Program Safeguard Systems Assessment

November 2020

India: Strengthening Comprehensive Primary Health Care in Urban Areas Program under Pradhan Mantri Atmanirbhar Swasth Bharat Yojana

List of Abbreviations

ADB	Asian Development Bank
BMW	bio-medical waste
BMWM	bio-medical waste management
CBWTF	common bio-medical waste treatment and disposal facility
COVID-19	coronavirus disease
CPCB	Central Pollution Control Board
CRM	common review mission
CTE	consent to establish
CTO	consent to operate
EIA	environmental impact assessment
EMP	environmental management plan
HWCs	health and wellness centers
IMEP	infection management and environmental plan
IPC	infection prevention and control
MOHFW	Ministry of Health and Family Welfare
NHM	National Health Mission
NHSRC	National Health Systems Resource Centre
NUHM	National Urban Health Mission
REA	Rapid Environmental Assessment
SPCB	State Pollution Control Board
SPS	Safeguard Policy Statement
TA	technical assistance
ULB	urban local bodies
UPHCs	urban primary health centers

PROGRAM SAFEGUARD SYSTEMS ASSESSMENT

1. This program safeguard systems assessment provides (i) an overview of the potential environmental and social impacts of the Strengthening Comprehensive Primary Health Care in Urban Areas Program under Pradhan Mantri Atmanirbhar Swasth Bharat Yojana, (ii) an assessment of the relevant systems to prevent or mitigate those impacts, and (ii) the measures to manage the risks. The results-based lending (RBL) program aims to support the Government of India in its efforts to expand access to a wider range of urban primary health care services, operationalizing comprehensive primary health care through health and wellness centers (HWCs) in the urban areas of 13 states.[1] The RBL program scope is limited to urban centers and includes (i) upgrading of about 3,100 existing urban primary health centers (UPHCs) to UPHC–HWCs to provide an expanded range of services; (ii) transforming one out of every five UPHC–HWCs into polyclinics to offer specialist services; and (iii) establishing about 3,200 new urban HWCs to cater to 10,000–15,000 people in the catchment area under the umbrella of the Pradhan Mantri Atmanirbhar Swasth Bharat Yojana (PM-ASBY). By the end of fiscal year (FY) 2024 (ending March 2024), the number of UPHC–HWCs and urban HWCs will increase to at least 6,000 from the baseline of 2,512 in FY2020.

2. The RBL program will follow the well-established implementation arrangements of the National Health Mission (NHM), of which the National Urban Health Mission (NUHM) is part. The NHM has been in implementation since 2005, while the NUHM has been in implementation since 2013. Across India, the NUHM covers 1,067 cities, providing urban health services through 4,655 UPHCs and 166 urban community health centers.[2] As a centrally sponsored scheme, the Ministry of Health and Family Welfare (MOHFW) at the national level, and the state health society in each state, are responsible for implementation. The RBL program will be implemented in cities and towns with populations of more than 50,000 in 13 states. The Indian Public Health Standards are being revised, and will be shared with the respective states when finalized. It would be desirable for UPHCs and HWCs to follow the revised standards to the extent possible, considering each state's situations.

3. The assessment considers national and state environmental and social safeguard regulatory frameworks, their implementation, and the institutional capacity to ensure an adequate safeguard systems for the program. It also assesses if they satisfy the principles of ADB's Safeguard Policy Statement (SPS, 2009). It proposes mitigation measures where it identifies relevant gaps or challenges.

A. Program Environmental and Social Impacts and Risks

4. **Environmental impacts**. The RBL program intends to enhance service availability through HWCs either by (i) upgrading and/or refurbishing existing UPHCs to become UPHC–HWCs and polyclinics; or (ii) renting premises and refurbishing them to operate as new UHWCs.[3] As the RBL program will not include any new construction within the program scope, the environmental impacts of the RBL program will include the following:

(i) **Dust, noise, occupational health and safety risks, and any other issues during refurbishment.** Considering the scale of refurbishment activities, impacts

[1] Andhra Pradesh, Assam, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Telangana, and West Bengal.

[2] Government of India, National Urban Health Mission. 2019. *NHM MIS/QPR Analysis for 3rd Quarter (October–December 2019)*. New Delhi.

[3] Upgrading and refurbishment will involve the installation of furniture and fixtures, and minor civil works (repartitioning of walls, plastering, and painting) within the buildings, without any vertical or horizontal building expansion.

are expected to be minimal, short-term, and can be readily mitigated by adhering to the guidelines related to construction in the infection management and environment plan (IMEP) policy framework.

(ii) **Impact from improper biomedical waste management.** Inappropriate management of biomedical waste (BMW) increases the risk of exposure to health care workers and the community, thereby increasing occupational health risks and community safety risks. Health care waste that is likely to be generated from HWCs includes sharps, nonsharps (or solid biohazardous waste), blood, chemicals, and body parts, which are generated from servicing 60–120 outpatients per typical UPHC center per day. Facility staff (e.g., doctors, nurses, pharmacists, technicians, and sanitary staff) are at high risk of exposure to health care waste. Other risk groups include patients and their attendants; staff involved in waste handling and transportation services; and workers involved in waste disposal, including scavengers.

(iii) **Land and groundwater contamination caused by untreated liquid waste from health and wellness centers.** Some HWCs will have laboratories for diagnostic tests, which may generate liquid waste that should be properly disinfected before being discharged to the municipal sewerage system. Although liquid wastes may cause negative impact, the magnitude of the impact is low since (a) national regulations include provisions for health care facilities to use disinfection techniques before releasing liquid effluent into municipal sewers; (b) the effluent is of similar quality to urban wastewater, and the contaminated water primarily consists of microbiological cultures discharged to sanitary sewage treatment systems (municipal sewers connected to sewage treatment plants); and (c) the amount of liquid waste likely to be generated by the facilities is very small (about 50 liters/day per facility).

(iv) **Standard building risks.** These include impacts caused by fire, electric shock, or failure of the buildings' safety features.

(v) **Occupational and community health and safety risks.** These may result from improper biomedical waste management (BMWM) and lack of adequate infection control during the operation of the health care facilities.

5. **Social impacts**. Each UPHC–HWC caters to about 50,000 urban population, while newly established UHWCs would cater to 10,000–15,000 population each. The program will cause no physical or economic displacement from involuntary land acquisition or involuntary restriction on land or structure use or access. No involuntary resettlement impacts are anticipated because the program will only involve the refurbishment of existing facilities or use of rented spaces. Field visits during due diligence showed that most HWCs are in existing government buildings or in rented premises. As the program's locations are in urban areas, they do not have any indigenous peoples following the ADB SPS definition. Therefore, no impact is envisaged on indigenous peoples' dignity, human rights, livelihood systems, culture, or territories. The program will have a positive impact on a large proportion of the urban population, including the marginalized, vulnerable, poor, and slum population by improving access to a broader range of quality health care services. The improved health status of such population groups will lead to higher productivity, which will result in increased income and improved living standards.

B. Safeguard Policy Principles Triggered

6. The program will trigger all the safeguard principles of ADB's environmental safeguard policy, except principles 3, 8, and 11. Only principle 1 of ADB's involuntary resettlement policy, (screen activities requiring upgrading or refurbishing to identify the potential involuntary

resettlement impacts and risks) will apply, since the project does not require land acquisition or the physical expansion of existing structures and will have no involuntary resettlement impacts. Since the program design avoids involuntary resettlement, any activity that is screened to have potential involuntary resettlement impacts will be excluded from the program. No policy principle of ADB's indigenous peoples policy is triggered, as the program will be implemented in urban areas. The scheduled tribes living in some urban areas are well integrated with the mainstream population and have adopted modern living, so they do not exhibit the characteristics of indigenous peoples as defined in the SPS. Therefore, no indigenous peoples live in the program areas, and the program will equally benefit all the population living in urban areas.

Table 1: Safeguard Policy Principles Triggered

Principles	Description
Environment	
Principle 1: Screen and categorize potential environmental impacts	The Environmental Impact Assessment (EIA) Notification, 2006 and its amendments act as the preliminary screening tool for projects that require further environmental assessment. Because of its minimal impact, the program is not covered under the EIA Notification, 2006 and its amendments. As no new building construction is included in the program scope, the program's environmental impacts are limited to the operational phase. All activities, i.e., individual primary health care facilities, are likely to be category B for their possible impact during operations because of the generation of biomedical waste (BMW) and possible liquid waste from some facilities with laboratories.
Principle 2: Conduct an environmental assessment	Considering the limited impacts of the program activities, the program does not fall under the purview of EIA studies required under the EIA Notification, 2006 and its amendments. However, the requirements under national legislation applicable to the program facilities—the Bio-Medical Waste Management (BMWM) Rules, 2016; The Air (Prevention and Control of Pollution) Act, 1981; and The Water (Prevention and Control of Pollution) Act, 1974—correspond with the principles of environmental assessment requirements detailed in ADB's Safeguard Policy Statement (SPS, 2009), Appendix 1. To comply with national regulatory requirements, the health care facilities are required to secure consent to establish (CTE) and/or consent to operate (CTO) under the purview of the The Air (Prevention and Control of Pollution) Act and The Water (Prevention and Control of Pollution) Act; and authorization under the purview of the BMWM Rules, 2016 from the respective state pollution control board (SPCB). The application for CTE and/or CTO should provide information on the inventory and amount of BMW likely to be generated by the new facility, the nature of emissions, water requirements, wastewater amounts, and contracts with the SPCB-authorized common biomedical waste treatment and disposal facility (CBWTF). National legislation lays out detailed processes to determine potential sources of environmental impacts before granting CTOs. The national regulatory requirements also mandate all health and wellness centers (HWCs) to submit an estimated inventory of the BMW they will generate, and provide information on association (membership) with the SPCB-authorized CBWTF, the nature and amount of BMW likely to be generated, the nature of emissions, water requirements, wastewater amounts, and other relevant information. Once the requirements are assessed to be satisfactory, the CTE and/or CTO are issued with specific conditions to manage possible environmental impacts.

Principles	Description
Principle 3: Examine alternative possibilities, locations, and technologies	The principle is not triggered as the program is limited to the refurbishment of existing urban primary health centers (UPHCs) and setting up of new HWCs in rented accommodation. However, alternatives in terms of use of materials will be explored. Materials on ADB's prohibited investment activities list will not be used. Building-related specifications in the infection management and environment plan (IMEP) policy framework will also be followed (e.g., avoidance of asbestos).
Principle 4: Prepare an environmental management plan (EMP)	The requirements under national legislation applicable to the program facilities—the BMWM Rules, 2016; The Air (Prevention and Control of Pollution) Act; and The Water (Prevention and Control of Pollution) Act—correspond with the principles of EMP requirements detailed in the ADB SPS, Appendix 1. The requirements under national regulations cover the management of environmental impacts during the operation phase, including BMW and liquid waste management: (i) According to national regulations, the facilities need to maintain a detailed inventory of the BMW generated and contract an authorized CBWTF for disposal. (ii) National regulations require health care facilities to disinfect liquid waste before it is discharged into the municipal sewer; discharged effluent is similar to urban wastewater in terms of quality; and the contaminated water primarily consists of microbiological cultures and is discharged to sanitary sewage treatment systems (municipal sewers connected to the sewage treatment plant). The construction impacts caused by the refurbishment will be avoided by adopting the management plan, as detailed in section 4.12 "construction of management guidelines" of the IMEP policy framework. The IMEP policy framework provides details on mitigating possible environmental impacts through good construction management practices. These include proper scheduling of works, providing noise barriers where there are sensitive receptors, proper storage and disposal of waste, and use of personal protective equipment. Because of the recent outbreak of coronavirus disease (COVID-19), the Ministry of Health and Family Welfare (MOHFW) has issued multiple circulars, guidelines, and policies on infection prevention to ensure occupational and community health and safety for the health facilities, including primary health care facilities. Hence, it can be concluded that national regulations are adequate in meeting the requirements of the EMP to secure the impact of the program, and that national legislative requirements are in congruence with ADB's SPS principles.
Principle 5: Consult stakeholders and establish grievance redress mechanism	The National Health Mission (NHM) IMEP policy framework[a] was developed in consultation with concerned stakeholders. The results-based lending (RBL) program is community-driven and involves participatory approaches for community mobilization and awareness generation. The health facilities are required to engage community groups and facility user groups in management and service provision to ensure that stakeholder concerns are identified and addressed. The National Urban Health Mission has institutional frameworks established for community-based monitoring and ensuring social accountability, including seeking feedback from patients and/or users of health facilities, which is a key element of a quality assurance mechanism. A grievance redress mechanism has been established under the NHM, and Guidelines for Establishing Grievance Redressal and Health Helpline have been developed. Complaints can be lodged through three channels: a call center (toll-free Dial 1800-180-1900 Helpline), help desk, and web portal. Complainants can check the status of their complaints by logging on to the NHM's web page. As soon as the grievances are registered, the complainant and concerned officials will receive an SMS to confirm successful registration of the complaint, and a tracking number is issued. Authorities or nodal officers at the appropriate level will check the web portal daily and will be responsible for resolving grievances within

Principles	Description
	7 days. Resolved grievances will be posted on the web portal and sent via SMS to inform the complainants of the status. Hence, it can be concluded that national regulations are in congruence with ADB's SPS requirements in Principle 5.
Principle 6: Disclose environmental assessment and EMP to stakeholders	The CTE and CTO, with specific conditions on environmental management, are disclosed on the websites of the SPCBs and the health care facilities. The annual audit reports on the management of the environmental impacts is also submitted by the health care facilities and disclosed on the SPCBs' websites. Hence, it can be concluded that national regulations are in congruence with ADB's SPS principle requirement.
Principle 7: Monitor and report EMP implementation	The facilities should update and submit annual reports on BMW generation and disposal to SPCBs. Following regulatory requirements, liquid waste generated should be disinfected before disposal, and SPCBs will monitor that the chemical disinfection methods demonstrate a 4 Log10 reduction or greater for Bacillus subtilis (ATCC 19659) in chemical treatment systems. Hence, it can be concluded that national regulations are in congruence with ADB's SPS principle requirements on monitoring and reporting.
Principle 8: Avoid critical habitats	This principle will be not be triggered as the program will be within existing facilities in urban areas.
Principle 9: Prevent pollution	The national regulations, as elaborated in Principles 2 and 4 and the IMEP policy framework, are comprehensive and cover pollution prevention and control measures for the management of BMW and liquid waste. For the management of BMW, the health care facilities need to segregate the waste in color-coded bins and contract authorized CBWTFs for treatment and disposal. For the management of liquid effluents, the health care facilities need to deploy chemical disinfection methods that demonstrate a 4 Log_{10} reduction or greater for *Bacillus subtilis* (ATCC 19659) in chemical treatment systems. In addition, the MOHFW launched the Kayakalp Award Scheme to promote cleanliness, hygiene, waste management, and infection control practices in public health care facilities; and incentivize facilities with exemplary performance. Hence, it can be concluded that national regulations are in congruence with ADB's SPS requirements in Principle 9.
Principle 10: Ensure occupational and community health and safety	The occupational and community health and safety impacts may result from improper BMWM and lack of adequate infection control. National laws and regulations detail the safeguards to be implemented at the facility level for mitigating the impacts. Detailed safeguard measures are documented in the IMEP guidelines for health care workers for waste management and infection control in primary health centers. In addition, the MOHFW launched the Kayakalp Award Scheme to promote cleanliness, hygiene, waste management, and infection control practices in public health care facilities; and incentivize facilities with exemplary performance. Because of the recent outbreak of COVID-19, the MOHFW is issuing circulars, guidelines, and policies on infection prevention to ensure occupational and community health and safety. Hence, it can be concluded that national regulations are in congruence with ADB's SPS requirements in Principle 10.
Principle 11: Conserve physical cultural resources	The principle is not triggered, as the program is limited to the refurbishment of existing UPHCs and setting up of new HWCs in rented accommodation.
Involuntary resettlement	
Principle 1: Screen the project early to identity past, present,	The program will screen activities requiring upgrading or refurbishing to identify the potential involuntary resettlement impacts. Any activity with involuntary

Principles	Description
and future resettlement impacts and risks	resettlement impacts will be excluded. The social safeguard screening form will be designed to procure information on probable impacts, including those on the scheduled tribe population.
Indigenous peoples	
Principle 1: Conduct early screening to determine whether indigenous peoples are present in, or have collective attachment, to the project area and whether project impacts on indigenous peoples are likely	All the activities are concentrated in urban areas where scheduled tribe populations might be present, but not indigenous peoples based on the SPS definition. As the program will not have impacts on indigenous peoples, this principle is not triggered. The social safeguard screening form will be designed to procure information on probable impacts, including impact on the scheduled tribe population.

[a] Government of India, Ministry of Health and Family Welfare, National Health Mission. 2007. *Infection Management and Environment Plan: Policy Framework* and *Infection Management and Environment Plan: Guidelines for Healthcare Workers for Waste Management and Infection Control in Primary Health Centres*. New Delhi.
Sources: Asian Development Bank's Safeguard Policy Statement (2009); diagnostic analyses on environmental and social impacts and risks.

C. Diagnostic Assessment

1. Assessment Methodology and Resources

7. The diagnostic assessment is based on information and data obtained through the following methods and sources:

(i) Detailed desk review of the following documents:
  (a) guidelines, policy documents, frameworks, circulars, and office orders issued under the NHM (and specifically for the NUHM, wherever available);
  (b) NHM documents on the IMEP;
  (c) recent common review mission (CRM) reports;[4]
  (d) national and state laws and regulations such as the BMWM Rules, 2016;[5] The Air (Prevention and Control of Pollution) Act, 1981;[6] and The Water (Prevention and Control of Pollution) Act, 1974;[7] and
  (e) relevant ADB and World Bank documents.[8]

(ii) Stakeholder consultations at national (MOHFW), state, district, urban local body (ULB), and facility levels. Field visits were undertaken to the states of Assam, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, and Odisha for baseline assessment of site-specific features and the environmental risks and impacts of

[4] The CRMs are annual monitoring mechanisms under the NHM that cover all aspects of the NHM (including the NUHM) implementation in several states. The 12th CRM covered 19 states. Government of India, MOHFW, NHM. 11th and 12th Common Review Mission.
[5] Government of India, Ministry of Environment, Forest and Climate Change. 2016. *Bio-Medical Waste Management Rules*. New Delhi.
[6] Government of India, Ministry of Environment, Forest and Climate Change, Central Pollution Control Board. 1981. The Air (Prevention and Control of Pollution) Act, 1981. New Delhi.
[7] Government of India, Ministry of Environment, Forest and Climate Change, Central Pollution Control Board. 1974. The Water (Prevention and Control of Pollution) Act, 1974. New Delhi.
[8] ADB. 2015. *Report and Recommendation of the President to the Board of Directors: Proposed Results-Based Loan and Administration of Technical Assistance Grant to India for Supporting National Urban Health Mission*. Manila; ADB. 2011. *Public Communications Policy 2011*. Manila; ADB Safeguard Policy Statement (2009); World Bank. 2012. *Mainstreaming Environmental Management in the Health Care Sector: Implementation Experience in India and a Toolkit for Managers*. Washington, DC; and International Finance Corporation. 2020. *Environmental, Health, and Safety Guidelines*. Washington, DC.

the proposed program.[9] Interactions were undertaken with officials from the state health departments, pollution control boards, district program management units, ULBs, and facility staff. State interactions were aimed at an assessment of the capacity to implement national guidelines and regulatory frameworks, and to address site-specific environmental risks. At the facility (UPHC and UHWC) level, the assessment of practices for BMWM, liquid waste management, infection prevention and control (IPC) procedures, fire safety and emergency response systems, disaster resilience, and regulatory compliance was undertaken.

2. Environment

8. The diagnostic assessment suggested that the program may have some site-specific, reversible, and time-bound adverse environmental impacts during operations. The impacts during upgrading and refurbishment are likely to be temporary and will be confined to existing buildings. No new construction is anticipated, as land availability is limited in urban areas and new UHWCs will be established in rented spaces. The due diligence shows that the project should be classified *category B* because of possible impacts during the operation of the health facilities.

9. The states have been implementing UPHCs under the NUHM since 2013, following the well-established implementation arrangements. Physical facilities, human resources, drugs and diagnostics, consumables, community outreach services, utilities (including cleaning), and other measures to provide primary health services and maintain the facilities to meet the quality standards are financed through the NUHM, of which the central government bears a large share. BMWM has been an integral part of the NUHM since its launch in 2013, and the current practices have been in place for several years. In 2015, the government introduced the Kayakalp Award Scheme, in which most states participate, to promote cleanliness and enhance the quality of health care facilities in India. With the coronavirus disease (COVID-19) pandemic, the MOHFW has issued various guidelines and instructions to improve IPC in all health facilities, including primary health care as well as the health and safety of health workers. These are applicable to all states, and expenditures related to the COVID-19 response are prioritized.

10. BMWM and liquid waste management is governed by the BMWM Rules but enforcement and implementation vary across states. Health care facilities are required to obtain consent to establish (CTE) and/or consent to operate (CTO) under the purview of the Air Act and the Water Act; and authorization under the purview of the BMWM Rules from the respective state pollution control board (SPCB). The consents provided by the SPCB to the health care facilities incorporate the requirements of the BMWM Rules pertaining to BMW and liquid waste.

11. Based on visits to the sample facilities (operational HWCs) of various states, most of the facilities do not have in-patient facilities, except a few daycare beds available for emergencies. They provide services such as (i) primary clinical checkups; (ii) dressings and first aid, with each of the facilities catering to 60–120 outpatient cases per day; (iii) medicine distribution; and (iv) collection of samples and pathological testing. Only a few UPHCs have bedded maternity wards where normal delivery (and occasional cesarean sections) are conducted.

12. Field visits showed that, in most facilities, BMW generated is (i) sharps such as needles and blades; (ii) expired or discarded medicines; (iii) soiled waste: items contaminated with blood or body fluids such as dressings, cotton swabs, and gauge; (iv) glassware: broken or discarded

[9] Odisha is not included in the program scope, but the practices in Odisha may be relevant in other states, so it is included in the assessment.

glass, including medicine vials and ampoules; and (v) contaminated waste (recyclable): syringes and gloves. The facilities also generate very small quantities of solid and plastic waste. Few UPHCs have bedded maternity wards, and BMWs such as human anatomical waste (human tissues, placenta, fetus below the viability period, etc.); discarded linens; and beddings contaminated with blood or body fluid etc. are also generated. Most of the HWCs are in government buildings or in rented premises, as observed during the field visits. Both types of HWCs have similar arrangements for BMW, i.e., each facility has color-coded disposal containers within the facility that are used to collect BMW, to be picked up by the common biomedical waste treatment and disposal facility (CBWTF), which is contracted by the health care facility.

13. Health care staff of the facilities visited have understood and applied the directives of the BMWM Rules on segregation, storage, color coding, and type of container required for storing different types of BMW. Solid and plastic waste is regularly picked up by municipality waste collectors from all the facilities visited. Most of the facilities visited dispose of BMW through SPCB-approved CBWTFs, or BWM is picked up by the nearest community health center for further disposal through SPCB-approved CBWTFs. The facilities maintain daily records of BMW generation. However, two of the facilities visited (providing basic services such as outpatient departments, medicine distribution, and sample collection only) were disposing of unsegregated BMW, solid, and plastic waste through the municipality solid waste collectors. The current BMWM arrangements involving CBWTFs are expected to meet the anticipated increase in BMW from the increased number of HWCs—from the current 2,500 to about 6,300 by FY2024—as the increase will be incremental over 4 years.

14. The liquid BMW generated from the facilities visited includes discarded samples, blood, aspirated and/or excretory body fluids, vomit, and liquid discharge from pathological labs. The facilities visited in Odisha and Gujarat had a local liquid waste disinfection setup where liquid BMW from pathological laboratories is collected in plastic tanks and treated with 1%–2% hypochlorite solution for a minimum of 30 minutes before final discharge to the municipal or public drainage system. This arrangement was not observed in the facilities visited in the other four states.

15. The BMWM Rules mandate SPCBs create inventories of occupiers and data on BMW generation, treatment, and disposal; grant, renew, suspend, or cancel authorizations; monitor compliance with various provisions and conditions of authorization; and take action against health care facilities or BMW treatment facilities for violating the rules. As indicated by the SPCBs of the states visited, CTE and CTO requirements under the purview of the Air Act and the Water Act are applicable for all the facilities with bedded facilities. The CTE and CTO requirements are also applicable for facilities with diesel generator sets. However, “authorization” from SPCBs under the purview of the BMWM Rules[10] (Form 3, Rule 10) is mandatory for all bedded and non-bedded facilities. All facilities need to obtain authorization to operate a facility for generation, collection, reception, treatment, storage, and disposal. All the facilities also need to maintain records on the generation, collection, storage, and transportation of BMW generated by the facility for inspection by SPCBs. On receipt of an online application from health care facilities, the concerned SPCB issues an “authorization” (certificate), CTE, or CTO the concerned SPCB issues an “authorization” (certificate), CTE, or CTO. The application submitted by each facility should indicate that the facility engaged a SPCB-authorized CBWTF, the nature and quantity of BMW likely to be generated, the nature of emissions, water requirements, and the amount of wastewater. Further, the facilities should update and submit annual reports on BMW generation and disposal to the

[10] Bedded facilities require CTE and/or CTO under the purview of the Air Act and the Water Act, as well as authorization under the purview of the BMWM Rules, as applicable.

SPCB. National and state environmental regulatory frameworks are applied to all NUHM activities. Additionally, an IMEP policy framework and IMEP guidelines are in place for health care workers in primary health centers, originally formulated for the National Rural Health Mission. These guidelines—with the Air Act, the Water Act, and the BMWM Rules—provide UPHCs with guidance on pollution prevention and implementation protocols for the segregation, treatment, and disposal of BMW generated from the facilities.

16. The regulatory frameworks and guidelines outlined in paras 9 to 15 are adequate to meet the international best practices outlined in the SPS. Due diligence undertaken during state visits indicates that the HWCs' practices for segregation and disposal of BMW are robust and aligned with the requirements of the BMWM Rules. HWCs have contracts with CBWTFs for the final treatment and disposal of BMW.

17. The BMWM Rules stipulate that all chemical liquid waste should be pretreated before mixing with wastewater effluent.[11] However, the pretreatment of liquid waste was found to be weak or nonexistent in the facilities visited by the field assessment team, and untreated chemical liquid waste was released directly into the municipal sewers. The health workers had limited understanding of the safeguard requirements for pretreating liquid waste before discharge. Further, evidence was lacking regarding training of health care workers in liquid waste management. Although liquid waste could create impacts, the magnitude of the impacts is low considering that (i) national regulations for health care facilities require disinfection techniques to be used before the release of liquid effluents into municipal sewers; (ii) the effluent is similar in quality to urban wastewater, and the contaminated water primarily consists of microbiological cultures and is discharged to sanitary sewage treatment systems (municipal sewers connected to sewage treatment plants); and (iii) the amount of liquid waste likely to be generated by the facilities would be very small (~50 liters/day per facility).

18. The COVID-19 pandemic has created renewed focus on occupational health and safety issues. Media reports regularly highlight the occupational hazards of frontline health care workers such as doctors, nurses, accredited social health activists, and auxiliary nurse midwives.[12] With revised focus and efforts, urban health authorities have intensified their supervision efforts on the use of personal protective equipment, and compliance with sanitization protocols by all health care personnel at HWCs, including outreach. In April 2020, the MOHFW issued a special directive and guidelines on measures for the safety of health workers during the COVID-19 pandemic.[13] The revised IPC guidelines for health care facilities are being strictly followed at HWCs and are regularly monitored by city health authorities.[14]

3. Involuntary Resettlement

19. The operationalization of UPHCs as HWCs does not necessitate the acquisition of new land for upgrading, or refurbishing, or any such activity that may result in physical or economic displacement of any individual, household, or organization. Thus, the social diagnostic assessment confirmed the classification of the program's involuntary resettlement impact as *category C*. Any activity that may have potential involuntary resettlement will be excluded (screened out) from the RBL program, consistent with the program's design to avoid involuntary

[11] The BMWM Rules are also applied to stand-alone or shared rented spaces to avoid environmental risks to other occupants.

[12] *Northeast Now*. 2020. COVID-19: Over 15,000 Frontline Workers Test Positive in India. 18 July.

[13] Government of India, MOHFW. 2020. *Measures for Safety of Healthcare Workers During COVID-19*. New Delhi.

[14] Government of India, MOHFW. 2020. *National Guidelines for Infection Prevention and Control in Healthcare Facilities*. New Delhi.

resettlement impacts.[15] The MOHFW's policy has not changed since the inception of the NUHM, and in the current program, the practice of using existing buildings or renting spaces to establish new HWCs will be the norm. No financing will be provided for land acquisition, construction of new premises, and/or physical expansion of the existing government structures or rented premises. The use of mobile health facilities in hard-to-reach urban slum areas will avoid land and other property acquisition, and facilitate effective health service delivery by reaching the vulnerable and poorer sections in urban areas. During field visits to facilities in six states, the due diligence team observed that current health facilities and premises are well secured, with walls around the compound. Hence, the proposed program will not have any negative social impacts, either permanent or temporary, on any individual or the community.

4. Indigenous Peoples

20. The social diagnostic assessment confirmed the classification of the program's impacts on indigenous peoples as *category C*.[16] The assessment shows that scheduled tribes live in some urban areas, but do not exhibit the following characteristics that would distinguish them from the other population groups: (i) self-identification as members of a distinct, indigenous cultural group and recognition of this identity by others; (ii) collective attachment to distinct habitat or ancestral domain in the activity areas; (iii) customary cultural, social, or political institutions that separate them from those of the dominant society and culture; and (iv) a distinct language or dialect different from the state's official language.[17] Thus, the scheduled tribes population living in urban areas is not indigenous peoples based on the definition of ADB's SPS.

5. Gap Analysis

21. **Environmental safeguards.** This section compares the program's environmental regulatory framework with ADB's environmental safeguard policy principles to identify gaps and highlight congruence. It also analyzes whether the program has adequate institutional capacity to apply its own environmental regulatory framework to the activities. Recommendations to address the gaps identified have also been provided.

Table 2: Gap Analysis of Environmental Safeguard Regulatory Framework Requirements and Institutional Capacity

ADB Policy Principle	Consistency or Gap with ADB Environmental Safeguard Policy Principles
Principle 1: Screen and categorize	The infection management and environment plan (IMEP) policy framework, 2007 provides guidance on the screening and categorization of the potential environmental impacts of a proposed activity under the program. Section 2.2.3 of the framework requires that all activities should be in full compliance with the Environmental Impact Assessment Notification, 2006. While public health centers and subcenters may not be covered, the environmental implications of the refurbishment and operation of the health facilities will be assessed by the state pollution control board (SPCB). IMEP Section 4.10 provides screening criteria for the selection of new sites. The Environment Protection Act, 1986 establishes the framework for studying, planning, and implementing the long-term requirements of environmental safety and laying down a system of speedy and adequate response to situations threatening the environment. Any urban primary health center (UPHC) or health and wellness center (HWC) that needs to be established must comply with these regulations.

[15] This will be done by excluding any expenditures related to new construction from the eligible expenditures.
[16] The term "indigenous peoples" is understood to be equivalent with communities defined as scheduled tribes in the Constitution of India.
[17] Indigenous Peoples Safeguards, ADB's SPS, p. 18.

ADB Policy Principle	Consistency or Gap with ADB Environmental Safeguard Policy Principles
	Hence, this is consistent with the environmental safeguards policy principle of the Asian Development Bank (ADB).
Principle 2: Environmental assessment	Principles of environmental assessment requirements, as detailed in Appendix 1 of the ADB Safeguard Policy Statement (SPS, 2009), correspond with requirements under the national legislation applicable for health care facilities covered under the program: the Bio-Medical Waste Management (BMWM) Rules, 2016; The Air (Prevention and Control of Pollution) Act, 1981; and The Water (Prevention and Control of Pollution) Act, 1974. As part of the national regulations, each health care facility needs to secure a consent to establish (CTE) and/or consent to operate (CTO). The medical officer for every health care facility prepares an application for the CTE and/or CTO, including information on the inventory and amount of biomedical waste (BMW) likely to be generated, the nature of emissions, water requirements, wastewater amounts, and details of the contract with the SPCB-authorized common biomedical waste treatment and disposal facility (CBWTF). Based on the field visits, it was assessed that the institutional capacity at the health care facilities is adequate for assessing the environmental risks, and is appropriately included in the consent application.
Principle 3: Examine alternatives, including the no-project alternative	The principle is not triggered as the program is limited to the refurbishment of existing UPHCs and setting up new HWCs in rented accommodation.
Principle 4: Prepare an environmental management plan (EMP)	The requirements under the national regulations cover the management of environmental impacts during the operation phase, including BMW and liquid waste management: (i) According to national regulations, the facilities need to maintain a detailed inventory of the BMW generated, and contract an authorized CBWTF for disposal. (ii) Provisions in national regulations for health care facilities on disinfection techniques before the release of liquid effluent into the municipal sewer and the effluent should be followed. The liquid waste has similar to urban wastewater in quality, and the contaminated water primarily consists of microbiological cultures and is discharged to sanitary sewage treatment systems (municipal sewers connected to sewage treatment plants). The construction impacts caused by the refurbishment will be avoided by adopting the management plan detailed in section 4.12 (construction of management guidelines) of the IMEP policy framework. Principles of environmental assessment requirements, as detailed in Appendix 1 of ADB's SPS, correspond with the requirements under the national legislation applicable for the program facilities: the BMWM Rules, 2016; The Air (Prevention and Control of Pollution) Act, 1981; and The Water (Prevention and Control of Pollution) Act, 1974. During the field visits, the due diligence team observed that the medical officers for each health care facility maintained a detailed inventory of the BMW generated, including a logbook of the details of BMW transported to the CBWTF. However, the capacity in or practice of pretreating the liquid effluent before discharge to municipal sewers should be strengthened.
Principle 5: Consult stakeholders and establish a grievance redress mechanism	The IMEP policy framework[a] was developed in consultation with concerned stakeholders. The National Urban Health Mission (NUHM) program is community-driven and involves participatory approaches for community mobilization and awareness generation. The health facilities will engage community groups and facility user groups in management and service provision. The institutional frameworks established for community-based monitoring and ensuring social accountability under the NUHM will also be strengthened to support operationalizing comprehensive primary health care services.

ADB Policy Principle	Consistency or Gap with ADB Environmental Safeguard Policy Principles
	The operating guidelines of the Ayushman Bharat: Comprehensive Primary Health Care through Health and Wellness Centres suggest that accredited social health activists facilitate the stakeholder consultation and to also be responsible for receiving or communicating community grievances with health facilities, if any. In addition, complaints can be lodged directly through three channels: a call center (toll-free Dial 1800-180-1900 Helpline), help desk, and web portal. Complainants can check the status of complaints by logging on to the National Health Mission's web page. As soon as the grievances are registered, the complainant and concerned officials will receive an SMS to confirm successful registration of the complaint, and a tracking number is issued. Authorities or nodal officers at the appropriate level will check the web portal daily and will be responsible for resolving grievances within 7 days. Resolved grievances will be posted on the web portal and sent through SMS to inform the complainants of the status. With the engagement of communities and a functioning grievance redress mechanism in place, it can be concluded that the national regulatory framework is consistent with ADB's environmental safeguards policy principle.
Principle 6: Disclose environmental assessment and EMP to stakeholders	To comply with the BMWM Rules, 2016 and secure CTE and CTO under The Air (Prevention and Control of Pollution) Act ,1981 and The Water (Prevention and Control of Pollution) Act, 1974, the facilities need to obtain membership of an SPCB-authorized CBWTF, and maintain records on the amount of BMW they generate. Further, the facilities should update and submit annual reports on BMW generation and disposal to the SPCB. The field visits found that the medical officers of each health care facility submitted the required annual audit reports to the SPCB.
Principle 7: Monitor and report EMP implementation	The annual reports on BMW generation and disposal are updated and reported by the facilities annually to SPCB. However, the monitoring of 4 Log_{10} reduction or greater for *Bacillus subtilis* (ATCC 19659) in chemical treatment systems for the liquid effluent has been partially observed during the field visits.
Principle 8: Avoid critical habitats	This principle is not triggered for the program.
Principle 9: Prevent pollution	All the facilities have robust BMWM systems, with segregation of waste in color-coded bins, as required under national regulations and by the contracting SPCB-authorized CBWTF for the disposal of such waste. The facilities visited in Odisha and Gujarat had a local liquid waste disinfection setup where liquid BMW from pathological laboratories is collected in plastic tanks and treated with 1%–2% hypochlorite solution for a minimum of 30 minutes before final discharge to municipal or public drainage systems. This is the best practice example that can be replicated across the other states in India. This practice was not observed in the facilities visited in the other four states. The field visits found that the laboratory staff have the required awareness to implement the disinfection before disposal into municipal waste streams, hence the institutional capacity was found adequate to implement the pollution prevention measures.
Principle 10: Ensure occupational and community health and safety	The IMEP guidelines for health workers in primary health centers consist of pictorial instructions on BMWM and infection control. The IMEP policy framework, 2007 provides detailed guidance on ensuring occupational and community health and safety during the construction phase. The Ministry of Health and Family Welfare launched the Kayakalp Award Scheme to promote cleanliness, hygiene, waste management, and infection control practices in public health care facilities; and to incentivize exemplary performing facilities. Because of the recent outbreak of the coronavirus disease (COVID-19), the Ministry of Health and Family Welfare has issued circulars, guidelines, and policies on infection prevention to ensure occupational and community health and safety. These operational guidelines are in congruence with ADB's environmental safeguard policy principle.

ADB Policy Principle	Consistency or Gap with ADB Environmental Safeguard Policy Principles
Principle 11: Conserve physical cultural resources	This principle is not triggered for the program.

[a] Government of India, Ministry of Health and Family Welfare, National Health Mission. 2007. *Infection Management and Environment Plan Policy Framework* and *Infection Management and Environment Plan Guidelines for Health Care Workers for Waste Management and Infection Control in Primary Health Centres*. New Delhi.
Source: Asian Development Bank.

22. **Social safeguards.** The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 provides safeguards for any person who suffers physical or economic displacement because of any such activities. However, this is limited to title holders, and squatters or encroachers are excluded. On the other hand, ADB's SPS 2009 recognizes the rights of these non-titled informal settlers, squatters, or encroachers. Since there will be no land acquisition or new construction, there is no likelihood of physical or economic displacement of any individual or community.

D. Assessment of Other Risks

23. The RBL program was also assessed against institutional, contextual, and programmatic risks likely to occur during program delivery.

24. **Institutional risks.** The executing agency is the MOHFW at the national level. The implementation will follow the well-established NHM, which commenced in 2005 (in urban areas in 2013). At the state level, the state health society has overall responsibility, while the health departments in states and other relevant departments and agencies have various responsibilities. In terms of environmental issues during operations that are of concern under this program, such as BMWM and IPC, the SPCB and state health departments are responsible for ensuring compliance with relevant national and state regulations. The medical officers of the health care facility discharge their responsibilities adequately in implementing the BMWM practices congruent with national requirements. However, field visits indicate that institutional capacity for implementing and monitoring the safeguard measures for managing liquid waste could be enhanced.

25. **Contextual risks.** Based on due diligence, the program is limited to the refurbishment of existing UPHCs and setting up new HWCs in rented accommodations in urban areas. As such, no identified sensitive environmental and social settings could impede successful performance of the program. Land acquisition or vertical and horizontal expansion of structures will be excluded, and no legacy or unresolved issues on the activity sites are known. No social conflicts or social fragility are present in the program areas. The program will not support activities with significant environmental and social impacts that may expose ADB to reputational risks. There have been no known safeguards complaints from the previous and proposed programs regarding environmental and social safeguards implementation.

26. **Programmatic risks.** The activities are not expected to have any interactions with other planned activities that may trigger adverse impacts. States have adequate staff managing environment and social safeguard-related impacts, as assessed, based on the record of the Supporting National Urban Health Mission, the RBL program supported by ADB since 2015. However, to strengthen their capacity, all urban primary health facility staff under the current program will be trained in BMWM following the IMEP, as part of their orientation training and refresher training. All facilities under the program will also go through self-assessment and peer assessment under the Kayakalp Award Scheme.

E. Safeguard Program Actions

27. The program safeguard systems are robust, with a clear regulatory framework, implementation arrangements, budget, and program activities to mitigate negative impacts on environment and people, especially from BMW and infection risks. The stakeholders have adequate capacity to deal with likely issues from implementation. The following areas are identified for further strengthening, to ensure that proposed program interventions can minimize negative impacts on the environment and on the health and safety of health workers and users of the primary health care facilities.

28. The MOHFW launched the Kayakalp Award Scheme to promote cleanliness, hygiene, waste management, and infection control practices in public health care facilities; and to incentivize exemplary performing facilities. This will be strengthened based on the lessons learned from the COVID-19 response, to enhance the practice of health and safety measures as well as BMWM in HWCs. The discharge of untreated liquid effluents from health facilities, especially laboratories, entails health and safety risks to the community, in addition to soil and ground water contamination. The program will support the development of a low-cost and replicable solution that can be adopted by UHWCs for localized pretreatment of the liquid effluent before discharge.[18] The program will help the MOHFW introduce supplementary guidelines for IPC and BMW (including pretreatment of liquid effluents), which is part of the disbursement-linked indicator (DLI 9) under output 3.

29. The IMEP policy framework and the guidelines were formulated in 2007 and have not been revised or updated since to accommodate the regulations on the treatment of BMWM and liquid waste management as detailed in the BMWM Rules. Hence, these documents need to be revised and updated to be more relevant for urban health facilities under the NUHM. These guidelines also need to factor in national and state environment and health regulatory frameworks as well as the BMWM Rules. A detailed checklist for environmental and social safeguard good practices will be developed as supplementary guidelines for urban HWCs under the IMEP guidelines, and a local language translation will be developed for selected states where BMWM performance is weak. This will allow for a systematic approach to address concerns pertaining to BMW and other waste management in the urban HWCs.

30. Updated guidelines will be disseminated through the regular NUHM training programs where all new staff will be trained, and all staff will go through refresher trainings in all aspects of UPHC services and facility management. ADB technical assistance (TA) will assist the MOHFW and relevant institutions in incorporating the updated guidelines or extend supplementary guidance to the training programs.

31. The program assessment has shown that UPHCs, HWCs, or UHWCs are not likely to cause social safeguard impacts. The urban health department or the ULBs will ensure that a social safeguard screening form is filled up and included in the project implementation document, to exclude activities that have any social safeguard impact from the program, consistent with the program's design.

32. Although, on average, the capacity to screen and mitigate the environmental impacts was satisfactory in the HWCs visited during the field visits, some capacity gaps were noticed among

[18] A low-cost solution that can be adopted by the states is simple primary treatment (sedimentation and filtration) as a first step, followed by four stages of treatment: (i) intermittent or demand-operated slow sand filtration, (ii) chlorine disinfection, (iii) carbon adsorption, and (iv) de-chlorination with vitamin C (ascorbic acid). The free residual chlorine is then neutralized based on a chemical reaction.

staff on the two issues identified under environmental impacts. The program will support TA to conduct capacity building training in environment and social impacts as well as screening, using the checklist developed for this purpose. After initial screening of a few upgraded or newly commissioned HWCs, they could serve as case examples during future trainings.

33. In summary, the following safeguard actions are included in the program action plan.[19] These actions will be supported and facilitated by ADB TA:

(i) supplementary guidelines for improved BMWM and infection control management developed for the Kayakalp (first quarter [Q1] of 2021) and implemented by the MOHFW (continuously until 31 March 2024);
(ii) IMEP framework and guidelines 2007 reviewed, and good practices for urban health facilities developed as an additional guide (from Q2 2021 onward);
(iii) any facility upgrading or refurbishment will be screened using a social screening checklist (from Q1 2021 onward); and
(iv) biannual safeguard monitoring report will be produced and submitted to ADB based on a desk review of the quarterly progress reports, other information sources, and sample-based field monitoring visits (from Q3 2022).

[19] Program Action Plan (accessible from the list of linked documents in Appendix 2 of the report and recommendation of the President).