DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

United Nations Development Programme

Multi-country Project Document:

The Project for the Improvement of Infectious Waste Management in Southwest Asia

Project Title: **The Project for the Improvement of Infectious Waste Management in Southwest Asia**

Atlas Project/ Output ID:

	Atlas Project ID	Atlas Output ID
Bangladesh	00146163	00133357
Bhutan	00146164	00133358
Maldives	00146166	00133360
Bangkok Regional Hub	00145965	00133185

PAC Meeting date: 30 August 2022
Start Date: 28 September 2022 **End Date: 27 September 2024**

Countries Participating: Bangladesh, Bhutan and Maldives

Brief Description

Improperly managed healthcare waste is a significant source of pollutants that adversely affect human health and the environment. The COVID-19 pandemic rapidly increased infectious healthcare waste, which is now overwhelming waste treatment facilities. Limited public and private investments in sustainable waste treatment systems have resulted in mounting infectious healthcare waste and limited waste management capacity to handle the different types of hazardous waste.

This project seeks to support national governments, health agencies and stakeholders in three countries (Bangladesh, Bhutan, and the Maldives) in Southwest Asia by deploying locally appropriate and gender-responsive healthcare waste management practices and technologies. It also seeks to improve the capacity of healthcare institutions (i) to address both infectious and non-infectious healthcare waste, (ii) to protect human health, and (iii) to minimize the environmental and social impacts.

This project will benefit healthcare workers, including staff and patients, healthcare waste management personnel, and the broader population. It will ensure that waste is safely handled and disposed. The project will strengthen healthcare waste management policies and include innovative digital technology and renewable/green energy. It will also contribute to South-South learning and the sharing of knowledge, skills, good practices, and expertise across the region and globally.

<table>
<tr><td rowspan="5">Contributing Outcomes (UNSDCF/CPD or RPD):
• UNDP Global and Regional Programme Outcome #1: Inclusive and sustainable structural transformation to reduce poverty, inequality, and vulnerabilities towards the achievement of SDGs and inclusive, sustainable, resilient, and digital transitions.
• UNDP Regional Programme Output 1.3. Inclusive, gender-responsive, resilient, sustainable, and universal social protection and health systems and services strengthened with increased investment.</td><td>Total resources required:</td><td colspan="2">USD 11,049,762</td></tr>
<tr><td rowspan="4">Total resources allocated:</td><td colspan="2"></td></tr>
<tr><td>UNDP TRAC:</td><td></td></tr>
<tr><td>Donor: Government of Japan</td><td>USD 10, 014, 181</td></tr>
<tr><td>Government:</td><td></td></tr>
</table>

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

Indicative Output(s) with gender marker[1]: Gen 2 **Output 1:** Strengthened institutions to deliver clean energy efficient Health Care Waste Management equipment and facilities. **Output 2:** Strengthened Institutional capacities through training on safe and proper management of Health Care Waste in gender responsive manner. **Output 3:** Enhanced gender responsive enabling environment at national and sub-national level for sustainable Health Care Waste Management. **Output 4:** Regional Coordination and Country Project Management.		**In-Kind:**	
	Unfunded:	USD 1,035,581* * Due to the exchange rate loss, the AWP and budget will be reviewed and amended to reflect the actual amount received.	

Agreed by UNDP Bangkok Regional Hub:

Signature:

DocuSigned by:
E882E40AA1B54B4...

Mr. Jaco Cilliers
UNDP Bangkok Regional Hub
Regional Bureau for Asia Pacific
Date/Month/Year:
28-Sep-2022

Agreed by UNDP Country Offices:

UNDP Bangladesh
Signature:

DocuSigned by:
AEE468B55716409...

Mr. Stefan Liller
Resident Representative

Date/Month/Year:
28-Sep-2022

UNDP Bhutan
Signature:

DocuSigned by:
169FE630BB0640B...

Ms. Azusa Kubota
Resident Representative

Date/Month/Year:
03-Oct-2022

UNDP Maldives
Signature:

DocuSigned by:
5341BE539BD1458...

Mr. Enrico Gaveglia
Resident Representative

Date/Month/Year:
29-Sep-2022

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

Country	Implementing Partner	Outputs to be delivered by country
1.Bangladesh	**UNDP**	• Output1: HCWM equipment, consumables and PPE delivered to partner healthcare units. • Output 2: Dedicated, trained, and well-equipped HCWM teams of 498 workers effectively managing HCW generated at 26 targeted units that are gender friendly. Output 3. A model for effective coordination between waste managers and district authorities deployed in a gender responsive manner.
TOTAL Bangladesh-Project Budget incl GMS		USD 3,068,740 (Actual transfer: USD 2,781,137)
2. Bhutan	**UNDP**	• Output 1: Primary health centers and 10-bedded hospitals in 15 districts with improved and efficient management capacities to treat and handle infectious waste. • Output 2: Dedicated, trained, and well-equipped HCWM teams of 2,544 workers effectively managing HCW generated at 113 targeted units that are gender friendly. • Output 3. Four municipalities adopted additional management efficiencies through digitalization, innovation, gender mainstreaming and infrastructure for management of HCW.
TOTAL Bhutan-Project Budget incl GMS		USD 2,221,051 (Actual transfer: USD 2,012,894)
3. Maldives	**UNDP**	• Output 1: HCWM Equipment and Consumables installed; dedicated vessels/vehicles powered by Renewable Energy (RE) for transfer of medical waste from island to regional centres. • Output 2: Dedicated, trained, and well-equipped HCWM teams of 200 workers effectively managing HCW generated at 18 targeted units that are gender friendly. • Output 3: Enhanced and effective gender responsive national level systems for sustainable Health Care Waste Management in Maldives.
TOTAL Maldives-Project Budget incl GMS		USD 4,861,080 (Actual transfer: USD 4,405,500)
BRH	**UNDP**	• Technical assistance • Coordination to facilitate an integrated approach to HCWM
TOTAL BRH-Project Budget including GMS		USD 898,890 (Actual transfer: USD 814,648)
TOTAL Programme (Incl GMS)		**USD 11,049,762 (Actual transfer: USD10,014,181)**

[1] The Gender Marker measures how much a project invests in gender equality and women's empowerment. Select one for each output: GEN3 (Gender equality as a principle objective); GEN2 (Gender equality as a significant objective); GEN1 (Limited contribution to gender equality); GEN0 (No contribution to gender quality)
[2] Note: This document, including the signature page, may be customized as needed. Separate signature pages (one per country) can be created and signed if needed to facilitate timely approval and budget revision if multiple countries are participating. Separate signature pages should still reflect all participating partners.

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

Table of Contents

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

I. DEVELOPMENT CHALLENGE

Improperly managed healthcare waste (HCW) is a significant source of pollutants that adversely affect human health and the environment. The COVID-19 pandemic rapidly increased infectious HCW, which is now overwhelming waste treatment facilities. Low and middle-income countries have historically seen limited public and private investments in sustainable waste treatment systems. These countries now face mounting infectious HCW flooding existing waste management capacity, while in other cases, such capacity is not in place.

The February 2022 WHO Report found that during the pandemic, over 140 million test kits, with a potential to generate 2,600 tonnes of non-infectious waste (mainly plastic) and 731,000 litres of chemical waste (equivalent to one-third of an Olympic-size swimming pool) were shipped across the world. Further, over 8 billion vaccine doses have been administered globally, producing 144,000 tonnes of additional waste in the form of syringes, needles, and safety boxes. This analysis shows that the health sector is under increasing pressure to reduce its carbon footprint and minimize the amount sent to landfills. The report notes that this only provides an initial indication of the scale of the COVID-19 waste problem and does not consider several other types of HCW generated by the public.

According to the latest available data, 1 in 3 healthcare facilities (HCF) globally do not safely manage HCW (WHO, 2021). There is a need to solidify emerging best practices and solutions to reduce the impact of waste on human and environmental health and to scale them up. At the same time, it is vital to prepare countries for potential long-term and recurrent vaccination programmes coupled with the need to improve resource use, promote circular approaches to recyclable wastes in the healthcare sector, and follow WHO/UNICEF guidance.

Furthermore, the provision of suitable guidance on safe health care waste management (HCWM) practices during the COVID-19 pandemic also play an important role in protecting waste workers and healthcare staff who may be at risk of (re)infection from the unsound handling of HCW. HCWM is often an afterthought when planning health service delivery. However, it is one of the main areas that, when not adequately addressed, can increase the risk of infection and pollution. Therefore, this requires interventions to address the below-listed challenges in HCWM. In terms of HCW generation during the COVID-19 pandemic in developing countries in Asia, the Asian Development Bank (ADB, 2020) has projected the increase of waste generation in five major cities associated with COVID-19 at 3.4kg/person/day. And since many cities or health care institutions may not have the capacity to deal with the projected excessive amounts of HCW, contingency plans based on local constraints should be developed, ensuring do no harm principles.

Health Care Waste Management and Gender

Gender dimensions are very relevant to the success of any project, and globally, women represent a large portion of healthcare workers who are more likely to be front-line HCWs. Women also make up the majority of HCF service staff – such as cleaners, laundry, and catering – and as such, they are more likely to be exposed to infectious HCW. While statistics are not readily available for the countries supported through this project, it can be assumed that most HCF workers are female. Therefore, the "nature" of the target beneficiaries instinctively lends itself to targeting women as key stakeholders. The pandemic has also reinforced and compounded the issue of the unpaid care work at home, burdening women, especially those in the health sector, as they juggle to fulfill their increasing workload as medical front liners and domestic responsibilities. Due to the deep-rooted social norms and gender stereotypes, women continue to perform domestic responsibilities such as childcare, elderly care, caring for disabled family members, cleaning and shopping.

The introduction of new technology also can add to a load of responsibilities for health workers as they need to learn and familiarize themselves with new technology. Technology can add bureaucratic layers, and attention must be paid to selecting the most relevant technology for HCWM from a gender perspective.

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

Awareness raising, guidance, training materials, and curricula must be developed and tailored to different recipients involved in HCWM. Training must also be tailored and provided to support services linked to healthcare facilities, such as laundries, waste handling, transportation services, treatment facilities, and workers in waste disposal facilities. Women and men will participate and benefit according to their individual needs and ensure the project provides a wide array of knowledge, skills, and expertise required to achieve maximum development results.

Health Care Waste Management Related Development Challenges

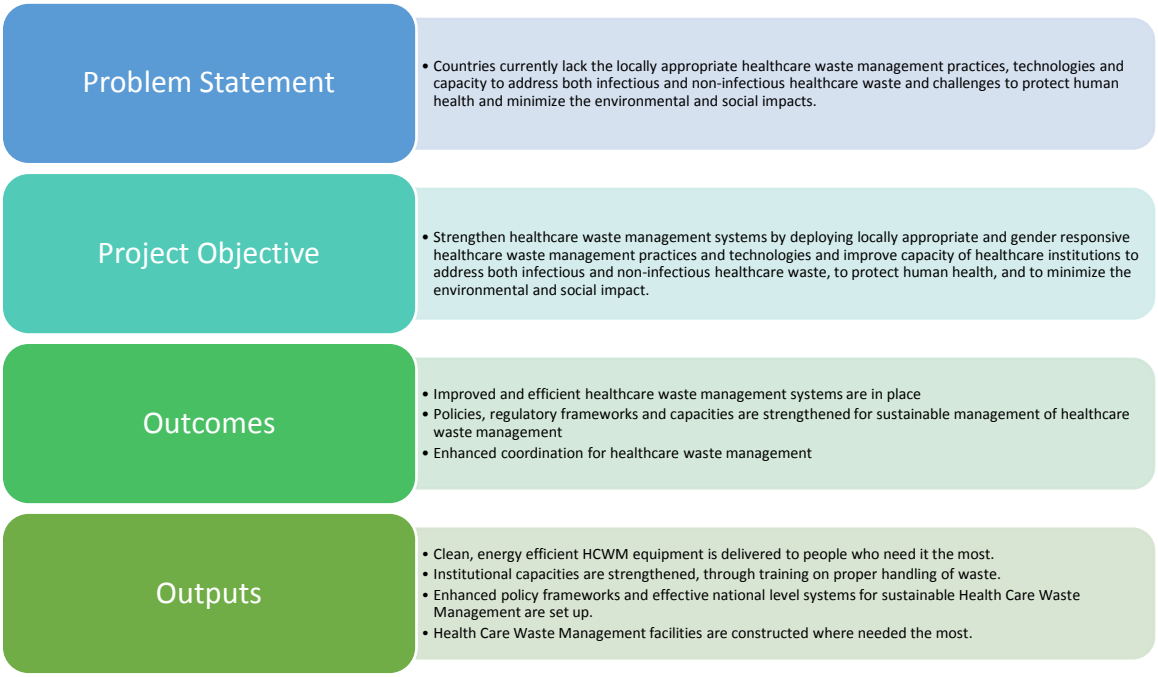
- Lack of PPE and waste-related consumables (bin liners, sharps containers, and bins) for healthcare staff and waste handlers.
- Increased infectious HCW generation rates surpass installed/available capacity and can increase pollutants if non-Best Environmental Practices (BEP)/ Best Available Techniques (BAT) approaches are applied.
- Overworked, overstretched, and overtired HCF staff and other essential staff such as waste management and cleaning staff make it highly challenging to introduce necessary new HCWM practices/technologies.
- Many agencies and NGOs do not have full-time technical staff on the ground who can advise/coordinate on HCWM practices and technologies (including required technical specifications), often resulting in uncoordinated rush procurement of suboptimal low technology incinerators that do not meet BAT/BEP requirements.
- These technologies seldom remain in use after the crisis ends, as HCF does not have the additional funding to operate them (electricity, water, generator, diesel) and the maintenance personnel to keep them functioning.
- Lack of information on available medical waste treatment technology capacities at the country level.
- Lack of capacities in using/adopting non-incineration technologies for treating HCW.
- Insufficient policies or regulations and the corresponding institutional capacity governing the proper treatment and management of infectious medical waste, including gender standards and gender-friendly target units.
- Closed borders, limited commercial/cargo flights, 14-21 days compulsory quarantine for (HCWM) experts, slowing down the delivery of essential HCWM -WASH goods, and providing technical on-the-ground expertise.
- Lack of awareness on the safe disposal of used PPE, especially for COVID-19, affected low-income households and communities.
- There is a lack of a comprehensive global platform on HCWM for knowledge sharing, such as important WHO guidance documents, good practices, lessons learned, technology solutions, training materials, data sharing, situation/impact assessments, FAQs, and so on.

II. STRATEGY

The project's strategy is grounded in the UNDP Strategic Plan 2022-2025 and the HIV and Health Strategy 2022-2025. The project will support countries in three interrelated areas: reducing inequalities, promoting effective and inclusive governance, and building resilient and sustainable systems for health. Similarly, the project aims to support UNDP Global and Regional Programme Outcome #1: Inclusive and sustainable structural transformation to reduce poverty, inequality, and vulnerabilities towards the achievement of SDGs and inclusive, sustainable, resilient, and digital transitions; and UNDP Regional Programme Output 1.3: Inclusive, gender-responsive, resilient, sustainable, and universal social protection and health systems and services strengthened with increased investment.

The problem statement, project objectives, outcomes, and outputs have been formulated as follows:

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079



a. Bangladesh

In Bangladesh, more remote regions continue to suffer from a lack of HCWM practices and policies, including the Chittagong Hill Tracts (CHTs). Many people in CHTs live below the poverty line due to a lack of economic opportunities, an absence of functioning social services, and high illiteracy rates. Health, nutrition, and population services in the CHTs have multiple geographical, environmental, infrastructural, and institutional challenges, and vulnerable people in the area, including women, the elderly, and children, do not have access to adequate health service facilities. These populations are facing the impact of climate change, including water scarcity, and lack of communication, further exacerbating challenges to addressing health concerns.

This project is expected to contribute to the following:

- **UNSDCF/CPD Outcomes 2**: By 2026, ecosystems are healthier, and all people, in particular, the most vulnerable and marginalized in both rural and urban settings, benefit from and contribute to, in a gender-responsive manner, a cleaner and more resilient environment, an enriched natural resource base, low carbon development, and are more prosperous and resilient to climate change, shocks, and disasters.
- **Output 2.2**: Institutions have strengthened capacities to develop, manage and deliver policies, strategies, and actions to improve ecosystem health and manage dynamic risks, such as climate change, disasters, pandemics, and humanitarian crises.

HCW during the COVID-19 pandemic in Bangladesh increased and improving the capacity of the HCFs and HCWM is essential for the country. Therefore, the project is designed to address the following challenges:

- Poor infrastructure and waste disposal process causing threat to the environment and human health in Bangladesh.
- Lack of awareness and gender responsiveness on the safe disposal of COVID-19 affected low-income households and communities.
- Poor service for collection and segregation of the HCW from the health care institution.
- Lack of PPE, waste-related consumables (bin liners, sharp containers, and bins) for healthcare staff and waste handlers, women, and men.
- Lack of capacities in using/adopting non-incineration technologies for treating HCW; and
- Disposal of unsafe or partially chemical-treated HCW in the open pits and landfills.

The Project's **Theory of Change** reads as follows:

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

If appropriate, HCWM practices in the public health care institutions in Bangladesh can address sustainable disposal of medical and solid waste in a gender-responsive manner. ***Resulting* in** a strengthened capacity of HCF and their staff, men, and women, at the district and sub-district level in Bangladesh to manage safely and effectively HCW and improve the coordination of waste management. ***Then,*** negative impacts and risks to the environment and human health from medical waste management are minimized in Bangladesh.

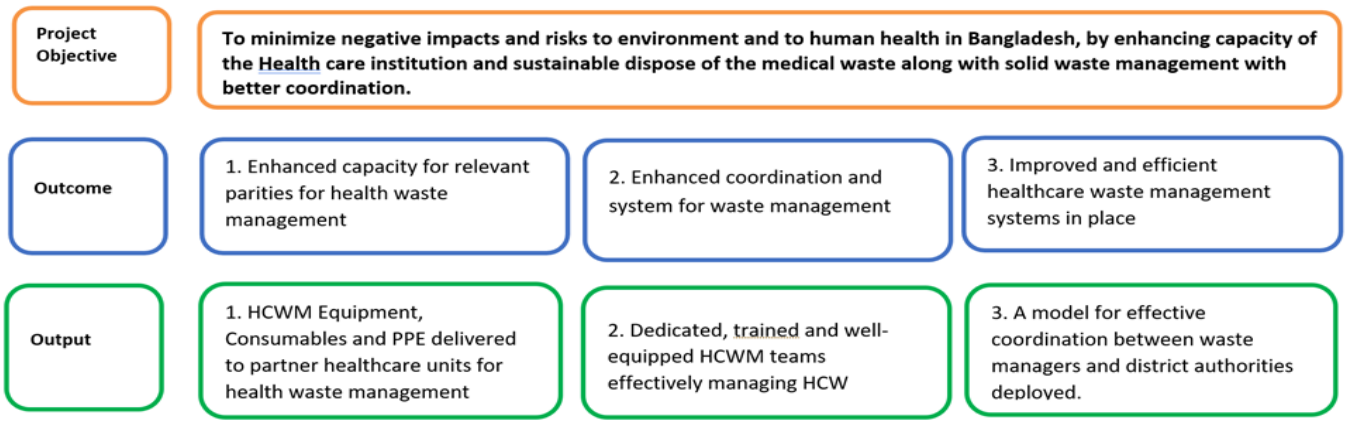


Figure: Theory of Change

b. Bhutan

Bhutan currently has 50 hospitals and 186 primary health units across the country. To varying degrees, waste management is practiced across all the units (WHO, 2020 – Case Study). The Ministry of Health reports that medical waste from health centers increases by about 15 to 20 percent annually, and approximately 421MT of medical waste was reported in 2015 – 2016.

Due to COVID-19, health facilities had to manage increasing medical waste with insufficient infrastructure. For example, Thimphu generates up to 50% of national medical waste. There is no dedicated van/truck for the safe transportation of HCW to the incineration facility, which is located approximately 17 km away. Additionally, the waste treatment at the primary health centers is very primitive (i.e., dipping the waste into the chemical solution). The current treatment and transport setup pose risks to health providers and waste handlers. The project will have a direct bearing on female staff, comprising more than 50% of the total staff strength (Annual Health Bulletin 2021).

After treatment at the 100 Primary Health Care centers, the medical waste is stored in the respective block collection centers and disposed of in the district landfill sites. Only six municipal HCF are connected to the municipal waste disposal system (details available under Bhutan Country Plan and Activity Budget table). HCW trucks will be provided to the three tertiary hospitals and district hospitals where the volume of medical waste generation is enormous to ensure the connection of the entire supply chain of waste management, from source to incineration facilities or landfill sites. Some districts (such as Samdrupjongkhar and Trashigang) have autoclaves provided through the ADB-supported project. The primary HCFs mentioned under the beneficiary districts (15), which include Gasa, Haa, Bumthang, and Trongsa, do not have autoclaves. Medical waste shredders will also be procured for the selected HCF. While the unavailability of the autoclaves is a primary reason for site selection, it is also anticipated that placing this essential equipment will improve Bhutan's HCWM system as a whole and uphold the regulatory standard nationwide in compliance with the Waste Prevention and Management Act 2009. The sites do not cover disputed areas. The project will also work with the four municipalities (Thimphu, Phuentsholing, Gelephu and Samdrupjongkhar) and the district (Wangdiphodrang), which houses hydropower projects on the fleet management of the general waste trucks in partnership with JICA CO.

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

This project aims to address the challenges of inadequate infrastructure for safe treatment, transportation, and disposal of HCW, including the digitalization gaps. At the country level, this project is expected to contribute to the following UNSDPF/CPD outcomes:

- **UNSDPF Outcome 2**: Vulnerable and unreached people access and receive quality health, nutrition, protection, education, water, sanitation, and hygiene services.
- **UNSDPF Outcome 4**: (CPD Outcome2): Bhutan's communities and its economy are more resilient to climate-induced and other disasters and biodiversity loss as well as economic vulnerability.

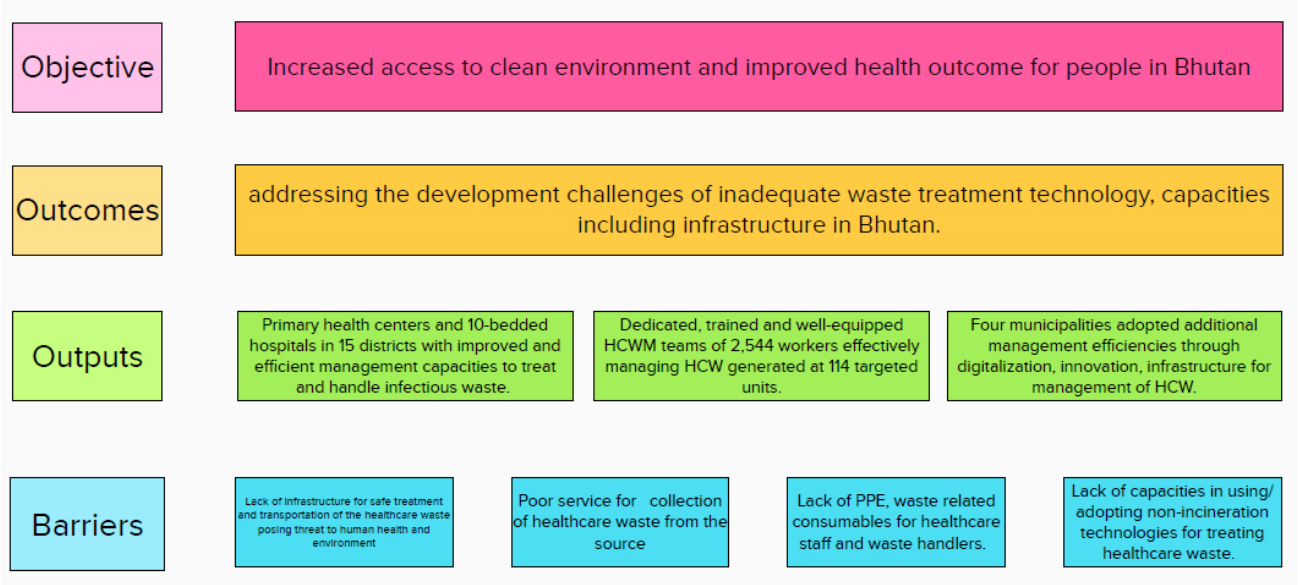
The project will lead to **Output 2.3** "Improved policies and strategies for health, nutrition, water, sanitation, and hygiene."

The project is designed to address the following challenges such as:

- Lack of infrastructure for safe treatment and transportation of the HCW poses a threat to human health and the environment.
- Poor service lacking gender considerations for collection of HCW from the source.
- Lack of PPE, waste-related safety gear for healthcare staff, and for waste handlers.
- Lack of capacities in using/adopting non-incineration technologies for treating HCW; and
- Disposal of unsafe or partially chemical-treated HCW in the open pits and landfill.

The proposed investments in this project are carefully designed to address the critical gaps and achieve sustainability through efficient management and capacity building while building on past Japanese Supplementary Budget (JSB 1.0) project around UNDP offers for COVID-19 response. (See *the Alignment of Other Interventions in HCWM Initiatives section* for additional information). To derive the optimal results from this project, the Government of Bhutan and UNDP will ensure the intervention of high-level technical management to guide the planning and implementation. The project will deliver lessons learned related to green and efficient procurement standards for this equipment to the Government that can later replicate the experiences in other regions/HCF not supported by the project.

Technical assistance for the operation and maintenance of autoclaves will also be delivered and critical to assure the complete and efficient use of the hardware during its lifecycle. The technical assistance activities will also support HCF in developing their operational business models for the treatment systems. Building on the past lessons on procurement such as cardiotocography (CTGs), specialized and state-of-the-art equipment to improve health care waste management will be sourced through regional pool procurement or UNDP/UN global LTAs.



c. Maldives

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

A Small Island Developing State (SIDS), the Maldives faces daunting challenges forHCWM due to its dispersed islands, the prevalence of high-water tables, and land limitations. HCWM is a critical issue due to the lack of infrastructure for managing the waste generated in HCF either on-site or off-site in municipal solid waste management sites. The COVID-19 pandemic exacerbated the challenges of managing HCW in the country, as the reliable waste management system was already under stress. Medium to small-scale HCF also had minimal capacity to address this challenge (from 193 healthcare units of different sizes, only 52 currently operate Autoclaves for treatment of HCW). In contrast, 80% of the HCW generated in the remaining 141 HCF is disposed mostly *in loco* through uncontrolled open burning practices.

This project aims to address the development challenges of inadequate HCWM processes and techniques and thereby increase such capacities in health care centers in Maldives. At the country level, this project is expected to contribute to the following UNSDPF/CPD outcomes:

UNSDCF Outcome 4 (CPD Outcome2): By 2026, national and subnational institutions and communities in the Maldives, particularly at-risk populations, are better able to manage natural resources and achieve enhanced resilience to climate change and disaster impacts, natural and human-induced hazards, and environmental degradation, inclusively and sustainably; Output 2.3. Policies, regulatory frameworks, and capacities at national/subnational levels strengthened for sustainable water and waste resources management.

Currently, stakeholders report a range of challenges in managing HCW, including:

- The highly dispersed nature of the Maldivian islands makes HCWM a costly and challenging endeavor in building and sustaining required infrastructures and capacities.
- Poor service for collection and segregation of HCW from health centers in a gender-responsive manner.
- Lack of PPE, waste-related consumables for healthcare staff, and waste handlers (women and men).
- Lack of capacities in using/adopting non-incineration technologies for treating HCW; and
- Disposal of unsafe or partially chemical-treated HCW in the open pits and landfills.

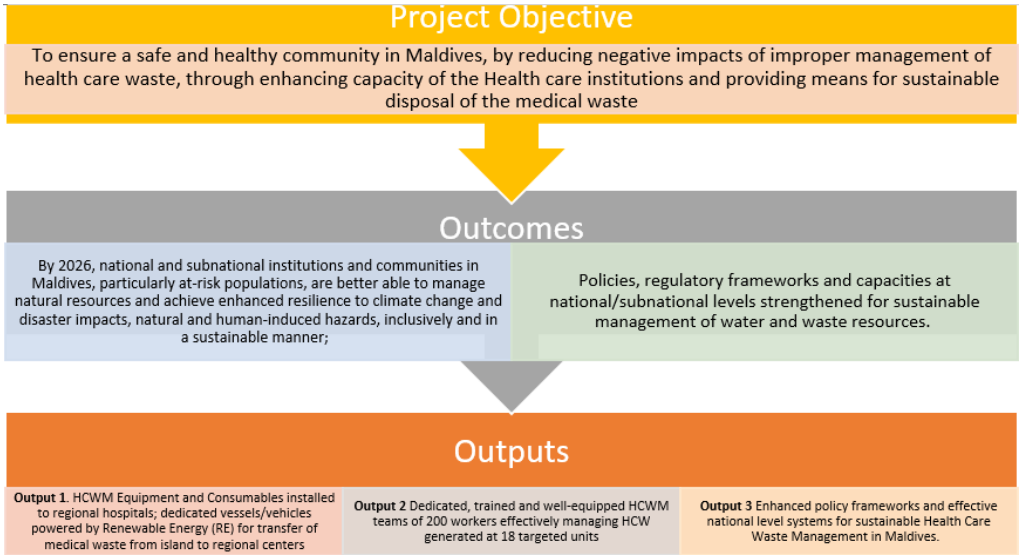
The Health Master Plan of the Maldives,[1] the subsequent Health Care Waste Policy, Strategic Plan,[2,] local knowledge, good practices, and lessons learned from previous and ongoing interventions have informed the proposed strategy. This strategy centers around ensuring the growth of regional capacities and focusing on the life cycle model of waste, on reducing greenhouse gas emissions by disposing of the newly sanitized waste through the regular waste management system rather than incinerating it – more of which are further detailed in the next section.

The theory of change (ToC) for this project is that access to quality-assured HCWM technologies and infrastructures equitably across the islands, and capacitating HCF staff, including male and female staff, will contribute toward effective and safe HCWM practices that are gender-responsive in the Maldives in a sustainable manner.

[1] https://www.aidsdatahub.org/resource/republic-maldives-health-master-plan-2016-2025

[2] https://health.gov.mv/Uploads/Downloads//Informations/Informations(49).pdf

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079



III. Results and Partnerships

Expected Results

a. Bangladesh

In Bangladesh, this project will equip 26 sub-districts under three (3) districts HCF with HCWM equipment and PPE to address the increased HCW generation and deploy a model for effective coordination between waste managers and district authorities. This will result in 1.64 million inhabitants and 351,875 households of 14 communities (including 13 Ethnic Minorities) directly benefiting from the project. The beneficiaries can be further broken down as follows:

- Health care and medical staff: 4,528 (41% female)
- Waste management staff: 498 (33% female)
- Potential patient per day: 5,295 (47% female)
- Residents: 1,641,456 (45% female)

b. Bhutan

In Bhutan, this project will improve the capacities of HCF in 15 districts and 5 cities to manage HCW better and assist 112 HCF in 93 blocks, including six municipal HCF and three tertiary hospitals in 15 districts covering a total of 411,727 beneficiaries through the project's interventions. The planned interventions are 1) to procure specialized and state of the art non-incineration treatment equipment (autoclaves, weighing scales, and medical waste shredders); 2) to develop and establish protocols and build capacities on autoclaves' use and maintenance and implementation of the HCWM system with procurement, PPEs for targeted primary HCF; 3) to procure specialized and state of the art equipment (GPS, computers, CCTV cameras, and monitors); and 4) to procure specialized and state of the art 5-7 Health care waste Vans/trucks. Our focus is to strengthen the waste management system in primary health centers and 10-bedded hospitals, and 5 cities to standardize the health services at the local level and increase the efficiency of the waste management system.

c. Maldives

This project will strengthen HCWM systems, capacities, and practices in at least 18 islands with a phased approach, benefitting at least 180,000 individuals by providing good practices, equipment, autoclaves, and safe buildings, and upgrading existing waste management capacities to manage increased HCW. The project will also improve digital infrastructures and abilities while assessing the current policy gaps on HCW and providing policy support to national stakeholders.

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

This project will reduce the risk of COVID-19 transmission and other diseases by providing a safe way to sanitize medical waste. Healthcare workers and patients will directly benefit from this result.[3] The project assumes that regions and atolls not covered by ongoing efforts will be the project's target regions, thereby eliminating possibilities for duplication. This project will ensure 100% coverage of all islands in the Maldives with safe and sustainable HCWM systems and capacities.

According to 2020 Maldives Health Statistics[4], almost 56% of the health professionals reside in the atolls, where nearly 32% are non-medical staff, and there are more females in all the categories except medical professionals (practicing doctors and specialists). While the statistics on waste handlers are unavailable, given the high number of women working in the health sector as support staff, especially in the islands, this project, in its implementation, will ensure gender-responsive modalities of the roll-out. The project will also contribute towards the safety and knowledge/skill building of women health care workers in HCWM.

Resources Required to Achieve the Expected Results

In collaboration with the country focal points, the BRH HHD team will establish an integrated regional technical working group that will include the NCE team, local government, gender, DRR, and innovation teams. The regional team will further support coordination, consolidating work plans, data management and analysis, and reviewing innovations in all the CO initiatives. The BRH HHD team will coordinate between BERA NY and Tokyo and link COs with global/regional procurement. It will also facilitate technical coordination between WHO, UNEP, and other interested development partners, as well as CSOs, INGOs, and academia. The BRH HHD team will also be accountable for monitoring and consolidating reporting for all three COs and ensuring visibility by communicating results using different platforms.

Partnerships and Alignment of Other Interventions in Health Care Waste Management Initiatives

At the global level, UNDP has been assisting 84 Low and Middle-Income Countries (LMICs) in their efforts to sustainably manage the use, disposal, and destruction of harmful chemicals, including the ones generated through unsound management of HCW. UNDP works with private sector partners and NGOs to reduce the risk of direct exposure to harmful HCW, including regional projects that deployed pilot facilities in Ghana, Madagascar, Tanzania, and Zambia that were instrumental in the rapid response against the Ebola outbreak, as well as in India, Vietnam, Philippines, and Jordan.

Based on the experiences of the project implementation, the following key points were considered from the GEF-funded project entitled "Reducing UPOPs and Mercury Releases from The Health Sector in Africa" when designing this project proposal as well will continue to be applied during this project implementation:

- Clear responsibilities and boundaries of the project should be highlighted and discussed with the stakeholder at the beginning of the project activities.
- Start drafting an exit strategy and the involvement of stakeholders in the exit strategy from the start of the project (taking over ownership).
- Collecting data on waste amounts and operation costs is fundamental to establishing a proper monitoring and reporting system for the project results and the countries' future planning. It should therefore be implemented as soon as the equipment arrives and should be institutionalized by the governments. A cradle-to-grave strategy for the project activities should be integrated.
- Ongoing communication with the relevant stakeholder, including discussing challenges at the moment these have been identified.
- A long-term annual financing system for the operation and maintenance of the project interventions after project finalization must be established during the project time.
- Identify important financial limitations for sustainable HCWM systems; build capacity on HCWM budgeting, and study/support possible (private/public) financial mechanisms to ensure the sustainability of HCWM operations.

[3] https://corporatemaldives.com/canada-approves-usd-1-million-to-support-maldives-medical-waste-management/

[4] https://health.gov.mv/Uploads/Downloads//Publications/Publication(140).pdf

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

- Introducing new technologies requires additional knowledge on the maintenance and repair of the technicians/agents.
- The establishment of a capacity-building program and asset management system is essential.
- Support the countries to establish a national quality management system for procurement, including standardization, communication, specifications, and evaluation based on international standards.

Other detailed lessons learned generated by the previous projects will be used as reference and starting point for those project proposals:

- Technical Lessons Learnt Report (GEF-funded Sub-saharan Africa Project);
- UNDP Sound Chemicals and Waste Brochure;
- Terminal Evaluation Report (GEF Global Project for Argentina, India, Latvia, Lebanon, Philippines, Senegal, Tanzania, Vietnam);
- Sustainable Health in Procurement Project (SHiPP), in collaboration with Health Care Without Harm (HCWH); and
- Resource Center for HCWM Practices.

This project will also seek to learn from and collaborate with the ongoing regional "Learning from China's Experience to Improve the Ability of Response to COVID-19 in Asia and the Pacific Region" (GDF) project that the UNDP BRH Disaster Risk Reduction and Recovery For Building Resilience Team (DRT) is carrying out. UNDP BRH DRT is conducting regional research to better understand the most pressing issues for HCWM in five project countries (Cambodia, Lao PDR, Myanmar, Nepal, and the Philippines).

a. Bangladesh

There are no ongoing Japan-funded programmes or projects on HCWM issues in Bangladesh. However, UNDP carried out other health projects and previously supported a health project in the CHTs from 2006-2012. UNDP implements livelihood programmes and maintains close links with local government and NGOs. UNDP has implemented another initiative on raising awareness in remote CHT sub-districts regarding the importance of vaccine intake on time to reduce vaccine wastage. During project implementation, UNDP developed linkages with local health service providers and health administration personnel. The hardware installed under the HCWM project will remain under the purview of the UNDP's overall footprint in the area in collaboration with the CHT ministry and local government to ensure greater sustainability. All are aligned with the ministries, and in the process, UNDP Bangladesh will also provide cost sharing from the government. In the targeted area, government cost sharing for the UNDP project is very high.

b. Bhutan

The following are other interventions in HCWM in Bhutan:

- The ADB-supported project, which sets standards for managing infectious waste in hospitals, deployed a limited number of autoclaves to be used by primary health centres in 5 districts;
- The Japanese Supplementary Budget (JSB 1.0) project, which supported the National Environment Commission (NEC) to procure three 300-kg capacity pyrolytic incinerators for three COVID-19 treatment centres. The incinerators manage biohazard wastes from medical facilities, flu clinics, and quarantine centres. Emission testing kits were procured to monitor and regulate emissions, in addition to PPE, and SOPs for incinerator management were developed. Training and field visits for government, medical, private sector, and NGOs were organized. Approximately 2.8 tonnes of medical waste have been safely disposed of to date. Under the JSB 1.0 project, UNDP, JICA Bhutan, and Melody International supported Bhutan with CTGs- a locally created technological solution from Japan. Similarly, this project intends to support specialized and state of the art equipment to improve HCWM in Bhutan. The partners are keen to replicate the quality of technology and equipment.
- JICA project, which supports municipal solid waste management by providing compactor trucks and other related equipment to expand and manage the landfill in the capital. JICA is also procuring 13 GPS devices for Thimphu Thromde (Municipal) and developing a new mobile app to enable the authorities and the citizens to have access to real time information about the waste collection

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

vehicles. Thimphu Thromde has employed K-trackers for the existing 11 trucks (K-trackers is the only backend system for fleet tracking).

- Together with JICA and the Japan Embassy, UNDP will support a fleet management system in Thimphu and other municipalities with the purchase of a few (20 nos.) high configuration computers (to be used for tracking waste in real-time) and GPS devices as current municipalities are not adequately equipped with IT infrastructure.

The municipal administrations and district hospitals currently face challenges in collecting COVID-19/infectious waste without a dedicated truck and lack a fleet management tracking system and proper surveillance. This support is vital and timely as this will contribute to and increase the geographical coverage of the management of COVID-19/ infectious waste and linkage to the solid waste management structure once the infectious waste is treated and becomes inert. This HCWM project will complement the past JSB project (setting up incineration facilities) and interventions of HCWM by Global Fund/ ADB on introducing autoclaves in the HCF as a part of COVID-19 response and municipal solid waste management support extended by JICA.

This project also aligns with Accelerator Lab UNDP by bringing in learnings from a social experiment in changing the mindset of health workers, policymakers, households, and others in properly managing waste, especially hazardous waste. This project's proper segregation and management of medical waste will inform proper household hazardous waste management. There might be households with sick and elderly patients that will generate hazardous waste at the household level. COVID-19 infected waste such as face masks. Learning from the project will inform the overall policy regarding managing hazardous/medical waste. All initiatives related to waste by CO will inform and promote a circular economy in health institutions. This is also part of the waste flagship initiative by the government, amounting to NU 3.74 billion.

c. Maldives

Recognizing the need for HCW management in the country, the Ministry of Health of Maldives endorsed a national HCWM policy in 2016. A national HCWM Strategic Action Plan 2016-2021, with a vision to ensure waste generated in the health sector is managed without adverse effects on human health and environment and in an economically sustainable manner[17]. Per the Ministry of Health's request, UNDP will support under activity 2.3 to develop a new National Strategy on HCWM (2022-2026). This will support MOH in strategic continuation.

This project builds on ongoing efforts by the Ministry of Health in partnership with the World Health Organization (WHO)/Government of Canada and the Asian Development Bank (ADB), where an active project is ongoing on:

- Procuring approximately 40 autoclaves, which sanitize medical waste.
- Installing the autoclaves in medical facilities across ten island atolls; and
- Providing training to staff in medical facilities on the use and maintenance of autoclaves.

However, the means to efficiently store and handle the equipment is severely under addressed. The urgent need, that will be addressed through this project is to ensure safe and sound facilities to operate and store this equipment.

RISKS AND ASSUMPTIONS

The project's management team at the regional and country levels will employ adaptive management techniques to maintain the delivery of the expected outcomes. The significant risk factors in the three countries that could result in the project not producing the expected results are the following:

- **Strategic risks:** Power dynamics and political and economic structures at the regional and sub-national level may undermine the implementation and impact of the project and lead to resources being allocated in a manner that is not consistent with the project objective.

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

- **Organizational risks:** Successful implementation will depend on careful coordination with various levels of government, across ministries and complementary regional, national, and sub-national initiatives.
- **Human resources risks**: Overworked, overstretched, and overtired healthcare facility staff and other essential staff such as waste management and cleaning staff, making introducing necessary new HCWM practices/technologies highly challenging. HCF staff, particularly women, face increased workloads due to domestic care responsibilities, so women healthcare workers may need to be consulted when introducing new HCWM technologies/practices.
- **Implementation capacity risks**: Inadequate and/or non-capacitated human resources to successfully implement the project are a risk. This includes potential insufficient technical capacity to complete the project at a high level of rigor or overworked, overstretched, and overtired HCF staff and other essential waste management staff that will have no bandwidth to absorb additional responsibilities.
- **Project management risks:** A committed project management team with adequate outreach and networking skills are essential for the activities' success. The team will need to have the ability: i) to engage the key stakeholders in constructive discussion about HCWM; ii) to guide and supervise the implementation activities and effectively cooperate with the donors iii) to present their findings and recommendations convincingly to key policymakers and opinion leaders; iv) to coordinate capacity building and training activities with a wide variety of stakeholders, and iv) to identify areas of future work. Required technical experts must also support the management team during project implementation.
- **Social and environmental risks:** This project is planned in a region with many indigenous and vulnerable communities. There is a risk that the voices of women, youth, people living with disabilities, and indigenous and/or marginalized communities may not be represented in the project activities and studies that will be carried out. Every effort will be made to include these communities in dynamic ways that will be identified during the development of the stakeholder engagement plans during project inception so that their recommendations are integrated at all levels in a gender-responsive and inclusive manner. There are also risks related to environmental pollution and human health hazard, should there be a malfunction in equipment, guidelines not properly followed, and damage to the facilities constructed.
- **Logistic risks:** Closed borders, limited commercial/cargo flights, 14-21 days compulsory quarantine for (HCWM) experts, slowing down the delivery of essential HCWM -WASH goods and the provision of technical on-the-ground expertise. Delays in procurement, inflation, and exchange rate losses (3 separate entries), as supply chain issues are ongoing, and inflation is rising.
- **Sustainability of project inputs:** Unplanned, uncoordinated, rushed, and inappropriate procurement can result in duplication and waste of resources, underutilized, or not utilized due to not considering local circumstances, lack of accountability, and unplanned funding for the long-term operations and maintenance of technologies and medical equipment.
- **Disruptions in the global supply chain:** COVID-19 demonstrated that disease outbreaks can impact the procurement supply chain but also result in lockdowns at the country level, paralyze travel to project sites and staff turnover, etc. In addition, political unrest, geopolitical dynamics, economic changes, natural disasters, and climate change can contribute to disruptions in global and regional supply chain management.

STAKEHOLDER ENGAGEMENT

a. Bangladesh

Several consultations have been conducted with different stakeholders. This included participants from WHO, UNICEF, a representative of the Zila Parishad CHT, civil surgeons of the CHT districts, Chief Executive Officer- Zila Parishad, local government representative, and the UNDP Expert in the CHT arena, resulting in positive feedback on commencing the intervention.

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

A complete stakeholder mapping and engagement plan will be conducted at the beginning of the project. Local government agencies (union council, district, and sub-district council), local administration (district and sub-district administration), municipalities, private sector, NGOs, different voluntary organizations, local ethnic community, local leaders, and volunteer groups will be included for effective implementation. The government's higher-level policymakers and local governments can contribute at the policy level.

The private sector will be engaged to manage the process through innovation with tools and expertise and create formal and informal employment for the marginal groups. Private sector engagement through district and sub-district administration can actively contribute to waste management, including contractual waste collection and supervision. Additionally, the private sector can facilitate waste business through formal and informal job creation and implementation of innovative processes in the waste management system.

Similarly, NGOs can assist with advocacy, and volunteers and local leaders can be engaged in running the project smoothly with their cooperation. Other NGOs, expert groups, interest groups, and relevant stakeholders can come forward with their social responsibility to contribute to managing HCW in the targeted hospitals.

b. Bhutan

This project will work closely with UNDP CO, Accelerator lab, which is experimenting with targeted collection of PET bottles in a community (Circular economy). Some private entrepreneurs have pitched their proposals through the UNDP springboard program on manufacturing bricks from plastic waste. This project intends to facilitate knowledge sharing on circular economy and establish connections among private waste management firms, entrepreneurs, and hospitals that produce large amounts of plastic waste. Training on handling infectious waste will also be provided to the informal waste handlers/private firms responsible for waste management.

c. Maldives

Consultations with CSOs and community groups across the 18 regions and women's groups will be essential to understand more significant community impacts and impacts on the 185,000 direct and 350,000 indirect beneficiaries. Cost-effective disposal technologies and waste management practices will be promoted throughout this project to ensure engagement and awareness of the private sector stakeholders.

Target Beneficiaries (Summary):

Country	No. of District	No. of Health Facilities	No. of Health Care and Medical Staff	No. of Waste Management Staff	No. of Potential Patient per day	No. of residents
Bangladesh	3	26	4,528 (41%Female)	498 (33% Female)	5,295 (47% Female)	1,641,456 (45% Female)
Maldives	6	18	500	150	5,000	350,000
Bhutan	15	118	2,203	341	11,370	411,727

SOUTH-SOUTH AND TRIANGULAR COOPERATION (SSC/TRC)

This project will enable South-South and Triangular Cooperation not only between the three countries through capturing of good lessons but also beyond, through regional technical assistance in developing regional work plans/briefs/policy papers/ and organization of webinars for a global audience, to serve as a platform for broader resource mobilization. Some COs have already developed technical guidance notes that will be shared throughout project implementation. In addition, the results of this project will contribute to sharing knowledge, skills and expertise across and beyond the three countries and the project's remit to other projects on HCMW.

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

As the proposed project covers three countries, there is a need for a regional coordination mechanism for better coordination and articulation, as well as to promote effective communication and exchange of experiences between countries. The regional Project Management team will be responsible for consolidated implementation support services and will be the main liaison with MOFA/GoJ in the project-related matters.

The regional project management team will allow for greater sharing of experiences and good practices among the three programme countries and is best managed at regional level, with potential for replication in other countries in the region and possibly beyond the project scope to other regions. The impact and visibility could be broader if managed regionally, taking advantage of UNDP organizational structure and presence in other regions such as LAC, RBA, EECIS, and so forth. This project will enable South-South and Triangular Cooperation not only between the three countries through capturing of good lessons, but also beyond, through regional technical assistance in developing regional work plan/briefs/policy papers/ and organization of webinars for a global audience, to serve as a platform for wider resource mobilization, and across similar projects at the Hub.

DIGITAL SOLUTIONS[5]

In **Bangladesh,** this project will use digital solutions such as assessing digital readiness and needs of district health centers to ensure digital tracking of HCWM at CHTs.

In **Bhutan,** this project also includes two types of digital solutions. As an outcome, the CO will integrate GPS: Global Positioning System (GPS) devices into the existing vehicle tracking system for the purpose of improving the efficiency of vehicle usage. This system can maximize the limited number of vehicle usage and can integrate municipal waste vehicles that also collect the HCF wastes into the system, entire waste management ecosystem will be strengthened. Additionally, to streamline stakeholder's communication due to the remote and scattered locations, the CO intends to use digital solutions as virtual communication tools for pre-inspection, communication, and troubleshooting for remote HCF. For example, the CO can apply hybrid communication strategies such as in-person and online follow-up sessions. The CO can also organize all stakeholders such as waste focal points in the 112 targeted HCF on the digital tools, so that information can be shared at the same time, and leverage peer-to-peer learning. The CO can also apply digital tools for monitoring activities such as online pre-inspection visits. By using these digital tools, we can engage with the technical support team easily and in the long term. The project interventions at large will help health staff and waste handlers in managing waste efficiently.

In the **Maldives,** this project will use digital solutions such as digital readiness assessments of regional health centers to ensure digital tracking of HCWM at the island level.

KNOWLEDGE

UNDP's communications efforts will generate donor visibility across multiple channels through the most effective communications methods identified at the country, regional and global levels. UNDP will provide visibility opportunities for the Government of Japan (GoJ) and, at the country level, work closely with the Japanese Embassies in visibility/communications efforts. The project will also develop and apply a visual identity that shall include the logos and other communication input materials to be provided by the GoJ. Workshops, trainings and other similar activities will be open for the participation of representatives of the GoJ.

The project will seek collaboration with the GoJ in various areas of cross-cutting interests, as well as support for technical assistance, technology transfer and other cooperation activities. In Bangladesh, UNDP works closely with the Japanese Embassy and has a Japanese M&E consultant with five years of experience working in Bangladesh and who will be providing support. In Bhutan, the RR is a Japanese national. Just recently, a Japanese senior United Nations Volunteer joined to support the broader UNDP work in the country and

[5] *Please see the Guideline "Embedding Digital in Project Design".*

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

would also be involved in managing the project. At the regional level, Japanese staff from the Japan Unit will hold a review session twice a year to understand each country's progress and address any issues each country might be facing during implementation.

UNDP will strategically consult Japanese representatives on visibility surrounding issues related to HCWM. Japan is a leader on these issues, and the activities outlined seek to draw on those experiences and expertise. With prior agreement, UNDP is keen to ensure Japan's contributions, giving them their proper acknowledgment. UNDP will ensure that a communication plan is in place for this project to highlight its progress and results.

SUSTAINABILITY AND SCALING UP

Project sustainability and scale-up will be achieved by deploying long-term hardware (low-environmental impact) for HCW treatment. Additionally, lessons learned about green and efficient procurement standards can be adapted and replicated in other areas/HCF not supported by the project. Technical assistance for the operation and maintenance of the autoclaves will be provided to support the full and efficient use of the hardware during its lifecycle. The technical assistance will also support the HCFs in developing their own operational business models for the treatment systems. The project will include advocacy to ensure co-financing or operation and maintenance allocations to ensure the sustainability of the equipment, as well as ensure the availability of well-trained technical capacity beyond the project lifetime.

Strengthened national capacities and increased stakeholder awareness will sustain the project results. By building this capacity, the national counterparts will continue maintaining the equipment and facilities so that project sustainability can be maintained. At the regional level, lessons learned will be consolidated and shared to contribute to the global knowledge management tools, data and evidence that will inform policies and programmes on safe HCWM practices at the national or sub-national level.

IV. PROJECT MANAGEMENT

The project will be implemented following UNDP's Direct Implementation Modality (DIM). The Project will be implemented by UNDP Country Offices (COs) in Bangladesh, Bhutan and Maldives with coordination and technical management support from the BRH HHD team based in Bangkok.

The COs have capable and professional teams with adequate experience in implementation and compliance with UNDP regulations and policies for Programme and Project Management (PPM). The COs are well structured to address the two complementary areas of project implementation and financial management as well as application of Rules and Regulations on Programme and Operations Policies. Each country will implement the project under the DIM modality, with dedicated project teams in each country, comprising of project managers, operations managers, procurement specialists and M&E specialists. The BRH HHD team will provide technical, coordination and communications advisory services.

a. **Programme**

Programme staff members are placed in thematic clusters which are responsible for the implementation (oversight) of UNDP-supported projects. In addition, the Monitoring & Evaluation, Partnerships, and Communications & Innovation and Gender teams can provide additional support in cross-cutting areas of the project.

b. **Operations**

Operational implementation support is carried out by dedicated teams under the Operations Manager, who is supported by a Head of Finance, a Head of Human Resources and a Head of Procurement.

c. **Financial Management Capacities**

The CO's HACT focal points oversees HACT compliance of project implementing and responsible partners (Executing Partners). On an annual basis, regular spot checks and project audits are conducted for all

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

projects, in line with UNDP POPP and the Assurance Plan approved by the CO's Resident Representative. The COs are also bound to comply with UNDP´s PPM Policies and the UNDP´s Financial Regulation 16.02 and Financial Rule 116.02.

Cost efficiency and effectiveness in the project management will be achieved through adherence to the UNDP Programme and Operations Policies and Procedures (POPP) and reviewed regularly through the governance mechanism and UNDP's Asia and the Pacific Regional Programme 2022-2025. In addition, there are specific measures for ensuring cost-efficient use of resources through using a portfolio management approach and based on the Theory of Change analysis for each country. The Regional Hub will review the joint work plan as well as procurement plans to maximize results with the available resources, such as explore pooled procurement opportunities, joint monitoring activities, communications and partnerships.

Cost-effective disposal technologies and waste management practices will be promoted throughout this project to ensure engagement and awareness of the private sector stakeholders. Lessons learnt will be collect by BRH and will be duly registered and shared among UNDP COs and governments so to foster scale up and replicability in Asia Pacific.

This project will leverage existing related activities as well as partnerships to improve cost-effectiveness. Procurement costs will be reduced through joint operations across the three countries. The countries and the Regional Hub have identified all procurement items and will develop detailed procurement plans and timelines. The project will engage technical specialists from UNDP, consultants to support the Technical Working Group to support the process, in addition to engaging procurement specialists and working with regional advisors. Attention will be paid to ensure gender responsive procurement practices are applied as much as possible and UNDP's PSEA terms and conditions are adhered to by vendors. To this end, the project will explore opportunities under capacity building to include awareness on UNDP's zero tolerance for sexual exploitation and abuse with local procurement vendors.

d. **BANGLADESH**

The project will operate under a Direct Implementation Modality (DIM). UNDP Bangladesh CO will manage this initiative under the UNDP RR and DRR's direct leadership. The project's technical implementation will be led by a Project Manager, supported by a project team consisting of national experts and staff. In terms of the audit and HACT arrangements, the UNDP policies and procedures will be followed in this regard. The DPC is included in the total budget in the workplan.

e. **BHUTAN**

The project will operate under a DIM. The Health Governance Specialist will lead the project with support from a UNV program officer under direct supervision of UNDP RR and DRR. Procurement related activities will be supported by the operations and management unit of the CO, and the CO intends to hire an additional procurement specialist. For the soft components such as training and capacity building, at least 1% of the budget will be allocated for the gender mainstreaming action. For the audit arrangements, spot checks and HACT audit will be carried out as per the UNDP's policies and procedure. The DPC is included in the total budget which amounts to 4.47% of the total project cost to cover missions and travels, Quality Assurance (QA) services for projects and Delivery Enabling Services.

f. **MALDIVES**

The project will operate under a DIM. A dedicated PMU will be set up under the supervision of the Assistance RR, Governance. The PMU will be led by a dedicated UNDP Project Manager based in the Ministry of Health, supported by a project team consisting of a procurement expert. Procurement assistants will be hired separately for this project, as the current capacity for procurement in the CO is insufficient to support a project of this nature and scale.

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

The project will be housed under the Governance Portfolio of the CO, with a conscious cross-unit collaboration with the Operations Unit and the Climate Unit, given the highly cross-sectoral nature of the project. This project will entail close support from the Operations Unit of the CO, with QA ensured by the DRR and the RR. A multisectoral National Technical Working Group, chaired by the Ministry of Health, will be set up to guide at the national level and include all development partners and donors involved in waste management at the national level. This group will ensure the effective use of resources for HCWM at the national and sub-national levels between countries. At the regional level, BRH will be responsible for consolidated implementation support services and will be the main liaison with MOFA/GoJ in the project-related matters.

As the proposed project covers three countries, there is a need for a regional coordination mechanism for better coordination and articulation, as well as to promote effective communication and exchange of experiences between countries. BRH HHD team will be responsible for consolidated implementation support services and will be the main liaison with MOFA/GoJ in the project-related matters.

At the regional level, BRH HHD team will facilitate sharing of experiences and good practices among the three programme countries. This is best managed at regional level, with potential for replication in other countries in the region. The impact and visibility may be broader if managed regionally, taking advantage of UNDP organizational structure and presence in other regions such as LAC, RBA, EECIS, and so forth. This project will enable South-South and Triangular Cooperation not only between the three countries through capturing of good lessons, but also beyond, through regional technical assistance in developing regional work plan/briefs/policy papers/ and organization of webinars for a global audience, to serve as a platform for wider resource mobilization, and across similar projects at the Hub.

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

V. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

The project will be implemented following DIM modality. The Project Board is the most senior, dedicated oversight body for the project. The two main roles of the project board are as follows:

1) **High-level oversight of the execution of the project by the Implementing Partner** (as explained in the "Provide Oversight" section of UNDP POPP). This is the primary function of the project board and includes annual (and as-needed) assessments of any major risks to the project, and decisions/agreements on any management actions or remedial measures to address them effectively. The Project Board shall be responsible for taking corrective action as needed to ensure the project achieves the desired results.
2) **Approval of strategic project execution decisions of the Implementing Partner** with a view to assess and manage risks, monitor, and ensure the overall achievement of projected results and impacts and ensure long term sustainability of project execution decisions of the Implementing Partner (as explained in the "Manage Change" section of the POPP).

The Project Board will meet on an annual basis and its responsibilities include:

- The project board provides overall guidance and direction to the project, ensuring it remains within any specified constraints, and providing overall oversight of the project implementation.
- Review project performance based on monitoring, evaluation, and reporting, including progress reports, risk logs and the combined delivery report.
- In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency, and effective international competition.
- The project board is responsible for making management decisions by consensus. In case consensus cannot be reached within the Board, the UNDP representative on the Board, who is the Regional Hub Manager, will mediate to find consensus, and if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.
- Approve the Annual Work Plans and Budgets, and ensure project manager's tolerances remain within the parameters outlined in the AWP, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded.
- Advise on major and minor amendments to the project within the parameters set by UNDP and the donor
- Provide high-level direction and recommendations to the project management units to ensure that deliverables are produced satisfactorily and according to plans
- Review and advise on the Project Risk Register and risk management plans including SES that have implications on the project implementation.
- Provide guidance on evolving or materialized project risks and agree on possible mitigation and management actions to address specific risks
- Address project-level grievances, if any, and follow up actions required.

The **Project Board** will be Chaired by the Executive, represented by UNDP Bangkok Regional Hub Manager. Senior Representatives from the Country Offices (Resident Representative or his/her delegate) may co-chair the Project Board. A representative of the Donor will serve in the Senior Supplier/Development Partner role. Relevant government authorities from each of the participating countries will serve as Beneficiary Representatives. The Beneficiary representatives' will be engaged in the decision making for the project and to ensure project results bring positive impact for the community and beneficiaries.

At the country level, Senior Management of the individual CO will set up a local Technical Working Group to ensure coordination between various donor and government-funded projects and programmes at the national level, and ensure that community and other relevant stakeholders are consulted and included in the decision making related to the project implementation and coordination at national and sub national

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

levels. The Technical Working Group will include the direct beneficiaries (managers of the health care facilities), and the indirect beneficiaries, which include patients of the health care facilities as well as the communities at the sub national level, all of whom will derive benefit from an improved health care waste management system.

Project Assurance: UNDP performs quality assurance and supports the Project Board, by carrying out objective and independent project oversight and monitoring functions, including compliance with the risk management and social and environmental standards of UNDP. This role ensures appropriate project management milestones are completed, and conflict of interest issues are monitored and addressed. The project assurance function is independent of project execution. Each country office will provide project assurance under the direction of their respective Senior Management. A designated Programme/ M&E Officer in each Country Office will play the project assurance role in line with UNDP corporate rules and regulations. Each individual country office will follow similar structures of project QA.

The UNDP BPPS team on HIV Health and Development (HHD) provides technical quality assurance and strategic oversight of the project, in partnership with the Country Office Support and Quality Assurance (COSQA) team through the respective country desk officers. They will provide their inputs directly to the Regional Project Management Unit, who in turn report to the Project Board.

Project Management:

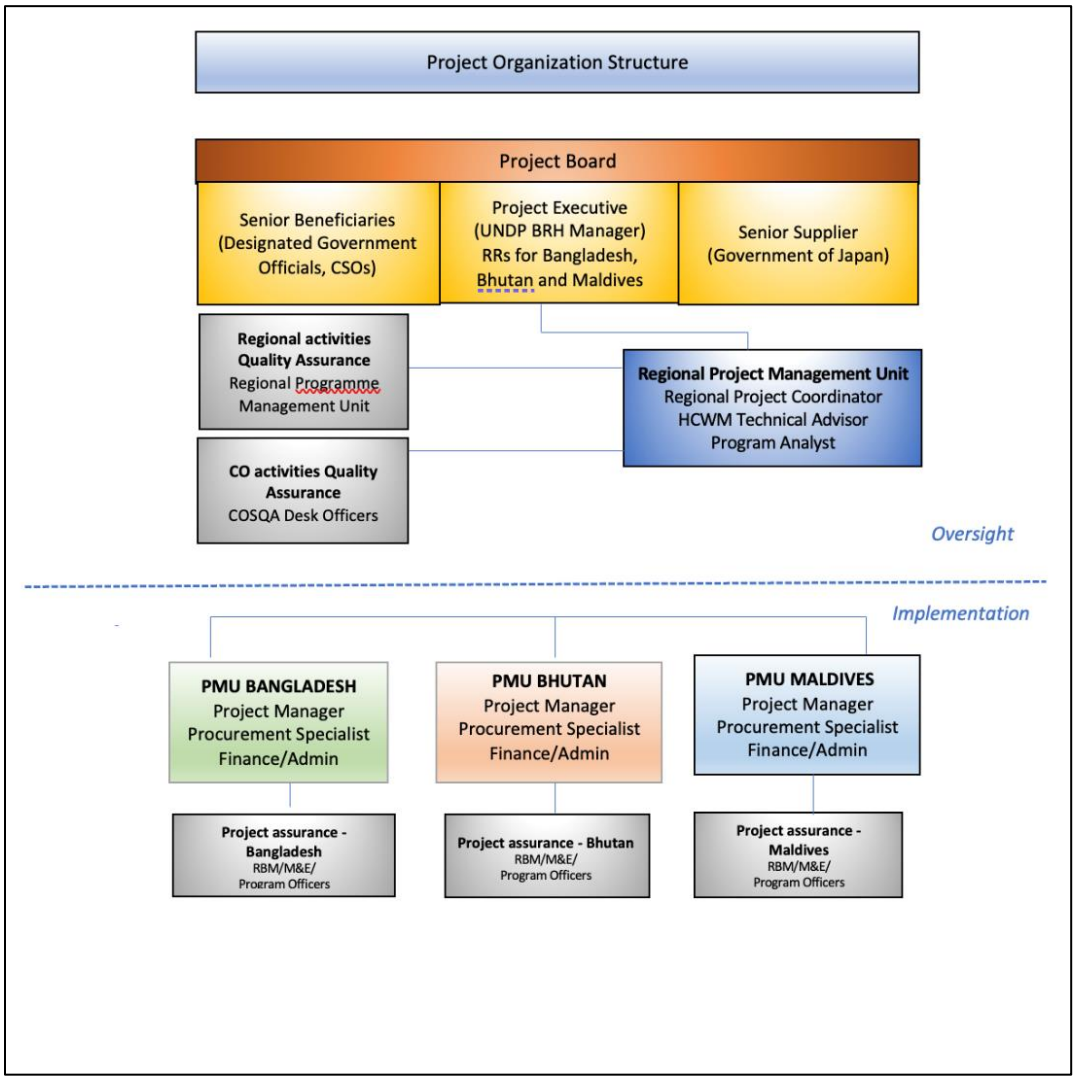
The HCWM Regional Programme Management Team, will consist of a Regional Project Coordinator, HCWM Technical Advisor, and a Program Analyst.

The Regional Project Coordinator will be responsible for the overall day-to-day coordination of the project, including the mobilization of all project inputs, facilitating pooled procurement, connecting partners across the region and countries. There will also be a Program Analyst to support the project. The tasks will include:

- Project planning, coordination, management, monitoring, evaluation and reporting to donors.
- Overseeing the management of project risks as included in this project document and new risks that may emerge during project implementation, and coordinate with the Country Project Managers.
- Procurement of goods and services, in coordination with BRH team, Copenhagen and KL.
- Financial management, including overseeing financial expenditures against project budgets, with support from the Programme Analyst.

Country Project Managers: Each CO will have a dedicated Project Manager that will be responsible for the day-to-day management of the project, managing all project inputs, supervising project staff, responsible parties, consultants and sub-contractors as well as coordinate the procurement and in country coordination. The project manager will present key deliverables and documents to the board for their review and approval, including progress reports, annual work plans, adjustments to tolerance levels and risk registers.

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079



VI. LEGAL CONTEXT

Global and Regional Projects

This project forms part of an overall programmatic framework under which several separate associated country level activities will be implemented. When assistance and support services are provided from this Project to the associated country level activities, this document shall be the "Project Document" instrument referred to in: (i) the respective signed SBAAs for the specific countries; or (ii) in the Supplemental Provisions to the Project Document attached to the Project Document in cases where the recipient country has not signed an SBAA with UNDP, attached hereto and forming an integral part hereof. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

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

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

VII. RISK MANAGEMENT

UNDP (DIM)

1. UNDP as the Implementing Partner will comply with the policies, procedures and practices of the United Nations Security Management System (UNSMS.)

2. UNDP as the Implementing Partner will undertake all reasonable efforts to ensure that none of the [project funds][11] are used to provide support to individuals or entities associated with terrorism , that the recipients of any amounts provided by UNDP hereunder do not appear on the United Nations Security Council Consolidated Sanctions List, and that no UNDP funds received pursuant to the Project Document are used for money laundering activities. The United Nations Security Council Consolidated Sanctions List can be accessed via https://www.un.org/securitycouncil/content/un-sc-consolidated-list. This provision must be included in all sub-contracts or sub-agreements entered under this Project Document.

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

The Social and Environment Procedure (SESP) has been undertaken and a summary of the findings (or recommendations?) are as follows:

- The overall project risk has been rated “substantial”.
- The SESP identified twelve (12) risks for this project that could have potential negative impacts in the absence of safeguards and adequate assessment and management measures.
- The identified risks that could affect the implementation and results of the project are described in the risk register in, along with proposed mitigation measures and recommended risk owners who would be responsible to manage the risks during the project implementation phase.
- The overall risk significance rating of “substantial” for this project requires the completion of scoped **ESIAs** (Environmental and Social Impact Assessment) for each country.
- During the development of each ESIA, site-specific **ESMPs** (Environmental and Social Management Plan) will be completed and disclosed to stakeholders for consultation.
    - The ESMPs will be designed to ensure compliance with the applicable legal and regulatory frameworks and will define the desired social and environmental management outcomes, indicators and targets to track the implementation and effectiveness of the measures contained within each ESMP.
    - The major elements required to be included in the ESMPs are as follows: (i) mitigation; (ii) monitoring; (iii) capacity development and training; (iv) stakeholder engagement; (v) grievance redress mechanism; and, (vi) implementation action plan (including schedule and cost estimates).
- A scoped **SESA** (Strategic Environmental and Social Assessment) is required for **Bangladesh only.**
- The procurement processes for acquiring autoclaves and other HCWM equipment **can be initiated prior to the finalization of the ESIAs**. However, any installation, training, or use of such equipment must wait until the completion and approval of the assessment and associated management measures.

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

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

5. In the implementation of the activities under this Project Document, UNDP as the Implementing Partner will handle any sexual exploitation and abuse ("SEA") and sexual harassment ("SH") allegations in accordance with its regulations, rules, policies and procedures.

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

7. UNDP as the Implementing Partner will ensure that the following obligations are binding on each responsible party, subcontractor, and sub-recipient:

a. Consistent with the Article III of the SBAA *[or the Supplemental Provisions to the Project Document]*, the responsibility for the safety and security of each responsible party, subcontractor and sub-recipient and its personnel and property, and of UNDP's property in such responsible party's, subcontractor's and sub-recipient's custody, rests with such responsible party, subcontractor, and sub-recipient. To this end, each responsible party, subcontractor, and sub-recipient shall:

i. put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried out.

ii. assume all risks and liabilities related to such responsible party's, subcontractor's and sub-recipient's security, and the full implementation of the security plan.

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

c. Each responsible party, subcontractor and sub-recipient (each a "sub-party" and together "sub-parties") acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the sub-parties, and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

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

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

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

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

investigative mechanisms. In line with this, sub-parties will and will require that their respective sub-parties will take all appropriate measures to:

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

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

(iii) Report and monitor allegations of SH and SEA of which any of the sub-parties have been informed or have otherwise become aware, and status thereof.

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

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

e. Each sub-party shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the relevant sub-party to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

f. Each responsible party, subcontractor and sub-recipient will ensure that any project activities undertaken by them will be implemented in a manner consistent with the UNDP Social and Environmental Standards and shall ensure that any incidents or issues of non-compliance shall be reported to UNDP in accordance with UNDP Social and Environmental Standards.

g. Each responsible party, subcontractor and sub-recipient will take appropriate steps to prevent misuse of funds, fraud, corruption, or other financial irregularities, by its officials, consultants, subcontractors and sub-recipients in implementing the project or programme or using the UNDP funds. It will ensure that its financial management, anti-corruption, anti-fraud and anti-money laundering and countering the financing of terrorism policies are in place and enforced for all funding received from or through UNDP.

h. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to each responsible party, subcontractor, and sub-recipient: (a) UNDP Policy on Fraud and other Corrupt Practices (b) UNDP Anti-Money Laundering and Countering the Financing of Terrorism Policy; and (c) UNDP Office of Audit and Investigations Investigation Guidelines. Each responsible party, subcontractor and sub-recipient agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

i. In the event that an investigation is required, UNDP will conduct investigations relating to any aspect of UNDP programmes and projects. Each responsible party, subcontractor and sub-recipient will provide its full cooperation, including making available personnel, relevant documentation, and granting access to its (and its consultants', subcontractors', and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with it to find a solution.

j. Each responsible party, subcontractor and sub-recipient will promptly inform UNDP as the Implementing Partner in case of any incidence of inappropriate use of funds, or credible allegation of fraud, corruption other financial irregularities with due confidentiality.

Where it becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, each responsible party, subcontractor and sub-recipient will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and

DocuSign Envelope ID: E5A4AD41-F6B2-4DD6-8E07-66CD3336E079

Investigations (OAI). It will provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

k. UNDP will be entitled to a refund from the responsible party, subcontractor, or sub-recipient of any funds provided that have been used inappropriately, including through fraud corruption, other financial irregularities or otherwise paid other than in accordance with the terms and conditions of this Project Document. Such amount may be deducted by UNDP from any payment due to the responsible party, subcontractor or sub-recipient under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail any responsible party's, subcontractor's or sub-recipient's obligations under this Project Document.

l. Each contract issued by the responsible party, subcontractor or sub-recipient in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from it shall cooperate with any and all investigations and post-payment audits.

m. Should UNDP refer to the relevant national authorities for appropriate legal action regarding any alleged wrongdoing relating to the project or programme, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover, and return any recovered funds to UNDP.

n. Each responsible party, subcontractor, and sub-recipient shall ensure that all obligations set forth under this section entitled "Risk Management" are passed on to its subcontractors and sub-recipients and that all the clauses under this section entitled "Risk Management Standard Clauses" are adequately reflected, mutatis mutandis, in all its sub-contracts or sub-agreements entered further to this Project Document.