

# Environmental Assessment and Review Framework

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November 2017

## Bangladesh: Urban Primary Health Care Services Delivery Project – Additional Financing

Prepared by Local Government Division, Ministry of Local Government, Rural Development and Cooperatives, Government of Bangladesh for the Asian Development Bank.



## CURRENCY EQUIVALENTS

(as of 3 November 2017)

Currency unit	–	Taka (Tk)
Tk1.00	=	\$0.01206
\$1.00	=	Tk82.8799

## ABBREVIATIONS

ADB	–	Asian Development Bank
DOE	–	Department of Environment
CRHCC	–	comprehensive reproductive health care center
EARF	–	environmental assessment and review framework
ECR	–	Environmental Conservation Rules
EIA	–	environmental impact assessment
EMP	–	environmental management plan
IEE	–	Initial environmental examination
GRC	–	grievance redress committee
GRM	–	grievance redress mechanism
LGD	–	Local Government Division
LGED	–	Local Government Engineering Department
NGO	–	nongovernment organization
PHC	–	primary health care
PHCC	–	primary health care center
PIU	–	project implementation unit
PMU	–	project management unit
SPS	–	Safeguards Policy Statement
ULB	–	urban local body
UPHCP	–	Urban Primary Health Care Project
UPHCSDP	–	Urban Primary Health Care Services Delivery Project
UPHCSDP-AF	–	Urban Primary Health Care Services Delivery Project – Additional Financing

## WEIGHTS AND MEASURES

kW	–	kilowatt
m	–	meter

## NOTE

- (i) In this report, "\$" refers to US dollars.

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## I. INTRODUCTION

### A. Project Background

1. Bangladesh has a strong public sector primary health care (PHC) network system in the rural areas but a significant lack of similar arrangement in the urban areas. Urban local bodies (ULBs) have been mandated to provide public health and PHC service delivery to the residents within their administrative jurisdiction. Considering limitations and scopes, the Local Government Division (LGD) of the Government of Bangladesh had taken initiative to provide PHC services to the urban people through partnership among ULBs and nongovernment organizations (NGOs) and with the financial support of Asian Development Bank (ADB) and other cofinancers. The LGD has implemented two projects, namely: Urban Primary Health Care Project (UPHCP) (1998–2005) and UPHCP II (2005–2001). Evolving from previous two projects, the LGD is currently implementing the Urban Primary Health Care Services Delivery Project (UPHCSDP) (2012–2018) and where one of the key outputs is the construction of new health care center buildings (see Table 1). For the proposed additional financing for UPHCSDP (2018–2023), the required environmental safeguards will be applied and monitored to ensure the health care centers' construction and operations do not result to significant adverse environmental impacts which is the focus of this framework.

2. Evolving from the previous two projects, LGD is currently implementing UPHCSDP requiring further expansion of urban primary health. This project continues to further develop and institutionalize a system to deliver pro-poor (PHC) services in urban areas through public–private partnership agreements with NGOs and other service providers. The project will have three major components: (i) supply and demand for urban PHC services, (ii) system building PHC services, and (iii) project management. One of the key outputs is the continued construction of new health care center buildings (see Table 1).

3. The UPHCSDP financed the construction of 10 new comprehensive reproductive health care centers (CRHCCs) and 19 PHC centers (PHCCs). Land registration was covered by the government. These facilities were located on empty lots where construction did not require resettlement of people. The UPHCSDP also financed the maintenance works for two CRHCCs and five PHCCs, and upgraded one PHCC to CRHCC, including installation of solar panels generating electricity for the new constructions (12 CRHCCs and 23 PHCCs), in accordance with the government regulations for new constructions (5 kW for CRHCC and 2 kW for PHCC). The project also financed solar water heaters to all project-owned health facilities (including facilities built under the previous UPHCP I and II) covering 32 CRHCCs and 150 PHCCs, plus new constructions (12 CRHCCs and 23 PHCCs). The proposed additional financing will construct eight new CRHCCs and 24 new PHCCs, upgrade existing facilities, and introduce the green and climate resilient health care centers. Under the proposed additional financing, 10 new partnership areas will be covered following the same approach. These are Chittagong City Corporation, and Jamalpur, Faridpur, Noakhali, Jessore, Patuakhali, Pabna, and Cox's Bazar, Mymensingh, and Tangail Municipalities.

4. As discussed in paragraph 11 below, none of the construction under the ongoing project was Category B and required an initial environmental examination (IEE). Nevertheless, the project has implemented an environmental management plan (EMP) as provided in the ongoing project's environmental assessment and review framework (EARF) as a precautionary measure. Environmental monitoring report (EMRs) have been regularly prepared at project management unit (PMU) and project implementation unit (PIU) levels, and disclosed on the project website. In addition, the Local Government Engineering Department (LGED), which coordinates civil works, has a set of EMP indicators integrated into the civil works contracts and are subject to regular monitoring.

## B. Purpose of the Environmental Assessment and Review Framework

5. Since the selection of sites where the health care centers remains unidentified at the time of ADB Board approval, this EARF is prepared providing agreed processes between ADB and LGD, and will be followed in (i) preparing an IEE, if any, including specifying mitigation measures during project implementation; (ii) institutional arrangement, including capacity building to manage environmental impacts and uncertainties in including reporting and disclosure; and (iii) financial resources committed by LGD to carry out these environmental measures. This EARF is a linked document of ADB's Report and Recommendation of the President and the loan covenant makes it binding for ADB and LGD to effectively implement.

6. In case unanticipated environmental impacts occur during project implementation, ADB's South Asia Department will require LGD to conduct further assessment on the significance of the environmental impact, prepare an IEE, or reflect in the environmental monitoring report the assessment and needed mitigation measures, and to mobilize needed resources to implement the measure including its monitoring.

**Table 1: List of CRHCC and PHCC Construction**

UPHCSDP Partnership Areas	Target		Status					
	CRHCC	PHCC	Completed and Operational		Completed not Operational		Under Construction	
			CRHCC	PHCC	CRHCC	PHCC	CRHCC	PHCC
Dhaka South City Corporation								
Dhaka North City Corporation	1		1					
Narayangonj City Corporation	1	3	1	3				
Sylhet City Corporation		1		1				
Barisal City Corporation								
Rajshahi City Corporation	1				1			
Rangpur City Corporation	1	3		1	1	1		1
Khulna City Corporation	1				1			
Gazipur City Corporation	2	2	1			2	1	
Comilla City Corporation		3		3				
Kishoregonj Municipality	1	2		2	1			
Gopalganj Municipality	1	2			1			2
Sirajgonj Municipality		1						1
Kushtia Municipality	1	1		1	1			

CRHCC = comprehensive reproductive health care center, PHCC = primary health care center.

Source: Project Management Unit.

## II. ASSESSMENT OF ENVIRONMENTAL POLICY, LEGAL, AND ADMINISTRATIVE FRAMEWORK

### A. Assessment of Legal Framework

#### 1. Review of National Environmental Policies and Legal Framework of Bangladesh

7. The national policies and legal framework for environmental safeguard requirements relevant to the project in Bangladesh were described in the Bangladesh Country Environmental Assessment, 2011.<sup>1</sup> The implementation of the project-related infrastructural works and other subproject will be governed by ADB Safeguard Policy Statement (SPS) (2009) and the environmental laws, policies, and regulations of the Government of Bangladesh.

#### 2. Safeguard Requirements of the Government of Bangladesh

8. A wide range of policies, laws, and regulations related to environmental issues are in place in Bangladesh. Many of these are cross-sectoral and several of them are directly related to environmental issues. The government laws, regulations, and standards for environmental assessment were summarized in several EARF documents of the project and available in the ADB website. The main provisions for environmental protection and pollution control in Bangladesh are contained in the Environmental Conservation Act, 1995 and Environmental Conservation Rules (ECR), 1997. Under the ECR, projects are classified as Green, Orange A, Orange B, and Red to determine the level of environmental assessment required. According to the nature and possible civil works, the project could be categorized as Orange B. Moreover, the project may have some adverse impact on environment which is localized and could be addressed with required mitigation measures.

9. Green category project is considered relatively pollution-free and hence does not require an IEE and an environmental impact assessment (EIA). An environment clearance certificate from the Department of Environment (DOE) is adequate for a project that fall into the Green category. Orange category projects fall into two categories. Orange A projects are required to submit general information, a feasibility report, a process flow diagram, and schematic diagrams of waste treatment facilities along with their application for obtaining DOE environmental clearance. Orange B projects are required to submit an IEE report, along with their application and the information and papers specified for Orange B projects. Red category projects are those which may cause significant adverse environmental impacts and are, therefore, required to submit an EIA report. It should be noted that they may obtain an initial site clearance based on an IEE report, and subsequently submit an EIA report for obtaining environmental clearance along with other necessary papers, such as feasibility study reports and no objections from local authorities. DOE has recently developed an IEE and EMP checklists to simplify the preparation of conventional and voluminous IEE and EMP reports that contain irrelevant and unnecessary information.

10. As per ECR, 1997, all existing and new industries and projects in Orange B and Red category require an EMP to be prepared (after conducting an IEE or EIA) and submitted along with other necessary papers while applying for environmental clearance.

11. Construction of multi-storied buildings is considered as the Orange B category in ECR, 1997. However, there is no fixed definition of a multi-storied building in the ECR. In practice, building of more than 10 stories within Dhaka City (as per building construction rules of RAJUK) and building of more than six stories outside of Dhaka city will be considered as multi-

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<sup>1</sup> ADB. 2011. *Country Environmental Analysis for Bangladesh*. Manila.

storied and categorized as Orange B category. The health facilities to be constructed both in and outside of Dhaka will not be more than six stories and as such, no environmental clearance will be required. If new construction of more than six-storied building is considered, an IEE and EMP would be required to get the environmental clearance from DOE as per ECR, 1997. In addition, the EARF would need to be submitted to DOE for their review and concurrence.

12. In addition to the Environmental Conservation Act and Rules, there are a number of other policies, plans, and strategies which deal with the water sector, agricultural development, coastal area, protected area, disaster management, and climate change. These are the National Water Policy, 1999; Forest Act 1927 (last modified 30 April 2000); National Forest Policy, 1994; National Conservation Strategy 1992; National Environmental Management Action Plan, 1995; National Policy for Safe Water Supply and Sanitation, 1998; National Policy for Arsenic Mitigation, 2004; National Sanitation Strategy, 2005; Coastal Zone Policy, 2005; National Food Policy, 2006; Coastal Development Strategy, 2006; National Agricultural Policy, 1999; National Fisheries Policy, 1996; National Livestock Development Policy, 2007; Standing Orders on Disaster, 1999 (revised in 2010); National Adaptation Programme of Action, 2005 (revised in 2009); Bangladesh Capacity Development Action Plan for Sustainable Environmental Governance, 2007; Bangladesh Climate Change Strategy and Action Plan, 2009; National Plan for Disaster Management, 2010–2015; Medical Waste (Management and Processing) Rules, 2008; Solid Waste Management Rules, 2010; National 3R Strategy for Waste Management, 2010; Noise Pollution (Control) Rules, 2006; etc. The Bangladesh National Building Code, 2006 and Bangladesh Labor Act, 2006 will also be important regarding the occupational health and safety of workers and laborers to be involved in the project's infrastructure development. Besides these, the cabinet has recently approved the Environment Court Bill, 2010 and Bangladesh Wildlife (Preservation) Bill, 2010. The National Building Code, 2006 and National Labor Act, 2006 have defined certain measures to ensure proper safety and work environment as well as the compensation measures to the laborers. By national law, in order to be compensated, contractors must follow these safety provisions and compensation arrangements. The implementing agency must ensure that the appropriate occupational health and safety provisions have been included in the bidding documents and are being implemented by contractor. As per the Safe Drinking Water Supply and Sanitation Policy, 1998, provision for arsenic free drinking water and adequate sanitation must be ensured for clinic and hospitals. The water quality needs to be monitored to ensure that the supplied water is safe for drinking.

### **3. Safeguard Requirements of ADB**

13. All projects funded by ADB must comply with the SPS (2009) and Operational Manual F1 (2010). The purpose of the SPS is to establish an environmental review process to ensure that projects undertaken as part of programs funded under ADB loans are environmentally sound, are designed to operate in compliance with applicable regulatory requirements, and are not likely to cause significant environmental, health, or safety hazards. The SPS (2009) requires a number of additional considerations, including (i) project risks and respective mitigation measures and project assurances; (ii) project level grievance redress mechanism (GRM) including documentation in the EMP; (iii) definition of the project area of influence; (iv) physical cultural resources damage prevention analysis; (v) climate change mitigation and adaptation; (vi) occupational and community health and safety requirements (including emergency preparedness and response); (vii) economic displacement that is not part of land acquisition; (viii) biodiversity conservation and natural resources management requirements; (ix) provision of sufficient justification if local standards are used; (x) ensuring adequate consultation and participation; and (xi) ensuring that the EMP includes an implementation schedule and (measurable) performance indicators.

14. ADB SPS (2009) include operational policies that seek to avoid, minimize, or mitigate adverse environmental and social impacts, including protecting the rights of those likely to be affected or marginalized by the development process. It sets out the policy objectives, scope and triggers, and principles for three key safeguard areas: (i) environmental, (ii) involuntary resettlement, and (iii) indigenous peoples. All three safeguard policies involve a structured process of impact assessment, planning, and mitigation to address the adverse effects of projects throughout the project cycle. The safeguard policies require that impacts are identified and assessed early in the project cycle; plans to avoid, minimize, mitigate, or compensate for the potential adverse impacts are developed and implemented; and affected people are informed and consulted during project preparation and implementation. A basic principle of the three existing safeguard policies is that implementation of the provisions of the policies is the responsibility of the borrower/client. Borrowers/clients are required to undertake social and environmental assessments, carry out consultations with affected people and communities, prepare and implement safeguard plans, monitor the implementation of these plans, and prepare and submit monitoring reports.

**Table 2: ADB Environmental Screening**

<b>Category</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>F1</b>
Description	The project is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented. These impacts may affect an area larger than the sites or facilities subject to physical works	The project has potential adverse environmental impacts on human populations or environmentally important areas—including wetlands, forests, grasslands, and other natural habitats—are less adverse than those of Category A projects. These impacts are site specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects	The project is likely to have minimal or no adverse environmental impacts	A project is classified as category F1 if it involves the investment of ADB funds to, or through, a financial intermediary
EA requirements	For a Category A project, an EIA is required	An IEE is required	No environmental assessment is required although environmental implications need to be reviewed	All F1s will ensure that their investment is in compliance with applicable national laws and regulations, and will apply the prohibited investment activities list

ADB = Asian Development Bank, EA = executing agency, EIA = environmental impact assessment, IEE = initial environmental examination.

Source: Asian Development Bank.

#### **4. Medical Waste Management Instruction (from Local Government Engineering Department)**

15. According to the Medical Waste Management Rules, any solid, liquid, gaseous, and radioactive waste material that is generated during the diagnosis, treatment, preventive and curative measure, or in research activities pertaining to disease diagnosis when it is released, discharged, or disposed causing detrimental effect on human health and environment is considered medical waste. Generally, 75% to 90% of the generated waste from the health care establishment are general or non-hazardous waste and 10% to 25% are hazardous. If these wastes are ineffectively managed, it may cause occupational health risks to those who generate, handle, package, store, transport, treat, and dispose of them. They also present environmental and public health risks through inappropriate treatment and/or disposal which may contribute to environmental pollution and the spread of infectious diseases such as AIDs, hepatitis, skin diseases, etc. The main objective of the guideline is to facilitate the health care establishments and the city corporations to follow the standards mentioned in the Medical Waste (Management and Processing) Rules, 2008. This instruction will help to deliver a safe, effective, economic, and appropriate environment-friendly and sustainable medical waste management (MWM) for the health care facilities in the cities. To achieve this target, waste handling and management plans and procedures should be established with the specific objective of:

- (i) improving the occupational health conditions for health care staff and caretakers and when the waste is collected and disposed, the staff of the city corporations and the staff of the responsible waste handling organizations;
- (ii) reducing the risk of people (patients, attendants, visitors, general public, scavengers, etc.) and animals (stray dogs, cattle, pet, etc.); and
- (iii) establishing and operating environmentally sound treatment and final disposal of hazardous medical waste.

16. Waste segregation is key to effective waste management. The waste should be segregated based on the category of waste. If waste is properly segregated, small amount are needed to be disposed of. If segregation is not done properly, small quantity of hazardous waste has a chance to mix with large volume of non-hazardous waste making the whole volume into hazardous waste. Segregation of medical waste should always be the responsibility of waste producer and waste should be segregated at the point just after its generation.

**Table 2: Categories of Medical Wastes**

Category type	Waste category	Waste description
Type-I	General waste (non-hazardous, non-infectious, sterilized)	Used paper, plastic or metal can, medicine strips, packaging box, polyethylene bags, mineral water bottle, food waste, tetra pack, etc.
Type-II	Anatomical waste	Human tissue, organs, body parts, placenta, tumor
Type-III	Pathological waste	Blood, body fluids, laboratory culture, serum
Type-IV	Chemical waste	Laboratory reagents, film developer, dialysis materials
Type-V	Pharmaceutical waste	Expired and unused drugs and vaccines
Type VI	Infectious	Blood/pus/body fluid infected bandage, cotton, sponge, catheter, infected syringe, urine/blood bags
Type-VII	Radioactive waste	Radioactive isotope, unused X-ray machine head
Type-VIII	Sharp (infectious/non-infectious)	Needle, scalpel, blades, knives, infusion sets, used ampules, broken slides
Type-IX	Recyclable waste	

Source: Government of Bangladesh. Waste Management Rules, 2010.

**Table 3: Recommended Color Coding and Type of Container for storage and Disposal**

Type of waste	Color code	Containers
General (non-hazardous, non-infectious, sterilized)	Black	Leak-proof plastic bin
Hazardous (infectious, pathological, anatomical)	Yellow	Leak-proof plastic bin
Sharp (infectious/non-infectious)	Red	Leak-proof, puncture resistant thick plastic bin/box
Liquid (hazardous/non-hazardous, infectious/non-infectious, chemical waste)	Blue	Leak-proof plastic bowl/bin
Radioactive	Silver	Leak-proof lid box
Recyclable waste	Green	Leak-proof plastic bin

Source: Directorate General of Health Services. 2011. Bangladesh Medical Waste Management Training Manual.

17. Though the medical waste is categorized in nine groups in the Waste Management Rules, however, in practice it is difficult to segregate into nine different types. In hospitals at Dhaka, waste is generally segregated in five types: (i) general waste (black bins), (ii) liquid waste (blue bins), (iii) infectious waste (yellow bins), (iv) recyclable plastic (green bins), and (v) sharp (red bins). The general wastes are disposed in city corporation dustbins; the liquid waste is washing out through drains. MWM should be integrated into the daily activities of health personnel. Awareness and training is essential for effective management as well as personal safety of the employees. Training includes general awareness about medical waste, ways of separation, and safe management.

18. MWM is in place but will be further enhanced. At the facility level, medical waste is segregated into proper containers with lining. Used syringes are disposed in a sharps container. Collection and disposal of medical waste and sharps are through local service providers in the respective area. Facility level quality assurance checklists include monitoring on MWM and facilities are independently assessed on a semiannual basis. PIUs monitor MWM in monthly environmental monitoring reports. PMU organizes annual trainings on clinical waste management through the Directorate General of Health Services and local training providers such as PRISM. However, the existing arrangement needs to be strengthened through development of an MWM plan for PIUs, standard guideline and material for service providers, and regular trainings and workshops.

## **5. Review of Institutional Capacity of the Executing Agency**

19. The UPHCSDP has two full-time positions dedicated as environmental focal persons—one executive engineer and one assistant engineer who are tasked with coordinating and implementing the civil works activities of the project and oversight and monitoring of environment-related safeguards. The executive engineer deputed from LGED is mainly responsible for planning, designing, and construction of civil works. LGED has very good capacity and understanding of environmental safeguards. Although UPHCSDP environmental focal persons are few in personnel strength, they have been operating adequately with the support of environment specialist consultants who have been engaged intermittently during the past 5 years of the ongoing project.

Table 4: National Legal Instruments Related to the Project

Policies, Laws and Regulations	Responsible Agency/Ministry/Authority	Potential Applicability	Compliance
National Environmental Policy, 1992	MOEF DOE	<ul style="list-style-type: none"> <li>➤ The policy sets out policies to prevent environmental pollution and natural resource degradation.</li> <li>➤ The policy states that EIAs must be conducted before projects are undertaken.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Relevant environmental policies are addressed in the IEE.</li> </ul>
NEMAP, 1995	MOEF DOE	<ul style="list-style-type: none"> <li>➤ The plan proposes actions for sustainable development.</li> <li>➤ The plan puts emphasis on development and application of guidelines to avoid environmental pollution due to transport and communication system. It particularly puts emphasis on different environmental pollution and agricultural land acquisition for development of transport system and preservation of natural drainage pattern.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Relevant section of NEMAP is complied with the design and IEE of the proposed project.</li> </ul>
Environment Conservation Act, 1995	MOEF DOE	<ul style="list-style-type: none"> <li>➤ According to this Act no industrial unit or project shall be established or undertaken without obtaining, in the manner prescribed by rules, an ECC from the director general.</li> </ul>	<ul style="list-style-type: none"> <li>➤ The IEE report is prepared in consideration of the Act.</li> </ul>
Environment Conservation Rules, 1997	MOEF DOE	<ul style="list-style-type: none"> <li>➤ The rule sets out procedure for issuing ECC.</li> <li>➤ According to the rule, proposed project is an Orange B category project and needs to fulfill following requirements               <ul style="list-style-type: none"> <li>❖ Prepare IEE report.</li> <li>❖ Report on the EMP.</li> <li>❖ Obtain No objection certificate of the local authority.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>➤ The IEE report is prepared in consideration of the procedure set for Orange B projects in this rule.</li> </ul>
Environmental Courts Act, 2000	MOEF DOE	<ul style="list-style-type: none"> <li>➤ Sets out policy for effective pursuance and completion of legal proceedings related to environmental crimes.</li> </ul>	<ul style="list-style-type: none"> <li>➤ According to this Act, government can take legal actions if any environmental problem occurs due to project interventions.</li> </ul>
National Land Use Policy, 2001	Ministry of Land	<ul style="list-style-type: none"> <li>➤ The policy provides guidelines for the protection of agricultural land, waterbodies and the optimal use of other land, as well as for restriction or minimization of the acquisition of land for non-productive use.</li> </ul>	<ul style="list-style-type: none"> <li>➤ The project area does not involve any land acquisition.</li> </ul>
Bangladesh Climate Change Strategy and Action Plan, 2009	MOEF	<ul style="list-style-type: none"> <li>➤ This strategy prioritizes adaptation and disaster risk reduction. The climate change action plan is built on six pillars. One of them is research and knowledge management to predict the likely scale and timing of climate change impacts on different sectors.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Climate change assessment is done for the proposed project with the objective to incorporate climate change implications in the design of the proposed project.</li> </ul>

<b>Policies, Laws and Regulations</b>	<b>Responsible Agency/Ministry/Authority</b>	<b>Potential Applicability</b>	<b>Compliance</b>
Bangladesh Labour Act, 2006	Ministry of Labour and Employment	➤ The Act provides the guidance of employer's extent of responsibility and workmen's extent of right to get compensation in case of injury by accident while working. Provides for safety of work force during construction period.	➤ Occupational health and safety has been addressed both in the EMP and Chapter for Impacts and Mitigative measures of this report.

DOE = Department of Environment, ECC = environmental clearance certificate, EMP = environmental management plan, IEE = initial environmental examination, MOEF = Ministry of Environment and Forest, NEMAP = National Environmental Management Action Plan.

Note: In addition to above environmental compliances, the implementing agencies must obtain building clearances from local municipal authorities before start of any construction activity.

Source: Asian Development Bank.

## B. ADB Safeguard Policies

20. The ADB SPS<sup>2</sup> (2009) has three safeguard policies that seek to avoid, minimize or mitigate adverse environmental impacts and social costs to third parties, or vulnerable groups as a result of development projects. This states that ADB requires environmental assessment of all project loans, program loans, sector loans, sector development program loans, loans involving financial intermediaries, and private sector loans. The objectives of ADB safeguards are to (i) avoid adverse impacts of projects on the environment and affected people, where possible; (ii) minimize, mitigate, and/or compensate for adverse project impacts on the environment and affected people when avoidance is not possible; and (iii) help borrowers/clients to strengthen their safeguard systems and develop the capacity to manage environmental and social risks.

21. ADB, as per SPS (2009), classify projects into Category A, B, or C depending on potential adverse environmental impacts. The additional financing for UPHCSDP-proposed health care centers will all be located on lands free from government hindrances and outside of any wildlife habitat or sanctuary. All impacts are site specific, majority are coterminus to project construction-phase and easily mitigated through good engineering practices. The proposed additional financing for UPHCSDP is classified as environmental category B.

### III. ANTICIPATED ENVIRONMENTAL IMPACTS

22. The scope of works under the proposed additional financing involves the construction of seven CRHCCs and ideally each will have a network of three PHCCs. The potential adverse impacts from the project includes limited tree clearing; dust, noise and construction debris generation; and occupational health and safety during construction phase and generation of hazardous hospital wastes. All these impacts are strictly regulated by the government with corresponding environmental regulations and guidelines. Other impacts include:

- (i) Construction phase: consistency with land-use; vegetation clearing; changes in surface landform; soil contamination due to improper disposal of wastes; impairment of visual and aesthetic; temporary disturbance of utilities; increase siltation from silt-laden surface run-off; deterioration of the quality of the receiving water body; and temporary blocking of access
- (ii) Operation phase: competition in water use with the host community and generation of wastes including hazardous hospital wastes; generation of toxic fumes from improper incineration of hospital wastes; and increase in carbon emission from use of electricity

23. Key benefits from the construction of PHCCs are the generation of employment and provision of PHC.

**Table 5: Potential Environmental Impact and Mitigation Measures**

Category	Potential Environmental Impact/Issue	Possible Mitigation Measures
Drainage management	Drainage congestion/water logging Spread of vector borne diseases	<ul style="list-style-type: none"> <li>• Consider the drainage system of the whole area in subproject design.</li> <li>• Maintain cross-drainage at all times during construction.</li> <li>• Prevent all solid and liquid wastes entering waterways by collecting solid waste and wastewater from brick, concrete.</li> <li>• Drainage facilities will be integrated with water supply options and sanitary latrine</li> </ul>

<sup>2</sup> ADB. 2009. *Safeguard Policy Statement*. Manila.

Category	Potential Environmental Impact/Issue	Possible Mitigation Measures
		facilities in planning and design.
Clearing of trees	Losses of trees and vegetation	<ul style="list-style-type: none"> <li>• Consider alternation options to reduce the loss of trees and vegetation.</li> <li>• A green fence will be raised with native tree species around the health center.</li> <li>• Plant same species of trees and vegetation as compensatory measures.</li> </ul>
Stone crushing	Dust and noise pollution	<ul style="list-style-type: none"> <li>• Spray of water during dry season and in windy conditions.</li> <li>• Immediate compaction after construction of base course.</li> <li>• Cover the stockpiles of fine materials in construction yard.</li> <li>• Plan the work schedule of noise creating activities in consultation of local community.</li> <li>• Employ best available work practices on-site to minimize occupational noise levels.</li> </ul>
Soil erosion	Soil erosion during construction	<ul style="list-style-type: none"> <li>• Careful arrangement to stop soil erosion by adopting proper protection measure before starting earthworks.</li> </ul>
Road blockage	Blocking of roads/ access/approach	<ul style="list-style-type: none"> <li>• Construction materials and machinery should not be placed in a manner that blocks any roads, paths or local accesses.</li> <li>• Unloading of construction materials should be carried in a manner and time to avoid blockage of roads/paths/access.</li> <li>• Waste should not be placed on the roads.</li> </ul>
Water pollution	Water pollution from construction activities	<ul style="list-style-type: none"> <li>• Prohibit direct disposal of solid and liquid wastage into nearby water body.</li> <li>• Spoil Management Plan should be implemented by the contractor.</li> </ul>
Occupational health and safety	Occupational health and safety	<ul style="list-style-type: none"> <li>• Implement suitable safety standards for all workers and site visitors.</li> <li>• Provision of first aid facility.</li> <li>• Arrangement of safe drinking water and sanitation facilities for the labors working in the health centers.</li> </ul>
Health, hygiene, and food safety	Unhealthy condition in health centers, food-related diseases	<ul style="list-style-type: none"> <li>• Promote health measures in health facility workers (handwashing facilities, safe disposal of human excreta, supply of clean and treated water, etc.). The standard norms for toilet shall be followed.</li> </ul>
Use of wood as construction/cooking materials	Deforestation	<ul style="list-style-type: none"> <li>• Minimize use of wood for construction.</li> <li>• Use local materials as much as possible.</li> <li>• Innovations shall be integrated in design for making schools more child and environmentally friendly.</li> <li>• Contractor shall supply kerosene or LPG at camps and restrict cooking and heating in firewood</li> </ul>
Solid/hazardous waste management	Spreading of waste, pungent smell, deterioration of aesthetics Use batteries, laboratory chemicals disposed haphazardly.	<ul style="list-style-type: none"> <li>• Proper solid waste management system shall be introduced in schools with segregation of waste, and its proper disposal.</li> <li>• Awareness raising on solid waste management with waste minimization, recovery and recycling.</li> <li>• Ban use of plastic products in health center.</li> <li>• Safe disposal of hazardous waste.</li> </ul>

Category	Potential Environmental Impact/Issue	Possible Mitigation Measures
Medical waste management	Improper disposal of medical waste	<ul style="list-style-type: none"> <li>• Set up of proper medical waste management system with separation and segregation of medical waste from the source.</li> <li>• Safe storage, transportation and proper disposal of medical waste.</li> <li>• Awareness raising on medical waste management with waste minimization, recovery and recycling.</li> <li>• Organize training program for relevant hospital staff, doctors, nurse, and cleaners on medical waste management.</li> </ul>
Proper ventilation	Day lighting and ventilation system	<ul style="list-style-type: none"> <li>• Identify unions and upazilas based on the Department of Public Health Engineering survey where shallow or deep tube wells are feasible.</li> <li>• Analyze local surrounding arsenic test results and recommend for tube wells or not.</li> <li>• Adopt rain water harvesting, pond sand filter, piped water supply.</li> <li>• After installation of tube wells, presence of arsenic in the drinking water will be tested and be used only if it satisfies the Bangladesh standard.</li> </ul>
Water and sanitation	Selection of appropriate location for water source and sanitary latrine	<ul style="list-style-type: none"> <li>• Discuss with medical/hospital committee and doctors/nurse and select a location which is convenient for clinic and not impacting on trees or any other common property resources.</li> <li>• A minimum distance of 15 m should be maintained between a tube well and a latrine to prevent contamination of water resources. In case of shallow shrouded hand tube wells, this distance should be 20 m as horizontal filters are used in this type of tube wells.</li> </ul>
Separate toilets for male and females	Female patient may face serious problem due to lack of separate toilet facility.	<ul style="list-style-type: none"> <li>• Provide separate toilets at adequate distance between male and females.</li> <li>• Water supply is available in the toilets.</li> <li>• One latrine should be designed for about 30 persons</li> </ul>
Extreme climate events and disasters	Extreme climate (e.g., cyclone, storm surge) and natural disasters (e.g., earthquake), etc. and fire	<ul style="list-style-type: none"> <li>• Adoption of appropriate adaptation and disaster risk reduction strategy, emergency preparedness and recovery, training/orientation program for health service workers on climate change, disaster, and earthquake, etc.</li> <li>• Construction of clinic/hospital cum disaster/cyclone shelter to cover the urgent needs of community and patient clinic building located in the cyclone and earthquake prone areas should be designed and constructed in way to be disaster and earthquake resilient or climate-proof.</li> <li>• Create awareness about natural calamities and extreme climate to doctors, nurse, and other clinic staffs.</li> <li>• Fire safety management and mock drill; ensure emergency equipment and facilities like fire extinguisher/water hose, first aid boxes, whistles, torch lights, etc. are available.</li> </ul>

Source: Asian Development Bank.

#### **IV. ENVIRONMENTAL ASSESSMENT FOR SUCCEEDING COMPREHENSIVE REPRODUCTIVE HEALTH AND PRIMARY HEALTH CARE CENTER CONSTRUCTION**

##### **A. Screening and Classification**

24. Each CRHCC and PHCC will be initially screened to understand the nature and significance of anticipated environmental impacts by using the ADB rapid environmental assessment checklist. Following the initial screening, the PMU will propose and ADB will confirm the environmental categorization of each health care center as B or C in accordance with ADB SPS (2009). The health care center's environmental categorization under ECR, 1997 by DOE will also be determined and intimated to ADB. Only CRHCCs and PHCCs classified as ADB Category B and DOE Orange category will be considered eligible.

##### **B. Environmental Selection Criteria**

25. The following criteria shall be applied for selection of CRHCC and PHCC sites:

- (i) The municipality is eligible based on the project administration manual (Annex 13 "Criteria for Selection of Municipalities").
- (ii) The proposed site is nominated by the municipal government attesting their ownership and the absence of encumbrances to include but not limited to informal settlers, environmental protected areas, physical cultural resources, and heritage sites.
- (iii) Consistent with the municipal land use and zoning plans.
- (iv) Minimize the climate change risk and vulnerability of PHC by referring to the rapid urban climate change assessment.

##### **C. Environmental Assessments and Environmental Management Plans**

26. Under the ongoing UPHCSDP, a project-level IEE had been prepared for selected<sup>3</sup> ongoing and completed health care centers. The findings correspond to the general environmental management and monitoring plans that have been implemented thus far at PMU and PIU levels. The project-level IEE study was conducted in accordance with the requirements of ADB SPS (2009), clearly identifies and describes the general area of impact, provides an assessment of potential impacts and mitigation measures, and involved public consultations with affected people and other relevant stakeholders. It includes a comprehensive and practical EMP and environmental monitoring plan and clear institutional arrangements for implementing them. Specifically, the study focused on the following:

- (i) potential impacts on the immediate urban environment and consistency with the existing land use;
- (ii) free from local flooding, erosion, storm-surge, dump sites, and with least two independent access road connections;
- (iii) potential waste issues including excavated spoil, hazardous materials and wastes and appropriate measures for their disposal, treatment and other forms of management; and
- (iv) climate change impacts to the project and recommendations for adaptation as well as mitigation;
- (v) occupational health and safety issues and measures for the construction workers as well as the local communities in and around the project site;
- (vi) potential impacts on physical and cultural resources and measures to avoid, minimize, or mitigate impacts; and

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<sup>3</sup> Site-assessment of CRHCCs and PHCCs in Comilla, Narangyagonj, and Gopalgoinj.

- (vii) GRM to address concerns and grievances of the affected people during the project cycle.

27. Due to the limited scale of physical infrastructure with predictable and easily manageable environmental impacts having similar designs located across several urban areas and the wide temporal distribution of the construction milestones, the succeeding construction of health centers in the nine new partnership areas,<sup>4</sup> will be guided by the project-level IEE in terms of screening and environmental examination. The project will continue to prepare health center-specific environmental management and monitoring plans to form part of the civil works bidding documents and disclosed annually as part of the environmental monitoring report. Unless warranted, like the occurrence of significant unanticipated environmental impacts, the project will not issue a revised IEE report.

28. As part of the detailed engineering design, the environmental consultant of the PMU, together with the LGED, will prepare a detailed EMP to consider the availability of additional site-specific information as deemed necessary. New information like the need for fill materials, disposal site for spoils, access roads, temporary storage areas, construction water sources, electricity sources, and mitigation measures against dust, noise, disturbance of access and utilities, and community health and safety will be considered in the EMP to clearly guide the contractor.

## **V. CONSULTATION, INFORMATION DISCLOSURE, AND GRIEVANCE REDRESS MECHANISM**

### **A. Consultation**

29. Meaningful public consultations must be held early on and continuously throughout the project development stage to allow the incorporation of relevant views of the stakeholders in the final subproject design, mitigation measures, implementation issues, and enhance the distribution of benefits. Stakeholders should include project beneficiaries, local affected people, government bodies, and NGOs if necessary. Consultations must be carried out in an environment free of coercion or intimidation and may be done through meetings, focus group discussions, interviews, hearings which will start with the description of the subproject design and initial identification of potential impacts. The consultations must encourage women participation and engage as many stakeholders as possible. All consultations conducted must be documented clearly in the IEE report. The findings of the IEE must be shared in a form or nature that is accessible and understandable by the affected persons and relevant stakeholders or necessary recommendations and guidelines made for sharing such kind of information at a later stage.

### **B. Information Disclosure**

30. Disclosing the environmental documents, including the IEE, annual monitoring, and environmental due diligence reports to the public, will be the responsibility of the UPHCSDP. It will ensure that these documents are systematically kept as part of the project records, and made available upon request. All environmental documents are subject to ADB Communication Policy (2011) and ADB SPS (2009). The IEE report will be disclosed to the public through the ADB website before the approval of ADB financing. Annual monitoring reports need to be disclosed to the public through the ADB and UPHCSDP websites.

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<sup>4</sup> Jamalpur, Faridpur, Noakhali, Jessore, Patuakhali, Pabna, Cox's Bazar, Mymensingh, and Tangail.

### **C. Grievance Redress Mechanism**

31. Grievances related to the implementation of the project, particularly regarding the EMP are acknowledged, evaluated, and responded to the complainant with corrective actions proposed using understandable and transparent processes that are gender responsive, culturally appropriate, and readily accessible to all segments of the affected people. The responsible agency for addressing the grievances along with proper timelines are clearly indicated. Record of grievances received, corrective actions taken, and their outcomes are properly maintained and form part of the environmental monitoring report to ADB.

32. Depending on the nature and significance of the grievances or complaints, the GRM comprise procedures to address grievances at the project site level, PIU level, PMU level, and the grievance redress committee (GRC). Most serious complaints which cannot be addressed at the PMU level are forwarded to the GRC. The GRC comprise members from the PMU/LGD, LGED, PIU, contractor, local community, and local forestry authority.

33. During preparation of IEE or at latest during pre-construction stage, the local communities in the project area are informed by the PMU and PIU on the grievance redress procedure and the contact persons for lodging complaints. Provisions are also made for lodging complaints at the project's website.

### **VI. INSTITUTIONAL ARRANGEMENT FOR IMPLEMENTING THE ENVIRONMENTAL ASSESSMENT AND REVIEW FRAMEWORK AND RESPONSIBILITIES**

34. The LGD of the Ministry of Local Government, Rural Development and Cooperatives as the executing agency and the city corporations and municipalities as implementing agencies are responsible for ensuring that all components of this EARF are complied with. Under the PMU, there will be several PIUs to manage individual partnership areas. The PMU is headed by a full-time project director that will provide technical, administrative, and logistical support to the LGD. The LGED, under the LGD, will be responsible for implementing the construction program of the project. Accountability of LGED will be ensured through a memorandum of understanding between the project and LGED with result-based payment and delivery.

35. There are 14 existing PIUs and an additional 10 will be established in ULB health departments to oversee project implementation in respective city corporations or municipalities.<sup>5</sup> However, the implementation of the EMP will be under the control and supervision of the PMU environmental specialist cognizant of the lack of capable staff in the PIUs. The PMU environmental specialist is responsible for the following:

- (i) Assist PMU/PIUs in implementation of the project's EARF particularly during the construction and operation of health facilities.
- (ii) Assist the PMU in checking the provisions of civil works contracts to ensure that environmental safeguards integrated in the bidding documents.
- (iii) Together with the LGED, monitor the compliance of the civil works contractors with the EMP provisions.
- (iv) Conduct quarterly monitoring of all CRHCCs and PHCCs to ensure compliance with the EMP-operation phase provisions.
- (v) Prepare and submit to the ADB annual environmental monitoring reports for review and disclosure.

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<sup>5</sup> A single PIU will be established for Gazipur and Tongi municipalities. Gazipur and Tongi municipalities are later expected to be merged into one city corporation.

- (vi) In case unanticipated environmental impacts become apparent, advise the LGD and ADB the needed assessment to be undertaken and resources to implement mitigation measures.
- (vii) Develop guidelines for environmentally sound treatment and final disposal of hazardous medical waste assist PMU in enforcing implementation of the guidelines.
- (viii) Assist the team of consultants implement the climate proofing program.
- (ix) Conduct annual environment safeguard workshops with all PIUs and partner agreement NGOs as reminder on the need to comply and identify areas of improvements

The LGED is responsible for the following:

- (i) Ensure all health care center's design comply with the Bangladesh Building Code including provisions for flood, tidal/storm surge, and tsunami; cyclone-prone areas; and high wind regions.
- (ii) Ensure all civil works bid documents contains site-specific environmental management and monitoring plans prepared by the environmental specialist in PMU.
- (iii) Conduct joint monthly monitoring with the environmental specialist of all the health care construction on compliance with the EMP.
- (iv) In case of non-compliance by the contractor with the EMP, immediately inform and seek guidance of the environmental specialist in PMU for corrective measures.
- (v) Seek concurrence from the environment specialist in PMU attesting compliance with the EMP provisions before the issuance of the Statement of Completion.

## **A. Capacity Development**

36. The UPHCSDP has two full-time positions dedicated as environmental focal persons—one executive engineer and one assistant engineer who are tasked with coordinating and implementing the civil works activities of the project and oversight and monitoring of environment related safeguards. The executive engineer deputed from LGED is mainly responsible for planning, designing, and construction of civil works. LGED has very good capacity and understanding of environmental safeguards. Although UPHCSDP environmental focal persons are few in personnel strength, they have been operating adequately with the support of environment specialist consultants who have been engaged intermittently during the past five years of the ongoing project.

37. With the additional financing and expansion to additional project areas, environment specialist consultant(s) will be engaged intermittently throughout the course of the project to provide oversight and monitoring on environmental safeguards, and engage in developing capacity and expertise of PMU and PIUs. Moreover, the ULB strengthening consultant firm and the individual consultants engaged under the climate change resilience fund will also help contribute to environment related aspects such as medical waste management.

38. The environmental specialist consultant(s) should ideally have an academic degree in environmental science (environmental chemist, biologist, ecologist) or environmental engineering (having courses in air quality, environmental health and safety, waste management, ergonomics, industrial hygiene, water quality, engineering technology program designing, etc.). All environment-related consultants could play a proactive role in environmental monitoring during project implementation as well as in undertaking post-project evaluation of projects to assess environmental compliance and develop future strategies

based on lessons learned. The consultants will also be entrusted with the task of organizing and administering training modular courses for the LGD staff and other stakeholders on environmental assessment and monitoring, social impact assessment, and public consultation/participation including participatory rural appraisal techniques. Training on participatory techniques is extremely vital on account of the LGD's current strategy and principle of involving all stakeholders at all stages of the project cycle. The focal persons shall cover environmental safeguard issues including mainstreaming of environmental best practices, coordinate environmental management activities in health care delivery, and facilitate capacity building activities of central and local level stakeholders. The focal persons and consultants will also be responsible for planning, assessment, and implementation of EMP, and monitoring and reporting of environmental safeguards activities in the project. Central, regional, district, and field level orientation and capacity development programs in ensuring environmental safeguards are designed in the project.

39. As an example, one such capacity development program will be on MWM. Its objectives will be to:

- (i) improve people's health and reduce environmental impacts from handling of medical waste by its proper disposal;
- (ii) identify the level of medical waste management that will be relevant to help implement and enforce proper health and environmentally sound, technically feasible, economically viable and socially acceptable systems for managing hospital waste by urban local bodies; and
- (iii) conduct a detailed study of one large municipal town and prepare a report based on that study. The specialist will design a feasibility study and environmental assessment of various treatment technologies and locations for a treatment facility, and prepare a report that includes recommendations on institutional development for ULBs and the preferred treatment technology and location of a treatment facility.

## **VI. MONITORING AND REPORTING**

40. LGD is responsible for undertaking environmental due diligence and monitoring the implementation of environmental mitigation measures for all CRHCCs and PHCCs under the respective projects. The due diligence report, as well as monitoring implementation of the EMP, needs to be documented systematically. ADB must be given access to undertake environmental due diligence of the project, if needed.

41. The monitoring reports will document the progress made in EMP implementation, with particular attention to compliance with each component of the EMP. The LGD, through the PMU, will submit annual monitoring reports to ADB.

42. Monitoring during construction is primarily the responsibility of the environmental specialist in PMU with support from the LGED to establish compliance with construction contracts, effectiveness of mitigation measures, complaints, and overall environmental quality from the results of the third-party ambient environmental monitoring hired by the contractor. Ambient monitoring will follow the approach to selecting quantitative standards, as recommended in the ADB SPS (2009).

43. Monitoring during operation will be conducted by the environment specialist consultant in PMU to cover EMP implementation and its effectiveness.