explain the rationale behind your answer.**

57. The partnership between the hospitals and other private entities will be critical to deploy effective the waste management systems and to assign the responsibilities while also considering their ability to handle the safe final disposal of decontaminated clinical waste or hazardous waste.
58. Private investment - or joint private and public investments and PPPs - are also expected to be mobilized as contribution to the project. Private sector will be critical to provide goods and services for facilities that include decontamination of HCW, application of using BAT and handling and disposal of hazardous waste generated by the local healthcare facilities and industries to increase the viability of the facility. At present many hospitals outsource waste management to private sector. As such, staff employed by the companies work as waste workers within the hospitals. The project will build on this partnership, engaging private companies, their managers and waste workers together with hospital administrators and staff in the awareness creation and technical training. Further, the companies will be encouraged to consider expanding partnerships to cover final disposal solutions. The interested/selected private company/companies will work with the LA to revive or rehabilitate a selected landfill for final disposal of disinfected waste and operate it as a business. The landfill would cater to many more hospitals (beyond the five pilot ones) including private hospitals in the area to operate increasing viability of the business entity. Further the business plan will also consider having low cost incineration options within the landfill based waste management complex to attract and service small medical facilities that cannot carry out viable disinfection process due to the scale. Such operation will demonstrate viable comprehensive HCWM integrated within the decentralized solid waste management systems within the country, and stimulate setting up more such options to cover other areas of the country taking advantage of the green financing options available.
59. PPPs will offer last-mile solution for hospitals and other stakeholders involved in the project to demonstrate a successful alternative working model for waste management. They will also support data collection on recycling potential, compositing, and green jobs related to waste management, as well as explore partnerships with local private sector (including women led MSMEs) for income generation from waste, mobilize resources and leverage opportunities for waste management as well as updating/developing relevant guidelines, and by-laws, facilitate knowledge sharing between the hospitals and LAs on general waste management which include 3R concepts.

## 5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

57. During PPG stage, thorough assessment on administrative, management, social and environmental risk assessment will be carried out, and more particularly, the UNDP Social and Environmental Screening Procedures (SESP) will be conducted. Below risks have been identified:

#	Description	Risk Category	Impact & Likelihood	Risk Treatment / Management Measures	Risk Owner
1	Duty bearers, and other relevant stakeholders may fall short of capacities to meet their obligations in the Project upon the development of the new coordination and regulatory mechanisms.	Operational Organizational Regulatory	I=2 L=1 Low	Component 4 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.	MoE MoH MoA Customs Department UNDP
2	Release and worker exposure during procedures of handling, transportation and disposal of wastes (pesticides, mercury, healthcare waste) from facilities to cluster or centralized treatment facilities or disposal sites.	Social and Environmental Strategic	I=3 L=2 Moderate	During the PPG, Component 3 will be designed to develop the proper management strategies for Pesticides, Mercury and Healthcare waste aiming to protect the environment and people from handling, transport and disposal practices of such wastes.  Component 2 will be designed to support stakeholders to collect, pack, transport and dispose of pesticides and mercury obsolete stocks, residual materials and contaminated wastes. For this, the project	MoE MoH UNDP



				<p>t will engage with legal service providers that comply with national legislation and abide by International Standards and BEP preconized in the Stockholm Convention on POPs and the Minamata Convention on Mercury, as well as WHO guidelines for the management of healthcare waste.</p> <p>Component 4 will be designed to devise awareness and training strategies to improve local practices and techniques on waste management, as well as to mainstream the guidelines and strategies developed under Component 3.</p>	
3	Risk of polluting through the accidental release of waste and residues from the interim storage of Mercury due to flooding.	Social and Environmental Strategic	I=3 L=2 Moderate	<p><b>Interim storage of Mercury:</b> the PPG will assess and select the Pilot Sites (Healthcare Facilities) and will ensure that the interim storage facilities at the selected facilities refer to Minamata Convention's Guidelines on the environmentally sound interim storage of mercury.</p> <p>An ESMF will be prepared during the PPG if the management measures required for the selected sites cannot be included in the project's activities, or if the project's categorization is confirmed as Substantial.</p>	MoE MoH MoA Customs Department UNDP
4	Improper handling and storage of pesticides, mercury and healthcare waste, as well as their products and containers, may have contaminated lands and e	Social and Environmental Operational Health	I=3 L=4 Moderate	Component 3 will be designed to develop the Guidelines and Standards to support Local Authorities and Stakeholders to identify and decontaminate sites contaminated by Pesticides, Mercury or Healthcare	MoE MoH MoA UNDP

	<p>xposed community members living close to the storage sites that are part of the baseline projects.</p>			<p>are waste, aiming provide effective guidance for activities that can remediate the environment.</p> <p><u>The project</u> be designed to <u>include an Environmental Risk Assessment</u> to align the local regulation to UNDP's SES and provide tools for the project team to monitor situation (referring to the <a href="#">UNEP/Minamata Convention Guidelines on the Management of Contaminated Sites</a> which will require the identification and characterization of the scope (e.g., the 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). In addition, a scoped <u>ESIA/ESMP</u> will be carried, if needed for SES compliance, if identified that the <u>Environmental Risk Assessment</u> fall short from UNDP's SES in terms of social risks.</p>	<p>Demonstration facilities</p>
5	<p>Working conditions that do not meet national labour laws and international standards/treaties, and exposure to health and safety risk within the demonstration sites related to recycling practices</p>	<p>Social and Environmental Operational Health</p>	<p>I=3 L=2 Moderate</p>	<p>Prior to engaging any enterprise or cooperative, during project implementation and through open competitive process, the scoped entity will be duly assessed to screen its adherence to National Laws and/or International Guiding Standards before engaging into implementation contracts/agreements with the project.</p>	<p>MoE UNDP Demonstration facilities</p>

				<p>This will be done through a visit to the facility and ensuring that occupational health and safety measures are applied (through <u>Labour Management Procedures</u>). The ES MF prepared during the PPG will outline the procedures to ensure this, or those procedures will be integrated into the project's design (if appropriate).</p>	
6	Healthcare facilities and other stakeholders are not involved in decision-making regarding the development of policy and regulatory frameworks .	Social and Environmental Regulatory Strategy	I=3 L=3 Moderate	<p><u>A Comprehensive Stakeholder Engagement Plan</u> will be developed during PPG Phase to ensure fair representation of Healthcare facilities that may otherwise be marginalized from participating in the project.</p>	<p>MoE UNDP Demonstration facilities</p>
7	Healthcare facilities and other stakeholders may not be aware of the green procurement standards and do not have equal access to financing through the Green Finance Framework	Social and Environmental Regulatory	I=4 L=2 Moderate	<p><u>A Comprehensive Stakeholder Engagement Plan</u> will be developed during PPG Phase to ensure fair representation of Healthcare facilities that may otherwise be marginalized from participating in any financing schemes and be at a disadvantage once the final phase-out of mercury devices.</p> <p>In addition, the project will be designed to raise the awareness of public and private health care facilities, relevant higher-level medical administration on possible green finance instruments, and facilitate their access to government and/or private banking investments, to support switching to mercury-free devices. It will also create a procurement subsidization scheme to support green procurement applic</p>	<p>MoE MoH UNDP Demonstration enterprises</p>

				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.	
8	Inadequate participation of women in consultations, policy decision making and design of modalities for capacity building in the uptake of non-mercury technologies and safe management and disposal of obsolete mercury devices and health care waste	Social and Environmental Regulatory	I=3 L=2 Moderate	A <u>Gender Action Plan</u> will be developed during PPG Phase to address potential risks and include measures to mainstream gender in all project components	MoE MoH UNDP Demonstrations on enterprises
9	Temporary increased GHG emissions due to project operation process of packaging, transportation and disposal of chemicals waste <sup>2</sup>	Social and Environmental Regulatory	I=3 L=1 Low	<p>When carrying on the disposal activities of residual and waste chemicals the emissions of GHG will be assessed and recorded in order to provide a baseline for the Implementing Partner to consider alternative mitigation strategies.</p> <p>The project will pilot technologies and develop strategies for long term healthcare waste disposal that have the potential to mitigate the baseline GHG emissions of the open/uncontrolled burning, and over time, reduce the healthcare waste sector GHG emission. The proper estimates will be considered in the Work Plans and Strategy Documents to be developed by the project</p>	MoE MoH UNDP Demonstrations on enterprises

10	The COVID-19 Pandemic may inhibit the smooth implementation of this project.	Operational Health	I=3 L=3 Moderate	<p>Different levels of protection measures to prevent COVID-19 contamination are being taken by the Government of Sri Lanka, including large scale vaccination programme..</p> <p>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.</p> <p>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.</p>	MoE UNDP Demonstration enterprises
11	Changes to management and trained staff changes at the IECD, CD CEA, etc	Management	I=3 L=3 Moderate	Produce practical guides and self-learning and training using digital tools i.e. audio and video clips.	MoE MoH MoA Customs Department UNDP
12	No agreement on Green Financing Framework Mechanism (GFFM)	Financial	I=3 L=3 Moderate	Sri Lanka has tested green financing for the promotion of biomass energy. The financial institution has expressed interest on this work too. Details of the financial modalities and additional financial institutions as well as private health care sector who would be interested being recipients of financing from	MoE MoH UNDP

				m the scheme will be identified at PPG	
1 3	Weak cooperation from private sector companies engage in Hg waste management	Strategic Management Financial	I=3 L=1 Low	This situation is unlikely to happen, as the most of these companies have already made substantial investment on Hg waste recovery and management and are stuck at the moment	MoE MoH UNDP

## 6. Coordination

**Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.**

*Project Implementation, Coordination and Monitoring.*

57. The project coordination and implementation modalities were duly assessed to consider the best approach at project level. It was noted in a recent issuance of government Circular (see Annex 04) that ministries are not allowed to establish a Project Management Units (PMU) for implementation of development projects.

58. The requisites of the above-mentioned Circular, in practical terms, have forbidden the Implementing Partner (Executing Agency) to establish dedicated PMU to implement Projects. Without PMU structure the Implement Partner is also not able to receive and manage cash transfers, from any Implementing Agency (meaning that no possibility to establish physical structure, recruit and deploy project staff, pay salaries and manage the funding for the implementation of the Project's Technical Components). It is important to note that the Circular restricts the administrative capacities of Ministries, but do not impact their Technical Capacities to coordinate, implement and monitor projects (act as Implementing Partner).

59. The Circular was considered as part of the UNDP's 2021 Micro Assessment of the IP, highlighting this "limitation to manage and execute project funds". This is a critical limitation once Vertical Fund projects implementation require a considerable additional workload, and an important factor of success of VF projects is the possibility of deploying dedicated project staff (through PMU), under the Project Management Cost Component. The inability to create such PMU will greatly hinder the quality, efficiency and punctuality of project execution.

60. *Other GOV Institutions were also screened:* specifically, the Ministry of Environment (MoE) and the Ministry of Health (MoH) were assessed against the "Full NIM" implementation proposal. However, Government Agencies are required to comply with the Circular BD/CBP/01/01/06-2020, and current limitations on the establishment of PMUs reaches these both Institutions and thus, their capabilities for management of project funds, **therefore this option is not viable.**

"Full NIM" modality, executed through a Third Party was also considered as alternative. UNDP carried out extensive analysis of potential IPs and Third Parties that could engage the project execution, considering GOV Agencies are not able to establish PMUs, the management of project funds is also not possible since the the Implementing Agency (GOV) will not be able to engage into legal Agreements and carry on fund transfers towards Responsible Partners (Third Parties), **therefore this option is not viable.** In addition, though individual consideration to each potential Third Party is given below:

a. UN Agencies (WHO and/or UNOPS): both Agencies hold Country Offices in Sri Lanka with different implementation capacities (WHO: highly technical capacities in healthcare waste area; UNOPS: great operational and administrative capacities). A combination of both Agencies could be used to take advantage of their comparative advantages. However, two issues were raised: (a) impossibility to transfer funds through "Full NIM"; and (b) additional support costs to be borne by the Project (8-18%)

b. NGOs: The government has limitations to engage with a non-governmental organization to provide execution support through a Responsible Party Agreement (RPA). Only a limited number of Government Agencies can be engaged using RPA modality of the Government. However, two issues were raised: (a) impossibility to transfer funds through "Full NIM"; and (b) MoE cannot engage into a RPA.

c. Private Sector: two companies already engaged in healthcare and municipal waste management activities were assessed (Sisili Projects Consortium; and Cleantech, a subsidiary of Abans Group). Both companies have provided services to local agencies (subnational governments) but lack capability for managing a whole cooperation project of the scale and nature of the proposed one. These companies could be engaged as service providers for specific Activities of the project.

d. Academia: there are several consultancy agencies affiliated with local universities mainly involved in environment-related research, consultancy, and training related activities which had provided services as Contractors to different Governmental Projects. However, none of these consultancy agencies has been involved in the management of a full project as Executing Agency, and if they were to be considered, additional support costs of 20% would be charged to the project budget as taxation for University-affiliated center. Also, there would still be impossibility to transfer funds through “Full NIM” from the IP to the Third Party; The involvement of these Agencies look more promising as service providers for specific Activities of the project.

61. Acknowledging GEF’s Policies, alternative implementation methods were also carefully assessed. It is concluded, however that **“Full NIM” modality is not viable in current national settings**. In addition, facilitating a **mixed “third-party execution support” to the IP (MoE) is highly recommended**. And the best option to address the issue of establishing a functional PMU and facilitate the transfer and management of project funds is to use a **“Country Office Support to NIM” modality (COS to NIM or “Assisted NIM”)**, where UNDP would provide limited executing (administrative and operational) services to the IP. Implementation Modality and scope of services to be confirmed during PPG Phase.

1. The GEF Operational Focal Point (OFF) has provided Letter agreeing COS to NIM support provided by UNDP to overcome the local barriers for implementation, and assure the efficient implementation of projects throughout the project duration. Under the proposed “assisted NIM” modality, the following system is to be put in place:

(a) Given the MoE is the Focal Point for the Stockholm Convention and has experience in implementing GEF projects, the MoE would act as Implementing Partner (Executing Agency) for the Project.

(b) A Letter of Agreement (LOA) between UNDP and the MoE will be signed enlisting the scope of services provided and establishing the basis for cost-recovery (through DPC). Estimated DPC is to be informed in the PIF. The signed Load is to be attached to the Project Document / GEF CEO Endorsement Request.

(c) A Project Monitoring Unit (PMU) will be established using UNDP Programmed and Project Management Policies (PPM). The PMU will report to the Project Steering Committee (PSC). The PSC is chaired by Moe. The PMU physical structure will, ideally, be in the Moe.

(d) Responsible Parties (RPs – or “Third Parties”) will be sourced through a competitive process. The execution activities will be based on deliverable-based/performance based Contracts and Terms of Reference encompassing specific or a set of Outcomes or Activities (60-70% of overall project targets).

(e) Individual Contractors (Consultants) will recruited and will be tasked to provide the technical assistance to Moe and the other Project Stakeholders, reporting directly to PMU and MoE. (30-40% of overall project targets).

(f) UNDP operational support (executing services) will be kept at minimal. UNDP Programmed and Operations Policies and Procedures (POPP) will be used in the project execution to assure alignment with GEF Policies. UNDP assistance will be provided through the PMU staff and is limited to:

(i) Under the Moe coordination, establish the PMU (structure, staff) and release payments (rental fees, utilities, office supplies, salaries) required to assure the functioning of the PMU.



- (ii) Avail UNDP's ERP Systems (Atlas) so project funds can be effectively managed.
- (iii) Issue travel tickets and pay DSAs for project staff and consultants.
- (iv) Assist the PMU and the Moe to recruit Consultants and RPs. Issue Consultancy Contracts.
- (v) Assist the PMU and the Moe to carry on Procurement Process. Issue Purchase Order.
- (vi) Oversee the delivery of the Contracts and Purchase Orders.
- (vii) Release payments to RPs and Contractors, once technically cleared by PMU and Moe.

(g) UNDP will provide execution support through the Integrated Service Team of the CO, and a firewall will be established between execution and oversight functions. The Project Board (PSC) will regularly monitor the performance of the RPs.

*Coordination with other relevant GEF-financed projects*

6. This project will reflect the "real-time" experiences generated by the project "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" (GEF ID 10349) that will demonstrate the manufacturing and application of mercury-free thermometers and sphygmomanometers in China, the largest producer and exporter of such products in the world, and responsible for an important share of the supply chain to the southeast and some south Asian countries.
7. This project will also draw from the experiences and results obtained in the GEF ID 4611 Project "UPOPs/Mercury from Health Sector in Africa" implemented by UNDP in partnership with WHO and the NGO Health Care Without Harm that implemented best environmental practices and introduce non-incineration healthcare waste treatment technologies and mercury-free medical devices in four Sub-Saharan African countries.
8. This project will also build from on the ground experiences and results in selected Asian Countries under the GEF ID 1802 Project "Reducing Medical Waste" implemented by UNDP that demonstrated and promoted best techniques and practices for reducing and managing health care waste and focused on education, training, establishing management systems.

## 7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions?

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

- Minamata Initial Assessment (MIA)
- Stockholm National Implementation Plan (NIP)
- Stockholm National Implementation Plan Update
- Others:

i. The *National Environmental Policy* (2003) recognizes Sri Lanka's responsibility of honoring the international commitments and effective management of POPs and mercury is integrated to the general context of chemical and waste management for coordinated actions by relevant institutions and stakeholders. Sri Lanka has integrated the management POPs chemicals under overall chemical and waste management and updated the relevant national legislative and regulatory frameworks to reflect this.

ii. The control of Pesticides Act No 3 of 1980, and its Amended Act No 6 of 1994, aim to regulate the import, use, transport, storage and disposal of pesticides and is also the basis for implementing control and management of POPs pesticides. The Act was amended (No 31, of 23.01. 2011) to increase penalty for contravention of the Act by tenfold, for stricter control of illegal imports and use.

iii. The national policy on healthcare waste management, from 2001, explains HCWM considerations and, provides for (1) setting up a national institutional mechanism for policy implementation, (2) safe HCWM based on regulations and HCWM planning, and, (3) the implementation and the monitoring of HCWM plans at national and subnational levels by having required legislation, human resources, training and awareness, budget allocation and private sector participation

iv. Relevance to SDG goals Sri Lanka: HCWM has a direct impact on providing safe working conditions for women (Goal 5 & 8). Most healthcare sanitary workers are women (~80-90 percent). Nonadherence to HCWM standards increases their risk to exposure and affects their health and livelihood. Often women waste worker's safety concerns are neglected, and they continue to work in unsuitable environment with inadequate protective gears, while also subjected to harassment, and low recognition etc. (V Sinnathamby, 2017). Current policies and guidelines have not given adequate attention to the gendered nature of HCWM

## 8. Knowledge Management

**Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.**

86. The Component 4 of this project proposal will be dedicated to “Knowledge Management and Monitoring & Evaluation”. As part of Component 4, the project will Implement:

- (i) a Stakeholder Engagement Plan to raise awareness to be project beneficiaries;
- (ii) a Gender Mainstreaming Action Plan to promote gender equality and to include all the displaced women’s reemployment policies in the project phase-out guidelines; and
- (iii) a Project Communication Strategy to making use of publications, promotional materials, lessons learned reports, among else to accomplish knowledge sharing.

87. Knowledge and experience will be gathered, documented, managed and disseminated through the following activities which will capture lessons-learned and experiences gained, and will publish them in publications, lessons-learned reports and promotional materials that will be used in training, seminars and workshops to facilitate the national scale up and to achieve sound management of chemicals.

86. The project will collect experiences and lessons learned from relevant GEF projects implemented (e.g. GEF project IDs 10349, 4611 and 1802) as well as international best practices in the area to compound relevant KM Plans and improve the replication of successful experiences”. Specifically, the project will identify potentially replicable or adaptable strategies, approaches, and methodologies that has worked well internationally which would include BAT/BEP, business models, standards and guidelines knowledge management products. The expected activities include:

- i. Review similar projects and collect experiences learned and supporting documents;
- ii. Review meeting reports, collect primary data from the pilot sites, build links with research community and encourage analysis of information generated by HCWM pilots and Mercury phase-out activities;
- iii. Produce publications (and create collaborations with Academia for opportunities for students’ research);
- iv. Carry out relevant documentation, develop case studies, create guidelines and instructions within new or revised SOPs for individual hospitals and for the Ministry of Health;
- v. Disseminate experiences using digital platforms, training programmes and other materials;
- vi. Engage with media outlets, create and promote the project’s social media.

87. Knowledge and learning experiences generated from the Pilot Projects, the green procurement and green finance mechanisms will primarily be tailored for stakeholders use in forms of training, diverse range of technical and knowledge products, webinars/workshops, content for digital platforms and social media, as well as awareness materials. The Project will such strategies to target wider healthcare stakeholders in the country to sustain and replicate the pilot experiences.

88. The training and capacity building programmes will be conducted with options to connect remotely providing opportunities for target groups beyond the pilot locations, and as such the actions will also cover both public and private sector across Sri Lanka. Ministry of Health will use these products proactively to target subnational Governments and medical establishments (including private ones), through relevant institutional mechanisms. Finally, the Project will also engage with Academia and research community, CSO and media outlets to wider knowledge sharing and look into practical ways to scale up impacts.

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification\*

PIF	CEO Endorsement/Approval	MTR	TE
High or Substantial			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

Project Information

<b>Project Information</b>	
1. Project Title	<i>Strengthened Management of POPs, UPOPs and Mercury in Sri Lanka with a special focus on integrated Health Care Waste Management (HCWM) and application of mercury-free alternatives in the Health Sector</i>
2. Project Number (i.e. Atlas project ID, PIMS+)	PIMS ID 6677
3. Location (Global/Region/Country)	Sri Lanka
4. Project stage (Design or Implementation)	Design (PIF)
5. Date	August 2021

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

<p><b>QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?</b></p>
<p><i>Briefly describe in the space below how the project mainstreams the human rights-based approach</i></p>
<p>The project contributes to Sri Lanka's commitment with Stockholm and Minamata Conventions and has the goal to strengthen the management of POPs/uPOPs and Mercury in Sri Lanka with a special focus on the health sector given the COVID-19 pandemic situations. The interventions will contribute to mercury-free alternatives in the Health Sector, reduced illegal imports of banned chemicals under the Stockholm and Minamata Conventions, improved coordination among agencies concerned with the two conventions through an integrated information management system, enhanced training and capacity building and improved final disposal facilities for health care waste.</p> <p>Technical and financial assistance is provided through this project to key stakeholders to enable them to adopt best practices for strengthened management of POPs/uPOPs and mercury and health care waste.</p> <p>Apart from the main aim of reducing releases of UPOPs and Mercury into the environment which affects the quality of life of people, the project has addressed the increasing quantities and infectious nature of healthcare waste resulting from the COVID-19 pandemic and the risk it poses, in particular when it is not properly managed. The project aims at adopting the best HCWM practices for final disposal to reduce the risk faced by hospital staff and patients, waste handlers, recyclers, and communities living near dumpsites. The project has also incorporated training and awareness into project activities to help safeguard the hospital staff and patients, waste handlers, recyclers and the nearby communities from risks due to improper management of health care waste.</p> <p>Through such assistance, the project utilizes a human rights-based approach, by supporting the government to build the capacity of the duty-bearers, (officials and other relevant stakeholders) and raise awareness among the health care sector, general public, and waste handlers and communities living nearby dumpsites and to contribute to healthy life and</p>

wellbeing and gender equality.

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

The project recognizes the vital role of women in health care waste management, as such measures have been taken by the project to ensure that the needs of the women are addressed at all levels in health care waste management. The project will develop a gender action plan for HCWM considering that the majority of the staff, as well as waste handlers, are women. It will provide an opportunity to tailor and include requirements of women in developing HCWM strategies and action plans. The project will engage women in the formulation of HCWM strategies and action plans which will prioritize their specific needs. These women will be prioritized for awareness creation, training as well as providing training on special requirements that they may have in HCW handling. Moving women from low paid waste management jobs to better ones is acknowledged as a gender-based challenge. However, the scope of the project may not permit targeting such a strategic transformation while the project will acknowledge the problem include women in targeting training for better jobs which will contribute towards the transformation in the long run. The project will also capture gender-disaggregated data to monitor the project activities as well as to contribute to raising awareness at the national level on the importance of gender equality interventions.

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

The project has an objective of promoting best practices through strengthening institutional capacities which enforce regulations on management of POPs, Mercury and other chemicals of concern, deploying environmentally sound management strategies and systems for mercury-containing wastes in the Healthcare sector including phase-out the use of mercury-added products, piloting management strategies for recycling and reduction of UPOP emission and treatment of infectious waste aligning the immediate COVID-19 response to long-term health care waste management, strengthening of information and data management systems that inform monitoring and reporting of chemicals waste management.

Strengthening institutional capacities, coordination and information management systems will help the government to minimize the illegal import of banned chemicals under the Stockholm and Minamata conventions and the project will assist the government to put in place a plan to continually update the information management system and build capacities of relevant stakeholders. The project will demonstrate PPP for final disposal of health care waste management to convince the government and the private sector to invest in such facilities and also develop a financial framework to support replication.

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

The project design will involve close interaction and participation of stakeholders mainly, government, hospitals, waste collector and the general public etc. The project will raise awareness among project stakeholders and create channels for communication through website, social media, telephone and government and project offices. The project will also disseminate information through online and printed media for relevant stakeholders to access in all languages to ensure that everyone is updated on project developments. The project website will also accommodate grievances and a redress mechanism will also be put in place.

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

<p><b>QUESTION 2: What are the Potential Social and Environmental Risks?</b></p> <p><i>Note: Complete SESP Attachment 1 before responding to Question 2.</i></p>	<p><b>QUESTION 3: What is the level of significance of the potential social and environmental risks?</b></p> <p><i>Note: Respond to Questions 4 and 5 below before proceeding to Question 5</i></p>			<p><b>QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High</b></p>
<p><i><b>Risk Description</b></i> <i>(broken down by event, cause, impact)</i></p>	<p><i><b>Impact and Likelihood (1-5)</b></i></p>	<p><i><b>Significance</b></i> <i>(Low, Moderate Substantial, High)</i></p>	<p><i><b>Comments (optional)</b></i></p>	<p><i><b>Description of assessment and management measures for risks rated as Moderate, Substantial or High</b></i></p>
<p><b>Risk 1:</b> 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.</p> <p>Related to:</p>	<p>I=2 L=1</p>	<p><b>Low</b></p>	<p>Sri Lanka holds an important baseline regulatory framework on chemical waste management.</p> <p>There are by-laws, guidelines and voluntary standards in relation to mercury management. It also noted that Government Officers are subject to regular training and are aware of the baseline instruments.</p> <p>The project proposes a complementary and streamlined set of instruments in Component 1, 3 &amp; 4 thus Office</p>	<p><u>As the project is categorized as Substantial, an ESMF will be prepared during the PPG – unless the PPG team can design the project to avoid the most serious risks and to directly manage all other risks via the project's outputs/activities (thereby reducing the project to a Moderate categorization and potentially negating the need for an ESMF).</u></p> <p>-</p> <p><u>This Risk is being managed by Project Design.</u></p> <p>Component 4 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 m</p>

<p>Related to:</p> <ul style="list-style-type: none"> <li>Human Rights; P.2</li> <li>Accountability; P.14</li> </ul>			<p>als, responsible for enforcing legislation phasing out POPs/uPOPs, pesticides and mercury will require adequate further capacity building to be also delivered by the project for implementing them properly.</p>	<p>andatory standards.</p>
<p><b>Risk 2:</b> Release and worker exposure during procedures of handling, transportation and disposal of wastes (pesticides, mercury, healthcare waste) from facilities to cluster or centralized treatment facilities or disposal sites.</p> <p>Related to:</p> <ul style="list-style-type: none"> <li>Standard 3: Community Health, Safety and Security; (3.2, 3.4, 3.5 and 3.6)</li> <li>Standard 7: Labor and Working Con</li> </ul>	<p>I = 3</p> <p>L = 2</p>	<p><b>Moderate</b></p>	<p>Transport, storage and disposal operations for any hazardous substance and their wastes may pose potential human and ecosystem health risks, whether to workers or the wider community, to the local environment, or transboundary ecosystems.</p> <p>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.</p> <p>The biggest contamination risks arise when trans-pack</p>	<p><u>This Risk is being managed by Project Design</u></p> <p>During the PPG, Component 3 will be designed to develop the proper management strategies for Pesticides, Mercury and Healthcare waste aiming to protect the environment and people from handling, transport and disposal practices of such wastes.</p> <p>Component 2 will be designed to support stakeholders to collect, pack, transport and dispose of pesticides and mercury obsolete stocks, residual materials and contaminated wastes. For this, the project will engage with legal service providers that comply with national legislation and abide by International Standards and BEP preconized in the Stockholm Convention on POPs and the Minamata Convention on Mercury, as well as WHO guidelines for the management of healthcare waste.</p> <p>Component 4 will be designed to devise awareness and training strategies to improve local practices and techniques on waste management as well as to m</p>



<p>ditions; (7.6)</p> <ul style="list-style-type: none"> <li>Standard 8: Pollution Prevention and Resource Efficiency; (8.1, 8.2 and 8.3)</li> </ul>			<p>ing of wastes and materials, poor handling and gathering of wastes, movement of stocks and packages, loading and accommodation on trucks, transportation and unloading at disposal sites.</p> <p>Therefore, working with services providers that are capacitated and experienced in these activities can reduce risks, and additional training for these processes is critical risk management strategy</p>	<p>and techniques on waste management, as well as to mainstream the guidelines and strategies developed under Component 3.</p>
<p><b>Risk 3:</b> Risk of polluting through the accidental release of waste and residues from the interim storage of Mercury due to flooding.</p> <p>Related to:</p> <ul style="list-style-type: none"> <li>Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management; (1.1, 1.7)</li> <li>Standard 2: Climate Change and Disaster Risk (2.1)</li> </ul>	<p>I = 3</p> <p>L = 2</p>	<p><b>Moderate</b></p>	<p><b>Interim storage of Mercury:</b> Increased weather events due to climate change may pose a risk on facilities where stockpiles of mercury medical devices are stored prior to disposal.</p>	<p><u>This Risk is partially managed by Project Design, partially managed by additional Targeted Plans.</u></p> <p><b>Interim storage of Mercury:</b> the PPG will assess and select the Pilot Sites (Healthcare Facilities) and will ensure that the interim storage facilities at the selected facilities refer to Minamata Convention's Guidelines on the environmentally sound interim storage of mercury.</p> <p>An ESMF will be prepared during the PPG if the management measures required for the selected sites cannot be included in the project's activities, or if the project's categorization is confirmed as Substantial.</p> <p>At this pre-screening stage, it is anticipated that the following measures might be needed during project implementation and will be confirmed during the PP</p>

<ul style="list-style-type: none"> <li>Standard 3: Community Health, Safety and Security; (3.2, 3.4, 3.5 and 3.6)</li> <li>Standard 8: Pollution Prevention and Resource Efficiency; (8.1, 8.2 and 8.3)</li> </ul>				<p>implementation, and will be committed during the PPG Phase G:</p> <ul style="list-style-type: none"> <li>A <u>Spill Prevention and Management Plan</u> 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</li> <li><u>IF required for SES compliance, the Project will carry on a scoped ESIA/ESMP</u> on the pilot/demonstration facilities to further consider the potential impacts of the interim storage of Mercury.</li> </ul>
<p><b>Risk 4:</b> Improper handling and storage of pesticides, mercury and healthcare waste, as well as their products and containers, may have contaminated lands and exposed community members living close to the storage sites that are part of the baseline projects.</p>	<p>I =3 L=4</p>	<p><b>Moderate</b></p>	<p><b>Note: any activity related to site decontamination is to be carried out by the relevant stakeholders that are providing the Project's co-finance.</b></p> <p>The project considers that baseline project/activities/associated projects may have had potentially contaminated sites due to the unsound practices related to handling and storage Pesticides waste and Mercury waste.</p>	<p>This Risk is will be further assessed during <u>PPG Phase, and proper Management Strategy/Plans will be included in the ESMF and/or project design, if required.</u></p> <p>Component 3 will be designed to develop the Guidelines and Standards to support Local Authorities and Stakeholders to identify and decontaminate sites contaminated by Pesticides, Mercury or Healthcare waste, aiming provide effective guidance for activities that can remediate the environment.</p> <p><u>The project</u> be designed to <u>include an Environmental Risk Assessment</u> to align the local regulation to UNDP's SES and provide tools for the project team to monitor situation (referring to the <a href="#">UNEP/Minamata Convention Guidelines on the Management of Contaminated Sites</a> which will require the identification and characterization of the scope (e.g., the extent of contamination, proximity to human populations, depth to g</p>

<p>Related to:</p> <ul style="list-style-type: none"> <li>Standard 1: Biodiversity Conservation and Sustainable <b>Natural</b> Resource Management; (1.1, 1.7)</li> <li>Standard 3: Community Health, Safety and Security; (3.2, 3.4, 3.5 and 3.6)</li> <li>Standard 4: Cultural Heritage; (4.1 and 58.3)</li> <li>Standard 5: Displacement and Resettlement; (5.2)</li> <li>Standard 6: Indigenous People (6.1, 6.3, 6.4 and 6.6)</li> <li>Standard 8: Pollution Prevention and Resource Efficiency; (8.1, 8.2 and 8.3)</li> </ul>			<p>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). In addition, a scoped <u>ESIA/ESMP</u> will be carried, if needed for SES compliance, if identified that the <u>Environmental Risk Assessment</u> fall short from UNDP's SES in terms of social risks.</p> <p>The implementation-stage <u>Risk Assessment</u> will also investigate the alignment of the International Guidelines, Local Regulations and UNDP SES Policy and provide tools necessary to the Project Monitoring Unit and the Redress Mechanism to monitor the issue if contaminated sites are found, and how responsible stakeholders will deploy their co-finance to address the issue.</p> <p>The <i>PPG Phase</i> will further assess the sites targeted where the storage of POPs and Mercury exists to consider their potential impacts on Standard 5.1, and if required, SESP will be updated and proper management plans reflected in the ESMF.</p> <p>At the PIF development stage, it has not been identified at the impact on Indigenous People. However, <i>The PPG Phase</i> will further assess the sites targeted by the project related to potential impacts to Standard 6. If indigenous peoples are confirmed to be in/near any of the potential sites (or could otherwise be impacted by the project), then the project sites will not be selected without their consent (FPIC) and an IPPF will be developed during the PPG. The need to delay final site selection to the first year of project implementation will be considered, if needed to ensure compliance with Standard 6. All such measures will be re</p>
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				flected in the ESMF prepared during the PPG.
<p><b>Risk 5:</b> Working conditions that do not meet national labour laws and international standards/treaties, and exposure to health and safety risk within the demonstration sites related to recycling practices</p> <p>Related to:</p> <ul style="list-style-type: none"> <li>Standard 7: Labor and Working Conditions; (7.1, 7.6)</li> </ul>	<p>I = 3</p> <p>L = 2</p>	<p><b>Moderate</b></p>	<p>Healthcare workers in the medical sector already have some baseline sensitivity and knowledge on safe handling of mercury and health care wastes, therefore lowering the risk associated with the decommissioning aspect of the work.</p> <p>Additionally, the project aims to promote de-contamination and recycling of healthcare wastes and for this will engage with companies and workers cooperatives in the recycling industries to create strategies that can promote recycling practices, increase income and potentially generate “green jobs”.</p> <p>It is important to note that Forced and Child Labour is illegal in Sri Lanka.</p>	<p><u>This Risk is being managed by Project Design. And Labor management procedures will be included in the ESMF and/or project design, if required.</u></p> <p>Prior to engaging any enterprise or cooperative, during project implementation and through open competitive process, the scoped entity will be duly assessed to screen its adherence to National Laws and/or International Guiding Standards before engaging into implementation contracts/agreements with the project.</p> <p>This will be done through a visit to the facility and ensuring that occupational health and safety measures are applied (through <u>Labour Management Procedures</u>). The ESMF prepared during the PPG will outline the procedures to ensure this, or those procedures will be integrated into the project’s design (if appropriate).</p> <p>In addition, the facilities, enterprises and cooperatives that will engage with the project will be verified against their adherence related to the Laws on Forced Labour and Child Labour. The project will not engage with any entity that utilizes such practices. The ESMF prepared during the PPG will outline the procedures to ensure this.</p>

<p><b>Risk 6:</b> Healthcare facilities and other stakeholders are not involved in decision-making regarding the development of policy and regulatory frameworks</p>	<p>I=3</p> <p>L=3</p>	<p><b>Moderate</b></p>	<p>If not engaged in the project design and implementation, these groups will thus become marginalized and not benefit equally from the project</p>	<p><u>This Risk is being managed by Targeted Plan incorporated in the Project Design</u></p> <p><u>A Comprehensive Stakeholder Engagement Plan</u> will be developed during PPG Phase to ensure fair representation</p>
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<p>Related to:</p> <ul style="list-style-type: none"> <li>Accountability (P.13; P.14)</li> </ul>				<p>be developed during PPG Phase to ensure fair representation of Healthcare facilities that may otherwise be marginalized from participating in the project.</p>
<p><b>Risk 7:</b> Healthcare facilities and other stakeholders may not be aware of the green procurement standards and do not have equal access to financing through the Green Finance Framework</p> <p>Related to:</p> <ul style="list-style-type: none"> <li>Accountability (P.13; P.14)</li> </ul>	<p>I=3 L=3</p>	<p><b>Moderate</b></p>	<p>If not aware of these potential financing instruments, small and medium-sized 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.</p>	<p><u>This Risk is being managed by Targeted Plan incorporated in the Project Design</u></p> <p><u>A Comprehensive Stakeholder Engagement Plan</u> will be developed during PPG Phase to ensure fair representation of Healthcare facilities that may otherwise be marginalized from participating in any financing schemes and be at a disadvantage once the final phase-out of mercury devices.</p> <p>In addition, the project will be designed to raise the awareness of public and private health care facilities, relevant higher-level medical administration on possible green finance instruments, and facilitate their access to government and/or private banking investments, to support switching to mercury-free devices. 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.</p> <p>-</p>
<p><b>Risk 8:</b> Inadequate participation of women and children</p>	<p>I=3 L=2</p>	<p><b>Moderate</b></p>	<p>Initial Assessment in a sample of health care facilities found a greater number of women in the area of nursing and amongst the cleaning staff. Considering the fact that women and children</p>	<p><u>This Risk is being managed by Targeted Plan incorporated in the Project Design</u></p> <p><u>A Gender Action Plan</u> will be developed during PPG Phase to address potential risks and include measures to mainstream gender in all project components, with a specific focus on encouraging women representation.</p>

<p>omen in consultations, policy decision making and design of modalities for capacity building in the uptake of non-mercury technologies and safe management and disposal of obsolete mercury devices and health care waste.</p> <p>Related to:</p> <ul style="list-style-type: none"> <li>Gender Equality and Women's Empowerment (P.9; P.10)</li> </ul>			<p>are most vulnerable to chemicals pollutions, the participation of women in the decision-making process and in the project activities is critical for its success.</p>	<p>tation (but not limiting it to) in the following:</p> <ul style="list-style-type: none"> <li>Inter-ministerial committee for National Implementation Plan</li> <li>Development of policy and regulatory frameworks, quality control standards, monitoring and management systems, and capacity-building programs</li> <li>Capacity building of medical staff to use and maintain mercury-free devices, and to soundly manage obsolete mercury devices and related health care waste</li> <li>Cooperation with WHO to share knowledge about the replacement of mercury thermometers and sphygmomanometers in health care</li> <li>Training on sound management of residual mercury stocks and obsolete mercury-containing devices, and the remediation of contaminated sites in medical facilities</li> </ul>
<p><b>Risk 9:</b> Temporary increased GHG emissions due to project operation process of packaging, transportation and disposal of chemicals wastes</p> <p>Related to:</p> <ul style="list-style-type: none"> <li>Standard 2: Climate Change Mitigation and Adaptation; (2.4)</li> </ul>	<p>I = 3 L = 1</p>	<p><b>Low</b></p>	<p>The activities needed to dispose of chemicals waste may increase the use of plastic encases and packages and temporary increase the use of diesel-based transportation. Therefore, the GHG emissions may temporarily increase during project implementation.</p> <p>In addition, related to healthcare waste management, the project will establish long term disposal strategies and promote the use of low cost/impact disposal technologies that, over time, will</p>	<p><u>This Risk is being managed by Project Design.</u></p> <p>When carrying on the disposal activities of residual and waste chemicals the emissions of GHG will be assessed and recorded in order to provide a baseline for the Implementing Partner to consider alternative mitigation strategies.</p> <p>The project will pilot technologies and develop strategies for long term healthcare waste disposal that have the potential to mitigate the baseline GHG emissions of the open/uncontrolled burning, and over time, reduce the healthcare waste sector GHG emission. The proper estimates will be considered in the Work Plans and Strategy Documents to be developed by the project.</p>

			mitigate the baseline GHG emissions of the baseline open-burning processes utilized.	
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	QUESTION 4: What is the overall project risk categorization?		
	<i>Low Risk</i>	<input type="checkbox"/>	
	<i>Moderate Risk</i>	<input type="checkbox"/>	
	<i>Substantial Risk</i>	<input checked="" type="checkbox"/>	<p>The Pre-Screening has identified 9 risks related to this project: two (2) categorized as LOW; and six (6) categorized as MODERATE.</p> <p>The risks identified are largely reversible and are being addressed by the project, while some specific target assessments and plans, also to be developed and integrated in the project design, will improve these risks mitigation strategies.</p> <p>However, during PPG phase, pilot sites will be assessed and selected and, as result, the overall risk categorization for this project is determined to be SUBSTANTIAL.</p>
	<i>High Risk</i>	<input type="checkbox"/>	
	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		

<i><b>Is assessment required? (check if "yes")</b></i>	<input checked="" type="checkbox"/>			<i><b>Status? (completed, planned)</b></i>
<i>if yes, indicate overall type and status</i>		<input checked="" type="checkbox"/>	Targeted assessment(s):	Planned for PPG: stakeholder analysis, gender analysis  Planned for implementation: Environmental Risk Assessment
		<input checked="" type="checkbox"/>	ESIA (Environmental and Social Impact Assessment)	To be confirmed during the PPG
		<input type="checkbox"/>	SESA (Strategic Environmental and Social Assessment)	n/a
<i><b>Are management plans required? (check if "yes")</b></i>	<input checked="" type="checkbox"/>			
<i>If yes, indicate overall type</i>		<input checked="" type="checkbox"/>	Targeted management plans	Planned for PPG: Gender Action Plan  Stakeholders Engagement Plan  Planned for implementation: Spill Prevention and Management, Labour Management Procedures
		<input checked="" type="checkbox"/>	ESMP (Environmental and Social Management Plan)	To be confirmed during the PPG



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

## Final Sign Off

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

<i>Signature</i>	<i>Date</i>	<i>Description</i>
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 <u>Risks</u>	
<b><u>INSTRUCTIONS:</u></b> 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 <a href="#">SES toolkit</a> for further guidance on addressing screening questions.	
<b>Overarching Principle: Leave No One Behind</b> <b>Human Rights</b>	<b>Answer (Yes/No)</b>
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)?	<i>No</i>
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?	<i>Yes</i>
P.3 Is there a risk that rights-holders (e.g. project-affected persons) do not have the capacity to claim their rights?	<i>No</i>

<i>Would the project potentially involve or lead to:</i>	
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? [1]	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
<b>Gender Equality and Women's Empowerment</b>	
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
<i>Would the project potentially involve or lead to:</i>	
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?  <i>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</i>	No
P.12 exacerbation of risks of gender-based violence?  <i>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.</i>	No
<b>Sustainability and Resilience:</b> Screening questions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below	
<b>Accountability</b>	
<i>Would the project potentially involve or lead to:</i>	
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	Yes

cluded individuals (including persons with disabilities), from fully participating in decisions that may affect them?	
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
<b>Project-Level Standards</b>	
<b>Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management</b>	
<i>Would the project potentially involve or lead to:</i>	
1.1 adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? <i>For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes</i>	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? <i>For example, construction of dams, reservoirs, river basin developments, groundwater extraction</i>	No

1.12	handling or utilization of genetically modified organisms/living modified organisms?[2]	No
1.13	utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)[3]	No
1.14	adverse transboundary or global environmental concerns?	No
<b>Standard 2: Climate Change and Disaster Risks</b>		
<i>Would the project potentially involve or lead to:</i>		
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 or disasters?  <i>For example, through increased precipitation, drought, temperature, salinity, extreme events, earthquakes</i>	No
2.3	increases in vulnerability to climate change impacts or disaster risks now or in the future (also known as maladaptive or negative coping practices)?  <i>For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding</i>	No
2.4	increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	Yes
<b>Standard 3: Community Health, Safety and Security</b>		
<i>Would the project potentially involve or lead to:</i>		
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)?	No
3.4	risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	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
<b>Standard 4: Cultural Heritage</b>		
<i>Would the project potentially involve or lead to:</i>		
4.1	activities adjacent to or within a Cultural Heritage site?	Yes
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)	Yes
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
<b>Standard 5: Displacement and Resettlement</b>		
<i>Would the project potentially involve or lead to:</i>		
5.1	temporary or permanent and full or partial physical displacement (including people without legally recognizable claims to land)?	No
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? <sup>[4]</sup>	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
<b>Standard 6: Indigenous Peoples</b>		
<i>Would the project potentially involve or lead to:</i>		

6.1	areas where indigenous peoples are present (including project area of influence)?	Yes
6.2	activities located on lands and territories claimed by indigenous peoples?	No
6.3	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? <i>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</i>	Yes
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?	Yes
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? <i>Consider, and where appropriate ensure, consistency with the answers under Standard 5 above</i>	Yes
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? <i>Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.</i>	No
<b>Standard 7: Labour and Working Conditions</b>		
<i>Would the project potentially involve or lead to: (note: applies to project and contractor workers)</i>		
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?	No
7.3	use of child labour?	No
7.4	use of forced labour?	No
7.5	discriminatory working conditions and/or lack of equal opportunity?	No
7.6	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life cycle?	Yes

11 hazards (including violence and harassment) throughout the project life-cycle?	
<b>Standard 8: Pollution Prevention and Resource Efficiency</b>	
<i>Would the project potentially involve or lead to:</i>	
8.1 the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	Yes
8.2 the generation of waste (both hazardous and non-hazardous)?	Yes
8.3 the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	Yes
8.4 the use of chemicals or materials subject to international bans or phase-outs? <i>For example, DDT, PCBs and other chemicals listed in international conventions such as the <a href="#">Montreal Protocol</a>, <a href="#">Minamata Convention</a>, <a href="#">Basel Convention</a>, <a href="#">Rotterdam Convention</a>, <a href="#">Stockholm Convention</a></i>	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

[1] 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.

[2] See the [Convention on Biological Diversity](#) and its [Cartagena Protocol on Biosafety](#).

[3] See the [Convention on Biological Diversity](#) and its [Nagoya Protocol](#) on access and benefit sharing from use of genetic resources.

[4] 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.



Upload available ESS supporting documents.

Title	Submitted
PIMS6677 - SRL HCMW PIF _ PreSESP draft4_26082021_JM_responses CLEAN_JM	

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

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Janaki Amaratunge	Director	Ministry of Environment	9/3/2021

## ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place





Map No. 4172 Rev.3 UNITED NATIONS  
March 2008

Department of Field Support  
Cartographic Section

Pilot/Demonstration locations will be identified during the PPG Phase.