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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

DRAFT ENVIRONMENT AND SOCIAL SYSTEMS ASSESSMENT

ON A

PROPOSED LOAN IN THE AMOUNT OF   US $500 MILLION EQUIVALENT TO INDIA FOR THE

INDIA'S ENHANCED HEALTH SERVICE DELIVERY
P178146

(Draft for discussion)

This document is being made publicly available

so that views/suggestions of interested individuals/groups from broader public

can be considered.

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LIST OF ACRONYMS

AB HWC	Ayushman Bharat - Health and Wellness Centre
ACSM	Advocacy, Communication and Social Mobilization
AIDS	Acquired Immuno- Deficiency Syndrome
ANC	Antenatal Care
ASHA	Accredited Social Health Activist
BIS	Bureau of Indian Standards
BMW	Biomedical Waste
BMWM	Biomedical Waste Management
BMWMC	Biomedical Waste Management Committee
BPHU	Block Public Health Unit
C&DST	Culture and Drug Susceptibility Testing
CAAA	Controller of Aid, Accounts, and Audit.
CAG	Comptroller and Auditor General
CBMWTF	Central Biomedical Waste Treatment Facility
CIEs	Central Level Internal Evaluations
CMSS	Central Medical Services Society
CPF	Country Partnership Framework
CPCB	Central Pollution Control Board
CPHC	Comprehensive Primary Health Care
CTD	Central TB Division
CTF	Common Treatment Facility
CVC	Central Vigilance Commission
DALY	Disability-Adjusted Life Year
DBT	Direct Benefit Transfer
DDG	Deputy Director-General
DLI	Disbursement-Linked Indicator
DMC	Designated Microscopy Centres
DLR	Disbursement-Linked Result
DOHFW	Departments of Health and Family Welfare
DOTS	Directly Observed Treatment Therapy
DR-TB	Drug-Resistant TB
EMP	Environment Management Plan
EHS	Environment Health and Safety
ESSA	Environmental and Social Systems Assessment
FM	Financial Management
FMR	Financial Monitoring Report
FPIC	Free and Prior Informed Consultation
FSA	Fiduciary System Assessment
GDP	Gross Domestic Product

GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GFR	General Financial Rules
GoI	Government of India
GOI	Government of India
GPS	Global Positioning System
GST	Goods and Services Tax
HDI	Human Development Index
HIV	Human Immune- Deficiency Virus
HWC	Health and Wellness Centre
IBRD	International Bank of Reconstruction and Development
IC	Infection Control
ICT	Information and Communications Technology
IDA	International Development Association
IEC	Information, Education, and Communication
IFSA	Integrated Fiduciary System Assessment
IMEP	Infection Management and Environmental Plan Framework
IPHS	Indian Public Health Standards
INR	Indian National Rupee
INT	Institutional Integrity
IRL	Intermediate Reference Laboratory
IRR	Internal Rate of Return
ISM	Implementation Support Mission
IT	Information Technology
IVA	Independent Verification Agency
JAS	Jan Arogya Samitis
JEET	Journey of Enhancing Targeted Interventions
JICA	Japan International Cooperation Agency
JMM	Joint Monitoring Mission
MAS	Mahila Arogya Samitis
MDR-TB	Multidrug Resistant Tb
MoHFW	Ministry of Health and Family Welfare
MoEFCC	Ministry of Environment and Climate Change
NCD	Noncommunicable Diseases
NDMA	National Disaster Management Authority
NGO	Non-Governmental Organization
NHM	National Health Mission
NHSRC	National Health Systems Resource Centre
NPV	Net Present Value
NPY	Nikshay Poshan Yojana
NQAS	National Quality Assurance Standards

NRL	National Reference Laboratory
NSP	National Strategic Plan
OCEMS	Online continuous emission monitoring system
OHS	Occupational Health and Safety
PAD	Project Appraisal Document
PAP	Program Action Plan
PDO	Program Development Objective
PFMS	Public Financial Management System
PforR	Program for Results
PIP	Program Implementation Plan
PM-ABHIM	Pradhan Mantri - Ayushman Bharat Health Infrastructure Mission
PPE	Personal Protective Equipment
PPM	Public-Private Mix
PHC	Primary Health Center
PWD	Public Works Department
RNTCP	Revised National TB Control Program
RoP	Record of Proceedings
SC	Scheduled Castes
SDMA	State Disaster Management Authority
SPCB	State Pollution Control Boards
ST	Scheduled Tribes
TA	Technical Assistance
THSRP	Tamil Nadu Health System Reform Project
TSU	Technical Support Unit
WHO	World Health Organization

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INDIA'S ENHANCED HEALTH SERVICE DELIVERY
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ENVIRONMENTAL AND SOCIAL SYSTEMS ASSESSMENT

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EXECUTIVE SUMMARY

Introduction

1. An Environmental and Social Systems Assessment (ESSA) was conducted by the World Bank E&S team for the proposed India's Enhanced Health Service Delivery (P178146) program supported by a Program-for-Results (PforR) financing instrument of the World Bank. Following the requirements of the World Bank PforR Policy, these rely on country-level systems for the management of environmental and social effects.

2. ESSA has been prepared to (i) identify the Program's environmental and social effects, (ii) assess the legal and policy framework for environmental and social management, including a review of relevant legislation, rules, procedures, and institutional responsibilities that are being used by the Program; (iii) assess the capacity to implement requirements under the system; and (iv) recommend specific actions to address gaps in the program's system and implementation capacity. Through this process, the ESSA Team assessed the extent to which the Program's environmental and social management systems are consistent with six-core environmental and social principles (hereafter Core Principles) contained in the PforR Policy and corresponding Key Planning Elements.

Program Development Objective and Description

3. The Program Development Objective is to expand provision of comprehensive primary health care services, improve quality of care, and strengthen governance of the health sector in India.

PDO Level Results Indicators

4. **Achievement of the PDO will be assessed with progress on a select set of strategic indicators.** The following are proposed at Concept stage and will be further refined in discussion with the government during preparation.

    i. Increased utilization of CPHC services (% female) [disaggregated by rural / urban]
    ii. % of diabetics and hypertensives on treatment with blood sugar/blood pressure controlled
    iii. % of HWCs accredited for quality of care [disaggregated by rural / urban]
    iv. Improved patient experience [disaggregated by rural / urban]

5. The proposed PforR Program will support the GoI's ongoing implementation of an ambitious reform agenda to transform the delivery and quality of essential health services as well as underlying accountability mechanisms needed to enable such reforms. The proposed Program will tackle reforms related to ensuring universal, effective coverage; spending more and better; and moving toward a system of accountability for results. The Program has three key results areas with a combination of both technical interventions related to CPHC, quality of care and health financing, as well as transversal interventions to strengthen institutions and state capacity to focus on results

to enable achievement of the expected outputs and outcomes in the Program Theory of Change. Briefly described below are the Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PM-ABHIM) components and underlying relevant Government programs that are included in this proposed PforR Program boundary. The selected seven priority states will be the focus for state-level interventions and results. TA will be provided at the national level and to priority states to enhance institutional and state capacity to achieve the results.

3. The proposed PforR Program ("P") is a well-defined subset of the Government program ("p") that is anchored on PM-ABHIM and is supported by AB-HWC under NHM to facilitate health sector transformation. Technical topics within the Government program that will be part of the PforR Program include CPHC reforms; quality of care; training and career development; and data, monitoring, and accountability. The Program Expenditure Framework (PEF) will exclude capital expenditures and include recurring expenditures to align with the Program scope and results and to minimize risks during implementation. The government program is US$XX billion, the Program is US$XX billion, and the World Bank contribution to the PEF for five years will be US$500 million (equivalent to XX percent of the total Program financing). Specifically, the following will be included for the seven priority states, i.e. Andhra Pradesh, Kerala, Odisha, Meghalaya, Punjab, Tamil Nadu, and Uttar Pradesh:
   a. PM ABHIM AB-HWCs
   b. PM ABHIM Block Public Health Units (BPHUs)
   c. NHM AB-HWCs
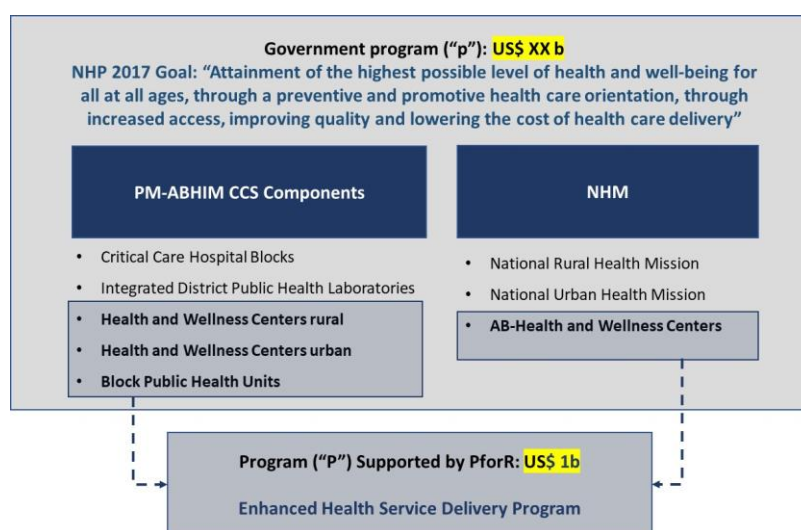
Figure 1 Program Boundary

ESSA methodology

6. The World Bank team prepared this ESSA report that provides an overview and analysis of the MoFHW's as well as the seven state government's policies, regulatory frameworks and ongoing programs for the environmental and social aspects of the participating state health societies. The ESSA discusses relevant environmental and social national legislations for the health sector in India. Apart from the national legislations, there are several state level environment regulations and

social inclusion guidelines (f.i. tribal health programming, community-level initiatives) which are also considered prior to implementing activities in any state.

7. The ESSA specifically evaluates modalities at the National and State level to help improve access and quality of health service delivery in tribal blocks of the states. Specifically for vulnerable groups, SC/ST households and women-headed households in Meghalaya, Tamil Nadu, Odisha and Andhra Pradesh. The ESSA also focuses on land management aspects and labor and safety standards as well as inclusionary strategies adopted by states.

8. The methodology focused on the understanding of the program activities, benefits, and risks associated with various activities, environmental and social conditions, the existing institutional mechanism at various levels for implementation, management, policies, and regulatory aspects. It is to understand the gaps and recommend an action plan to not only address the gaps but also to ensure sustainable environmental and social effects under the program.

9. Towards this, an assessment of the government's program and various associated activities was made; mainly focusing on the proposed upgradation of facilities and services, biomedical waste management which has a higher probability of risks and impacts. The assessment also took into consideration locational differences of activities, compliance to applicable policies and regulations, institutional capacities, and tools to support these. This helped in understanding the gaps and formulate the required actions to ensure that the proposed program meets the environmental and social requirements.

Potential Environmental and Social Effects of the Program

10. Consistent with the requirements of the Bank PforR Policy, the proposed PforR operation does not support activities that pose high social or environmental risks. There will be no large-scale infrastructure, only minor refurbishments, upgradation-related works within health facilities any major civil works and capital costs on health facility infrastructure is excluded from program boundary. The refurbishments will be carried out within the existing footprint of the health facilities. While the Program does not have a significant environmental footprint, and with no land acquisition implications, risks to cultural properties, natural habitats, land acquisition and involuntary resettlement its programmatic approach to under PM-ABHIM provides an opportunity to improve systemic implementation of environmental and social practices related to the functioning and operations of HCWs. Additionally, grievance redressal systems under PM-ABHIM at the federal level, state-level and community-level were found to be functional and will be monitored under the Program for redressal of grievances and complaints related to Program interventions.

11. *Environmental effects:* the environmental effects of the program are associated with the operationalisation and increase footfall in the health facilities under PM-ABHIM to offer more comprehensive services and attain high quality of service delivery. While there will be an incremental increase in biomedical waste, and other wastes (solid and liquid) associated with the program supported activities. The project, through DLI 3 further improves critical parameters around environment, health, and safety management (biomedical waste management, infection control, worker safety, and building design safety) through the new PM-ABHIM program

guidelines and NQAS standards. The measures are linked closely with the Disbursement linked Indicators (DLIs) for the PforR operation, specifically DLI 3 Increased NQAS certification of HWCs/UHWCs

12. The key environmental effects of the program include (i) increase in biomedical waste: the key risk arising from the program is the increase in biomedical waste throughout the country. As healthcare centres are upgraded and offer more comprehensive services and increase in footfall will lead to increase in biomedical wastes, and other associated wastes- plastics, e-wastes, and solid wastes. Some HCWs particularly in the rural areas which do not have access to centralised waste treatment facilities would need to plan for final disposal facilities, and sealed pits (ii) increase in liquid wastes: the quantity of liquid wastes disposed (wastewater, blood, disinfectants and reagents) which need to appropriate treated and disposed. (iii) Risks to worker health and safety during the operations of the HCWs needs to be abetted through appropriate immunization and training programs for all workers (contracted and healthcare staff) ensuing good hygiene, infection control practices, and biomedical waste handling is followed (iv) Building and fire safety while the standards of HCWs encompass critical elements such as life and fire safety, building safety and maintenance, there is a need to ensure all staff are trained on these aspects and systems, and that there is also good collaboration with other disaster planning initiatives and (v) Generation of dust, noise, and debris while HCWs are being refurbished. Though these impacts are temporary, and manageable, the healthcare facilities need to ensure that appropriate mitigation is followed so that solid wastes are disposed appropriately, and dust and noise do not cause adverse impacts to in-patients and visitors.

13. At the same time, there are several opportunities presented through the program results and DLIs national legislation and program guidelines which promote higher standards of environment health and safety management, namely (i) to maintain an infection-free, clean, and hygienic conditions with sound occupational health and safety practices and proper disposal of infectious wastes and wastewater to ensure safety of workers, in-patients, and visitors. (ii) Develop a safe and hazard-free building with universal and safe accessibility, emergency response mechanisms, and fire safety. (iii) conserve energy and natural resources, by procuring energy efficient equipment. Overall, there are also opportunities to build capacity across the board of all stakeholders on aspects of environment health and safety, and improve the performance of sectors that contribute to the efficient performance of the HCWs (such as water and sanitation, disaster management, energy etc)

14. *Social effects:* The activities to be supported by the Program are likely to provide considerable social benefits such as (i) increased community ownership and management of HWCs through Village Health and Sanitation Committees (VHSCs), Jan Arogya Samitis (JAS) and Mahila Arogya Samitis (MAS) ; (ii) development of performance measurement and rewards at the district level including for aspirational districts; (iii) Increased number of operational / functional HWCs providing expanded healthcare service delivery packages of CPHC including for tribal blocks in Schedule V areas of the state and (iv) increased utilization of public health facilities by women-headed households and SC/ST households.

15. The key social risks of the program are directly associated with the risks of exclusion particularly for STs and vulnerable groups in unserved areas, i.e., aspirational districts and ITDA blocks. Four

of the seven participating states have designated Schedule V and Schedule VI areas*1*. The social systems assessment filtered Odisha and Tamil Nadu as focus states to decipher key social risks and institutional capacities in improving health service delivery in tribal blocks. Additionally, across seven states, the program covers 15 aspirational districts. **Therefore, social risks can be broadly divided into two pillars: I. Risks of exclusion in aspirational districts and ITDA blocks** (i) uptake and utilization of health facilities by traditionally excluded vulnerable groups in unserved and underserved areas, including aspirational districts, tribal blocks and Schedule V areas of Odisha, Andhra Pradesh, Meghalaya and Tamil Nadu; (ii) utilization of health facilities by women-led households and adolescent girls for reproductive healthcare, NCD screening and preventive care; (iii) access to quality health care for the urban poor, including migrants and informal workers. **II: Functionality of community-level platforms (JAS, MAS) in aspirational districts and ITDA blocks** (i) low institutional capacities of JAS and MAS in tribal/unserved areas to manage health facilities, coordinate with VHSNCs and act as grievance redressal platforms as per Jan Arogya Samiti Guidelines*2*.

Applicability of the ESSA Core Principles

Table 1 Identified E&S Gaps and Recommendations

List of Identified Gaps	Recommendations
Core Principle 1: Environmental and social management procedures and processes are designed to (a) avoid, minimize, or mitigate adverse impacts; (b) promote environmental and social sustainability in program design, and (c) promote informed decision-making relating to a program's environmental and social effects.	
▸ The capacity to manage environment health and safety risks in PM-ABHIM is spread across an array of institutions and sectors (health, environment, disaster remediation, water and sanitation, urban and rural departments). All sectors have also provided their own set of guidelines and good practices, there is no dedicated capacity in MoHFW that can look at EHS in consolidated manner. ▸ Through PM-ABHIM implementation there will be an increase in biomedical waste, and other wastes aggregated, while many states have unutilized capacity remaining in the central treatment	▸ Hiring of E&S Specialists as a part of the PMU for the EHSD Program to have dedicated capacity and institutionalise EHS best practices (BMWM, IC, HCW safety and cleanliness) ▸ Updating terms of references for state-level BMWM advisory committee to look holistically at management of all wastes (solid and liquid) ▸ Strengthen qualification/accreditation standards of BMWM/IC supervisor linked to management of sanitation, accident and spills, fire safety, emergency response preparedness,

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1 In Scheduled Areas declared so under the Fifth Schedule, the governor of the state has special responsibilities with respect to tribal populations in the area including issuing directives to the state government and limiting the effect of acts of the central or state legislature on the Schedule Area. On the other hand, in Scheduled Areas declared so under the Sixth Schedule, the emphasis is on self-rule; tribal communities are granted considerable autonomy, including powers to tribal communities to make laws and receive central government funds for social and infrastructure development. To enable local control, the role of the Governor and the State are subject to significant limitations in Sixth Schedule areas.

2 *https://nhsrcindia.org/sites/default/files/2021-06/Guidelines%20for%20Jan%20Arogya%20Samiti.pdf*

List of Identified Gaps	Recommendations
facilities, there is a need for future planning especially for decentralised waste disposal facilities and areas that do not have access to CBMWTF due to terrain and weather conditions. This would require appropriate siting of deep burial pits, soak pits, septic tanks so that they do not pose risk to the environment or nearby communities. Strengthened data collection and planning mechanism that includes environment, health, urban and rural local bodies. ▸ BMW committees look only at BMW generated, they need to look at both solid and liquid wastes and their management and future planning that needed to manage and dispose wastes. Accordingly make recommendations to the State Government. ▸ 5. The organizational arrangements and provisions, such as, designated biomedical waste supervisor in the HCWs and BPHUs and infection control committees should be nominated, and information disclosed publicly to set accountability and expectations for EHS.	and complaints handling on BMWM (in HCWs) ▸ Each state to disclose details regarding BMWM supervisor in HCWs and BPHUs in the healthcare facilities, to fix responsibility and accountability. ▸ Disclose BMWM oversight committees at the state level and district level on SPCB and DoHFW website ▸ Deploy qualified biomedical experts to the states that can support states in developing integrated waste management strategies for the HCWs based on local conditions. ▸ Strengthen the supervision and enforcement capacity of responsible agencies (monitoring committees for BMW and IC etc.) to ensure adequate action on non-compliance

Core Principle 2: Environmental and social management procedures and processes are designed to avoid, minimize, and mitigate adverse effects on natural habitats and physical cultural resources resulting from the program.

This principle is not applicable as all eligible expenditure under the program is limited to existing and current footprint of health facilities. This is including all recuring expenditure on HCWs and BPHUs. There will be no expansion or new construction that would impact physical and cultural resources and natural habitats.	An environmental screening checklist has been included as a best practice in Annex 9. MoH&FW focal points on E&S will be trained to use the checklist for all future planning for biomedical waste infrastructure.

Core Principle 3: Program procedures ensure adequate measures to protect public and worker safety against the potential risks associated with (a) construction and/or operations of facilities or other operational practices developed or promoted under the program and (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials.

▸ As part of PMABHIM many contracted workers/ outsourced agencies would be hired to undertake cleanliness, housekeeping, biomedical waste collection services, which may not fall under the ambit of the formal training programs under NHM/ PMABHIM. Trainings need to be provided to all outsourced agencies teams on infection control practices and biomedical waste handling to ensure health and safety of workers and patients	▸ States to ensure continuous occupational health and safety training to all outsourced agencies engaged in the cleanliness activities for HWCs ▸ Include in the contractor's scope of work collection and disposal of all debris and solid waste after refurbishment works ▸ Structured Training program for contracted workers undertaking refurbishment works on OHS, and use of PPE

List of Identified Gaps	Recommendations
▶ Public works departments and other accredited agencies will carry out works related to upgradation of the HCWs, while national laws and standards exist for labour work safety, due to the small nature of these works, these contracts are also often outsourced to smaller contactors. It is important that these contractors' teams undergo structured and formal trainings in occupational health and safety management, use of PPE, and maintaining cleanliness, sanitation and to ensure minimal disruption to the environment, and visitors.	

Core Principle 4: Avoid or minimize the land acquisition and related adverse impacts: Avoid or minimize displacement, and assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards.

Consistent with the requirements of the Bank PforR Policy, the proposed PforR operation does not support activities that pose high social or environmental risks. There will be no large-scale infrastructure, only minor refurbishments, upgradation-related works within health facilities. **Therefore, risks of land acquisition and involuntary resettlement are not applicable under the Program.**
 	
Additionally, the ESSA negative list, reproduced below, is in complete adherence with World Bank's PforR guidelines*3*:
  - Land should be available for the selected facilities and land purchase cost should not be covered under PM-ABHIM.
  - Repair and Renovation works already undertaken under the National Health Mission (NHM) Funds.
	The key recommendations are:
	
	• E&S screening mechanism is to be instituted during the planning phase of any new construction (including HCFs and waste management pits) under the program to identify any adverse social risks and impact.
	• Though both land acquisition and/or resettlement is not anticipated during preparation, but in rare scenarios, if any need arises, World Bank's ESF policy, particularly ESS5 on land acquisition and resettlement will be followed and due process to be instituted in consultation with World Bank task team.
	• The ESSA includes a screening template for monitoring land requirements at the HC level, if required.

Core Principle 5: Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups

▶ **Risks of exclusion in aspirational districts and ITDA blocks** (i) uptake and utilization of health facilities by traditionally vulnerable groups in	Development of an **inclusion monitoring template** to track roll-out of PM-ABHIM in aspirational districts

List of Identified Gaps	Recommendations
unserved and underserved areas, including tribal blocks and Schedule V areas of Odisha, Andhra Pradesh, Meghalaya and Tamil Nadu; (ii) utilization of health facilities by women-led households and adolescent girls for reproductive healthcare, NCD screening and preventive care; (iii) access to quality health care for the urban poor, including migrants and informal workers.	and integrated tribal development blocks (ITDA) blocks in select states. States with aspirational districts and Schedule V and VI areas will adopt the inclusion template to monitor a) specific KPIs to track tribal health programming and outreach and b) functionality of Jan Arogya Samitis in ITDA blocks.*
► **Functionality of community-level platforms (JAS, MAS) in aspirational districts and ITDA blocks** (i) low institutional capacities of JAS and MAS in tribal/unserved areas to manage health facilities, coordinate with VHSNCs and act as grievance redressal platforms as per Jan Arogya Samiti Guidelines.	*(Four of the seven participating states under the EHSD Program have designated Schedule V and VI areas. In addition, across 7 states,15 aspirational districts are included under the Program).*

Core Principle 6: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.	

► There are no social conflict-affected areas in the Program Areas. And, in any case, the program interventions do not exacerbate any social conflicts as it supports the strengthening of health services in seven states leading to overall improved health outcomes. Also, exclusion of any groups in terms of caste, religion, and/ or geography by the program activities is not expected.	No relevant recommendations.

Disclosure and Consultations

16. The team undertook consultations at the federal and state level (during the development of the instrument) with relevant stakeholders from MoHFW, state health societies, biomedical waste management, infection control and quality control officers, on April 4, 2022, to seek inputs on states performance on environment and social management. A checklist to capture key issues and gaps in government systems was circulated to states prior to consultation. This is included in Annex 4.

17. The draft ESSA and its executive summary will be disclosed and consulted on during the appraisal process. A multi stakeholder consultation will be conducted based on the draft ESSA to share the findings and recommended actions for the PAP and the PIP. The final ESSA, incorporating stakeholder comments and suggestions will be disclosed in-country and on the World Bank's external website before the close of appraisal.

Key Findings from Environmental and Social Management Systems Assessment

Social

18. The program is limited to the refurbishments of existing HCFs and during preparation, no identified sensitive social settings could impede successful performance of the program. Land acquisition or horizontal expansion of structures outside the HCF premises will be excluded, and no legacy or unresolved issues on the across seven states 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 the World Bank to reputational risks. There have been no known safeguards complaints from the previous state-level financed operations and/or ongoing operations.

19. The assessment reviewed the social policies and procedures (both at National and State level) for the Government Program – PM-ABHIM and found them to be adequate. The social systems assessment filtered Odisha and Tamil Nadu as focus states to decipher key social risks and institutional capacities in improving health service delivery in tribal blocks. The assessment finds an enabling policy, regulatory and legal framework at the federal and state-levels that will promote decentralized planning, implementation and monitoring, active redressal of grievances through Jan Arogya Samitis (JAS) and effective participation and safeguarding the interests of vulnerable sections (scheduled tribe communities, schedule case communities, women-headed households, and adolescent girls).

20. However, residual social risks related to exclusion of vulnerable groups particularly in aspirational districts and Integrated Tribal Development Blocks (ITDA blocks) in Schedule V and VI areas remain. Further implementation of the Prevention of Sexual Harassment at the Workplace Act, 2013 and information about the Internal Complaints Committee mechanisms for contracted health workers and frontline workers remains a key challenge. **The anticipated social risks are manageable and can be mitigated through localized implementation strategies, better local oversight, and enhanced capacities of JAS and Mahila Arogya Samitis (MAS).**

Environment

21. Overall, the applicable environmental management systems are generally adequate to address underlying environmental and social risks, and noteworthy strengths are strong regulations and guidelines on biomedical waste management, general waste management, infection control, building and worksite safety. 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.

22. The provisions of the existing systems require strengthening institutional and technical capacity, and multi sector coordination. While the provisions of the Biomedical Waste Management and Handling) Rules, Infection Management and Environment Policy Framework (IMPS) are being implemented, provisions of other relevant environmental acts such as, hazardous, solid, plastic and e-waste Rules applicable to the Program require additional oversight. Additionally, as there will be more outsourced agencies and contract workers, it is critical that they undergo structured trainings on OHS, waste management and infection control practices. Gaps identified through the

assessment are proposed to be addressed through a set of actions which are compiled as Environmental and Social inputs to the Program Action Plan.

Gap 1: The capacity to manage environment health and safety risks in PM-ABHIM is spread across an array of institutions and sectors (health, environment, disaster remediation, water and sanitation, urban and rural departments). All sectors have also provided their own set of guidelines and good practices, there is no dedicated capacity in MoHFW that can look at EHS in consolidated manner.

Gap 2 Through PM-ABHIM implementation there will be an increase in biomedical waste, and other wastes aggregated, while many states have unutilized capacity remaining in the central treatment facilities, there is a need for future planning especially for decentralised waste disposal facilities and areas that do not have access to CBMWTF due to terrain and weather conditions. This would require appropriate siting of deep burial pits, soak pits, septic tanks so that they do not pose risk to the environment or nearby communities. Strengthened data collection and planning mechanism that includes environment, health, urban and rural local bodies.

Gap 3 At present, there is no formal mechanism adopted for screening and identifying any potential environmental and social issues before undertaking any works. However, given the nature of the works the impacts are predictable (dust, noise, debris) and temporary, and measures can be worked into the contract bill of quantities (such as fencing, screens, watering, low-noise equipment etc.). and a plan to mitigate accordingly.

Gap 4 BMW committees look only at BMW generated, they need to look at both solid and liquid wastes and their management and future planning that needed to manage and dispose wastes. Accordingly make recommendations to the State Government.

Gap 5 As part of PMABHIM many contracted workers/ outsourced agencies would be hired to undertake cleanliness, housekeeping, biomedical waste collection services, which may not fall under the ambit of the formal training programs under NHM/ PMABHIM. Trainings need to be provided to all outsourced agencies teams on infection control practices and biomedical waste handling to ensure health and safety of workers and patients

Gap 6 Public works departments and other accredited agencies will carry out works related to upgradation of the HCWs, while national laws and standards exist for labour work safety, due to the small nature of these works, these contracts are also often outsourced to smaller contactors. It is important that these contractors' teams undergo structured and formal trainings in occupational health and safety management, use of PPE, and maintaining cleanliness, sanitation and to ensure minimal disruption to the environment, and visitors.

Gap 7: States do not have all CBMWTF connected to the online CEMS monitoring systems to supply data on emissions from the treatment facilities.

Way Forward

23. The Program will ensure adequate resources are provided for timely and effective implementation of environmental and social measures and the key recommendations are made a part of the Program Action Plan.

INPUTS TO THE PROGRAM ACTION PLAN (PAP)

Action Description	Source	Responsibility	Timing		Completion Measurement
Hiring of E&S Specialists (*separate roles for Environment and Social risk management)* as a part of the PMU for the EHSD Program.	Environmental and Social Systems	MoHFW, GoI	Due Date	3 Months of Effectiveness	Hiring of qualified staff, scope of work including preparation of E&S guidance and monitoring the implementation of E&S actions (with Nodal E&S persons at state level) and reporting protocols, as in Annex xx of the ESSA and relevant templates
Development of guidance to states for updating terms of references for state-level BMWM advisory committee to look holistically at management of all wastes	MoHFW		After 3 Months of Effectiveness	Guidance issued to states and disclosed on MoHFW website	Development of guidance to states for updating terms of references for state-level BMWM advisory committee to look holistically at management of all wastes
Strengthen qualification/accreditation standards of BMWM/IC supervisor linked to management of sanitation, accident and spills, fire safety, emergency response preparedness, and complaints handling on BMWM (in HCWs)	MoHFW		After 6 Months of Effectiveness	States to report back to MoHFW regarding updating TORs of the BMWM and IC supervisor's role under PM ABHIM	Strengthen qualification/accreditation standards of BMWM/IC supervisor linked to management of sanitation, accident and spills, fire safety, emergency response preparedness, and complaints handling on BMWM (in HCWs)
States to ensure continuous occupational health and safety training to all outsourced agencies engaged in the cleanliness activities for HWCs	MoHFW		Recurring	States to include action and costing in their annual work plans submitted to MoHFW,	States to ensure continuous occupational health and safety training to all outsourced agencies engaged in the cleanliness activities for HWCs

				and MoHFW to approve	
Development of an **inclusion monitoring template** to track roll-out of PM-ABHIM in aspirational districts and integrated tribal development blocks (ITDA) blocks in select states.* *(States with aspirational districts and designated Schedule V and Schedule VI areas)*	Environmental and Social Systems	MoHFW, GoI	Due Date	TBC with MoHFW before close of appraisal	Development and adoption of an inclusion template to monitor a) specific KPIs to track tribal health programming and outreach and b) functionality of Jan Arogya Samitis in ITDA blocks.* *(Adoption by states with aspirational districts and designated Schedule V and Schedule VI areas)*
Biannual ESSA monitoring report will be produced and submitted to WB based on a desk review of the quarterly progress reports, other information sources, and sample-based field monitoring visits in states.	Environmental and Social Systems	MoHFW, GoI	Due Date	TBC with MoHFW before close of appraisal	Regular reporting in Implementation Support Missions

I INTRODUCTION

A. ENVIRONMENTAL AND SOCIAL SYSTEMS ASSESSMENT: PURPOSE AND OBJECTIVES

24. An Environmental and Social Systems Assessment (ESSA) was carried out in line with the World Bank policy and procedure for PforR financing for the identified Program. This was undertaken to (a) identify the possible benefits, risks and environmental and social impacts applicable to the interventions of the Program; (b) review the policy and legal framework related to the management of the environmental and social impacts of Program interventions; (c) assess the institutional capability regarding environmental and social management systems within the Program system; (d) assess the performance of the Program system with respect to the basic principles of the PforR instrument and identify gaps, and (e) submit recommendations and PAPs to address gaps and improve performance during the program's implementation.

The ESSA covered an assessment of MoH&FW and DoH&FW of Andhra Pradesh, Meghalaya, Tamil Nadu, Odisha, and Uttar Pradesh which are most relevant for health service delivery in NHM, AB HWC, and PM AB-HIM. The ESSA identified opportunities for strengthening the existing institutional, operational, and regulatory systems and capacities pertaining to environment and social issues in the health sector. The findings of the ESSA are based on use of checklists to assess BMWM, the institutional assessment questionnaire, and discussions with key stakeholders, including officials from MoHFW and the five states. The ESSA also benefited from the experience of ongoing World Bank-financed projects in Tamil Nadu Health System Reform Program P166373; Andhra Pradesh Health Systems Strengthening Project; Uttar Pradesh Health Systems Strengthening Project P100304; and Meghalaya Health Systems Strengthening Project P173589.

This ESSA assesses or considers the extent to which the Program's environmental and social management systems are adequate for and consistent with six core environmental and social principles (hereafter, Core Principles), as may be applicable or relevant under PforR circumstances. The Core Principles are listed below and further defined through corresponding Key Planning Elements that are included under each Core Principle in Chapter III.

(a) Core Principle 1: Environmental and Social Management: Environmental and social management procedures and processes are designed to: (a) promote environmental and social sustainability in Program design; (b) avoid, minimize, or mitigate against adverse impacts; and (c) promote informed decision making related to a Program's environmental and social effects

(b) Core Principle 2: Natural Habitats and Physical Cultural Resources: Environmental and social management procedures and processes are designed to avoid, minimize, and mitigate any adverse effects (on natural habitats and physical and cultural resources) resulting from the Program.

(c) Core Principle 3: Public and Worker Safety: Program procedures ensure adequate measures to protect public and worker safety against the potential risks associated with: (a) construction and/or operations of facilities or other operational practices developed or promoted under the Program; and (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials.

(d) Core Principle 4: Land Acquisition: Land acquisition and loss of access to natural resources are managed in a way that avoids or minimizes displacement, and affected people are assisted in improving, or at least restoring, their livelihoods and living standards.

(e) Core Principle 5: Indigenous Peoples and Vulnerable Groups: Due consideration is given to cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of indigenous peoples and to the needs or concerns of vulnerable groups.

(f) Core Principle 6: Social Conflict: Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

An additional purpose of this ESSA is to inform decision making by the relevant authorities in the borrower country and to aid the Bank's internal review and decision process associated with the **India's Enhanced Health Service Delivery Program (P178146)**. The findings, conclusions and opinions expressed in this document are those of the World Bank and the recommended actions that flow from this analysis will be discussed and agreed with counterparts in MoH&FW and States and will become legally binding agreements under the conditions of the new loan.

B. ESSA METHODOLOGY

The ESSA was primarily a desk-based exercise with virtual interactions and consultations, due to the impacts of COVID-19 and travel restrictions. ESSA included a review of the borrower's systems including policies, guidelines, regulations, standards, procedures, and systems and capacities for E&S management were compared against the core principles and key planning elements to identify gaps that could affect Program performance. (a complete list of the government policies and documents reviewed is included in Annex 1 and 5. Detailed consultations with state nodal officials across seven states were conducted utilizing the possibility of virtual platforms. The ESSA team also ensured consultations were evenly spread across the hierarchy by consulting bio-medical waste management focal points, nodal persons for community strengthening initiatives and officials in-charge of infection control and safety. Because of the COVID-19 situation, all the interviews and consultations were conducted through online video conferencing or telephonically. The Bank team reviewed the capacity of existing systems at the state and block level (specifically for integrated tribal development blocks) to plan and implement effective measures for environmental and social management of the Program and determine if any measures will be required to strengthen it to manage risks and enhance benefits.

ESSA refers both to the process for evaluating the acceptability of a borrower's system for managing the Program's E&S risks in the operational context, and to the final report that is an output of that process. The ESSA process for the EHSD Program is a multistep methodology in which the World Bank team analysed the E&S effects, including indirect and cumulative effects, of activities associated with the defined Program; analyses the borrower's systems for managing the identified E&S effects, at the federal and state level, including reviewing practices and the performance track record; compares the borrower's systems - laws, regulations, standards, procedures, and implementation performance against the core principles and key planning elements to identify any significant differences between them that could affect Program performance; and recommends measures to address capacity and performance on policy issues and specific operational aspects relevant to managing the Program risks such as staff training, implementing institutional capacity building programs, developing and adopting internal operational guidelines.

The World Bank ESSA team and the borrower worked closely to identify and consider the range of E&S effects that may be relevant to the Program both at the central and state level. The PforR approach distinguishes specific roles and responsibilities regarding major steps and tasks at the various phases of the program cycle.

The World Bank team prepared this ESSA report that provides an overview and analysis of the MoFHW's as well as the seven state government's policies and regulatory frameworks for the environmental and social aspects of the participating state health societies. The ESSA discusses relevant environmental and social national legislations for the health sector in India. Apart from the national legislations, there are a few state level environment regulations and social inclusion guidelines which are also considered prior to implementing activities in any state. The ESSA filtered Odisha and Tamil Nadu as focus states to decipher key social risks and institutional capacities in improving health service delivery in tribal blocks.

The ESSA specifically evaluates modalities at the National and State level to help improve access and quality of health service delivery in tribal blocks of the states. Specifically for vulnerable groups, SC/ST households and women-headed households in Meghalaya, Tamil Nadu, Odisha and Andhra Pradesh. The ESSA also focuses on land management aspects and labor and safety standards as well as inclusionary strategies adopted by states.

The methodology focused on the understanding of the program activities, benefits, and risks associated with various activities, environmental and social conditions, the existing institutional mechanism at various levels for implementation, management, policies, and regulatory aspects. It is to understand the gaps and recommend an action plan to not only address the gaps but also to ensure sustainable environmental and social effects under the program.

Towards this, an assessment of the government's program and various associated activities was made; mainly focusing on the proposed upgradation of facilities and services, biomedical waste management which has a higher probability of risks and impacts. The assessment also took into consideration locational differences of activities, compliance to applicable policies and regulations, institutional capacities, and tools to support these. This helped in understanding the gaps and formulate the required actions to ensure that the proposed program meets the environmental and social requirements.

The following tasks involved in shaping the report:

Task 1: Screening and scoping of environmental and social risks of proposed activities

▶ *Subtask 1.1: Understanding the ongoing Program*

The PM-ABHIM scheme the largest pan-India Health Infrastructure Program that aims to provide a much-needed fillip to India's capacity to address emergent Public Health issues. This will bring about a paradigm shift in India's healthcare infrastructure and make it more resilient.

The PM-ABHIM has a three-pronged approach to health sector reform. First, it strengthens the public health system, with a focus on bolstering infrastructure, to deliver universal CPHC to address the current epidemiological and demographic transitions, a double burden of chronic and infectious diseases, and the unfinished agenda of RMNCAH, which have collectively created an increasing demand for public health services. Second, it expands and builds an IT-enabled disease surveillance system. Third, it supports biomedical research and the one-health approach to respond to epidemics. While the PM-ABHIM is a new initiative, it is layered on top of the NHM—an extensive National Government program

that aims to strengthen health systems, RMNCAH, communicable diseases, and NCDs—and Ayushman Bharat (AB) which aims to provide CPHC (Ayushman Bharat health and wellness centers [AB-HWCs] and offer financial risk protection (PM-JAY). PM-ABHIM's approach aims to enhance service delivery and quality of care, with a reinforced focus on CPHC, and sets the stage for a long-term transformational reform agenda for equipping India's health system for the 21st century. Given this, the proposed Program aims to assist India in embarking on this journey for health sector reform, by providing support to the immediate and medium-term agenda for enhancing CPHC service delivery, especially in the wake of the COVID-19 pandemic and helping to create a platform for longer-term sustainable interventions to improve quality of care and strengthen health sector governance and accountability.

▶ *Subtask 1.2: Review of locational aspects and sensitivities of the ongoing and proposed program (including site sensitivities, community/stakeholder related sensitivities)*

The objectives of the PM-ABHIM Program and the proposed EHSD program include strengthening grass root public health institutions to deliver universal Comprehensive Primary Health Care, active community engagement and improved risk communication, health education and prevention; and to strengthen public health institutions and public health governance capacities, to meet challenges posed by the current and future pandemics/epidemics with capacities for comprehensive diagnostic and treatment including for critical care services. Diagnosis of state led initiatives on community engagement, tribal health programming, inclusion initiatives to reach women-headed households, and monitoring of works are found to be robust. The emphasis on community ownership of health facilities and linkages between 'people' 'providers' and 'policy makers' highlight the high degree of community involvement in health service delivery and management essential for the long-term sustainability of facilities created. Involvement of communities and the civil sector (different agencies in different regions) in the delivery of quality health services supports addressing these risks provided there is ample guidance and awareness. Additionally, PM-ABHIM and NHM have a clear emphasis on awareness and training needs of communities including tribal households, and actions to improve the monitoring capacity of agencies/communities are detailed out in the ESSA. ESSA also includes a list of ineligible activities, excludes the same under the program, and outlines the steps (action plan) to be followed by the borrower to mitigate potential adverse risks and impacts.

Task 2: Review of Regulatory Aspects

▶ *Subtask 2.1: Applicable regulatory / policy-related aspects to various program activities (including construction, consultancies, capacity development).*

The ESSA undertook a review of priority policies and operational guidelines applicable to the health sector and public health service delivery in India. The ESSA notes the following policies and government guidelines are directly relevant to the Program:

1. National Health Policy 2017: The primary aim of the National Health Policy, 2017, is to inform, clarify, strengthen and prioritize the role of the Government in shaping health systems in all its dimensions- investments in health, organization of healthcare services, prevention of diseases and promotion of good health through cross sectoral actions, access to technologies, developing human resources, encouraging medical pluralism, building knowledge base, developing better financial protection strategies, strengthening regulation and health assurance.

Equity, Accountability and Universality are core principles of the National Health Policy:

Equity: Reducing inequity would mean affirmative action to reach the poorest. It would mean minimizing disparity on account of gender, poverty, caste, disability, other forms of social exclusion and geographical barriers. It would imply greater investments and financial protection for the poor who suffer the largest burden of disease.

Affordability: As costs of care increases, affordability, as distinct from equity, requires emphasis. Catastrophic household health care expenditures defined as health expenditure exceeding 10% of its total monthly consumption expenditure or 40% of its monthly non-food consumption expenditure, are unacceptable.

Universality: Prevention of exclusions on social, economic or on grounds of current health status. In this backdrop, systems and services are envisaged to be designed to cater to the entire population- including special groups.

Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PM-ABHIM): As mentioned earlier, the World Bank's PforR Program supports the GoI's PM-ABHIM scheme. The Implementation Framework for the PM-ABHIM includes a negative list for financing of civil works for health facilities*4*. Key highlights of the negative list are listed below. The ESSA found that PM-ABHIM's negative list is in complete adherence with World Bank's PforR guidelines:

- Land should be available for the selected facilities and land purchase cost should not be covered with this component.
- Repair and Renovation works already undertaken under the NHM Funds.
- Facilities or any of its components should not over-lap with the funds provided under FC-XV grants.
- This amount should not be used for the construction of a single room /wellness area or any other single project like boundary wall, toilets, water tanks etc.
- Construction of boundary walls, entrance, pavements, footpaths etc.

For complete list of environmental policies refer to annex 5 and table 10 for complete list of applicable environmental policies analysed

▶ *Subtask 2.2: Review of compliance levels of ongoing programs*

The ESSA also reviewed compliance levels of state health societies for the GoI's National Health Mission – an ongoing, flagship program. The National Health Mission (NHM) encompasses its two Sub-Missions, The National Rural Health Mission (NRHM) and The National Urban Health Mission (NUHM). The main programmatic components include Health System Strengthening, Reproductive-Maternal- Neonatal-Child and Adolescent Health (RMNCH+A), and Communicable and Non-Communicable Diseases. The NHM envisages achievement of universal access to equitable, affordable & quality health care services that are accountable and responsive to people's needs.

Overall, the findings of the ESSA concludes that state health societies of the participating seven states, have requisite systems, checks and balances to ensure compliance of E&S aspects under the

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NHM. Additionally, Meghalaya, Andhra Pradesh and Tamil Nadu (3 of the seven participating states) have active bank-financed operations with the state health societies. The ESSA reviewed Aide Memories and Implementation Support and Results Report (ISRs) of these three bank-financed operations to gauge compliance on E&S aspects in Andhra Pradesh, Tamil Nadu and Uttar Pradesh. E&S performance ratings for these three operations were found to be 'Satisfactory' indicating adequate compliance in on-going programs at the federal and state-level.

▶ *Subtask 2.3: Assessing the gaps in regulations and mechanisms*

The environmental and social management under the Program will be largely based on the existing legal, regulatory, and institutional system in India. The applicable environmental and social management systems are generally adequate to address underlying environmental and social risks, and noteworthy strengths are (i) existing national guidelines on bio-medical waste management (ii) equity, universality and accountability. ESSA has identified Gaps in the existing system to manage environmental and social effects, which could be managed through certain opportunities for improvement.

Overall, the ESSA found that MOHFW and state health societies have the necessary regulations for managing E&S effects as per PforR guidelines.

Task 3: Assessment of the environmental and social benefits and risks of the proposed program

▶ *Subtask 3.1: Assessment of Environmental and Social Risks and Benefits*

Consistent with the requirements of the Bank PforR Policy, the proposed PforR operation does not support activities that pose high social or environmental risks. There will be no large-scale infrastructure, only minor refurbishment, upgradation-related works within health facilities. Additionally, existing grievance redressal systems under PM-ABHIM at the federal level, state-level and community-level are functional.

An assessment of the key environment risks and benefits was conducted for the program, and the program specific results areas in table 8 and 9

The activities to be supported by the Program are likely to provide social benefits such as (i) increased community ownership and management of HWCs through Village Health and Sanitation Committees, Jan Arogya Samitis and Mahila Arogya Samitis; (ii) development of performance measurement and rewards at the district level including in unserved areas; (iii) Increased number of operational / functional HWCs providing expanded healthcare service delivery packages of CPHC including for tribal blocks in Schedule V areas of the state and (iv) increased utilization of public health facilities by women-headed households and SC/ST households.

The key social risks of the program are directly associated with the risks of exclusion particularly for STs and vulnerable groups in unserved areas, i.e., aspirational districts and ITDA blocks. Four of the seven participating states have designated Schedule V and Schedule VI areas*5*. Additionally, across

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5 In Scheduled Areas declared so under the Fifth Schedule, the governor of the state has special responsibilities with respect to tribal populations in the area including issuing directives to the state government and limiting the effect of acts of the central or state legislature on the Schedule Area.On the other hand, in Scheduled Areas declared so under the Sixth Schedule, the emphasis is on self-rule; tribal communities are granted considerable autonomy, including powers to tribal communities to make laws and receive central government funds for social and infrastructure development. To enable local control, the role of the Governor and the State are subject to significant limitations in Sixth Schedule areas.

seven states, the program covers 15 aspirational districts. **Therefore social risks can be broadly divided into two pillars: I. Risks of exclusion in aspirational districts and ITDA blocks** (i) uptake and utilization of health facilities by traditionally vulnerable groups in unserved and underserved areas, including tribal blocks and Schedule V areas of Odisha, Andhra Pradesh, Meghalaya and Tamil Nadu; (ii) utilization of health facilities by women-led households and adolescent girls for reproductive healthcare, NCD screening and preventive care; (iii) access to quality health care for the urban poor, including migrants and informal workers. **II: Functionality of community-level platforms (JAS, MAS) in aspirational districts and ITDA blocks** (i) low institutional capacities of JAS and MAS in tribal/unserved areas to manage health facilities, coordinate with VHSNCs and act as grievance redressal platforms as per Jan Arogya Samiti Guidelines[6].

▶ **Subtask 3.2: Arriving at possible risk avoidance, mitigation, management, and benefit** *enhancement measures*

The environmental and social management under the Program will be largely based on the existing legal, regulatory, and institutional assessment of health systems in India at the federal level and state health societies of the participating seven states. The applicable environmental and social management systems are generally adequate to address underlying environmental and social risks, and noteworthy strengths are (i) existing national guidelines on access and equity under NHM (ii) policy emphasis on inclusion and quality health service delivery in unserved areas. ESSA has identified Gaps in the existing system to manage environmental effects, which could be managed through certain opportunities for improvement.

Task 4: Assessment of Institutional Capacities and constraints

Subtask 4.1: Gap Assessment in terms of capacities, tools, and interagency linkages co-ordination

Following the previous subtask, a gap assessment was undertaken on the need and provision of management mechanisms to manage environmental risks and enhance benefits. This included gaps in staff and resource supply, availability of guidance's/frameworks and appropriate tools (hard /soft), and co-ordination mechanisms between agencies to manage the environmental and social aspects well during all stages.

▶ Subtask 4.2: Assessing the needs to strengthen the existing mechanism to manage the environmental aspects of the proposed program

Based on the gap assessment conducted during the subtask above, recommendations were made to strengthen existing mechanisms to manage environmental and social aspects. This includes suggestions on required staff capacities frameworks to be followed for better environmental effects, tools, and mechanisms to ensure long-term management.

During the Appraisal Mission, the draft ESSA and its findings – benefits, risks, gaps, and recommendations (environmental and social) will be shared with MoHFW. A consultation will be undertaken to gather feedback and the report will be report will be updates accordingly for final

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6 *https://nhsrcindia.org/sites/default/files/2021-06/Guidelines%20for%20Jan%20Arogya%20Samiti.pdf*

disclosure. Details of Stakeholders Consulted in the Region are presented in *Annex 11* The methodology for ESSA preparation is presented in *Figure 2.*
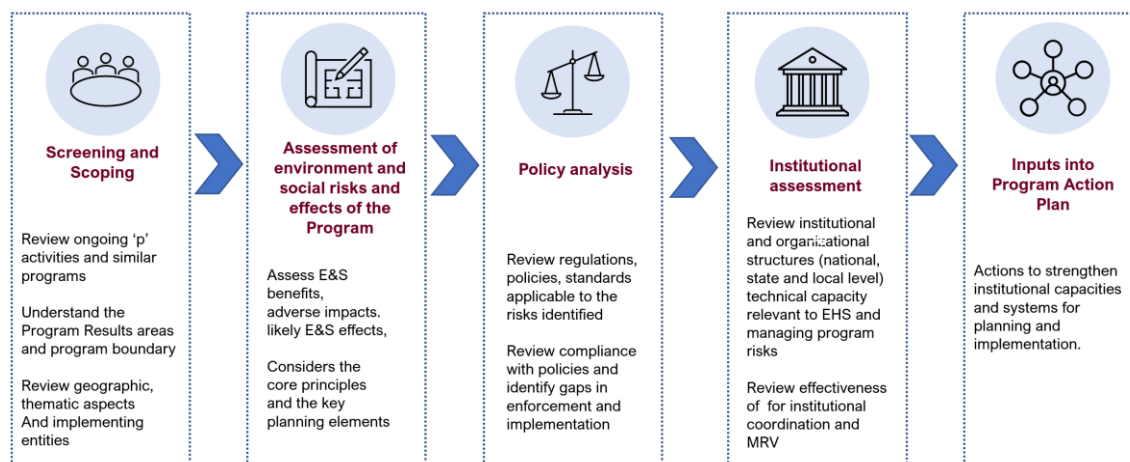
Figure 2: Methodology adopted for E&S Systems Assessment

C. ORGANIZATION OF ESSA REPORT

▶ *Chapter 1: Introduction to the Program*: presenting the overall program context and the details of the Governments program this program would support scope, and result areas of the Bank-financed P4R, the program implementation arrangements, and identification of E&S effects of program activities,

▶ *Chapter 2: Purpose and Objectives of ESSA* introduces the ESSA and its methodology, Potential Environmental and Social Effects discusses Result Area (RA) wise Environmental Effects (Benefits, Risks, and Opportunities to manage these),

▶ *Chapter 3: Assessment of Environmental and Social Management Systems and Implementation Capacity* discusses the guidance on E&S management in the P for R policy of the Bank, and discusses the systems, regulatory aspects, gaps, and proposed actions bridge the gaps through a systematic description pf E&S effects to be considered as part of each of the ESSA 6 core principles It presents an assessment of the adequacy and consistency of the program's environmental and social management systems and related implementation capacity against the Core Principles and Key Planning Elements

▶ *Chapter 4: Consultation and Disclosure* and describes the key formal and informal consultations undertaken as part of the ESSA process, important input and recommendations received, and how and when the ESSA will be disclosed.

▶ *Chapter 5: Environmental and Social Inputs to the Program Action Plan* for mitigating impacts risks and enhancing environmental & social benefits and overall E&S management. This section lists the actions that the ESSA Team recommends be undertaken to addressing the system and capacity gaps and shortcomings identified which are grouped into two categories: (a) those that have been mainstreamed into program design and (b) those that are to be included in the Program Action Plan.

II PROGRAM DESCRIPTION AND POTENTIAL ENVIRONMENTAL AND SOCIAL EFFECTS

A.   PROGRAM CONTEXT

India's performance in health has varied widely over time, states, and indicators. In recent decades, India's health system has been at or above global trends for its income level on some key indicators. India's life expectancy—at 69 in 2017, up from 58 in 1990—is higher than the average for its income level. Under-five, infant, and maternal mortality rates are all close to the average for India's income level, reflecting significant achievements in access to skilled birth attendance, immunizations, and other priority services. India still lags global trends on other key indicators, such as stunting and financial risk protection. A rapidly increasing burden of non-communicable diseases (NCDs) and a persisting high burden of communicable diseases further compound the challenges in the health sector. This has long-term implications for health, learning, employability, and economic performance.

While India's health system has made significant progress, it is plagued by some critical performance issues. First, access is not equal or equitable. Wide disparities in all key health outcome indicators exist across states as reflected in the National Institution for Transforming India (NITI) Aayog's Health Index. Across India, poor and Scheduled Caste and Scheduled Tribe (SC/ST) populations have far worse outcomes. Access to care also varies by types of services (e.g., less access to NCD services compared to RMNCH services) and residence (e.g., urban poor have limited access to health services). Second, quality of care remains a key challenge. While there has been some progress in terms of structural quality (infrastructure, other inputs), process quality and patient outcomes lag. These health system performance challenges have resulted in India ranking 6th (out of 8 countries) in South Asia on the Healthcare Access and Quality (HAQ) Index. Furthermore, India's population lacks financial risk protection against catastrophic and impoverishing medical expenses. An estimated 60 million Indians are pushed into poverty each year due to out-of-pocket payments for health.

The COVID-19 outbreak has re-emphasized the need and urgency for significant reforms to improve health sector performance. Four key health system reforms need to be prioritized:

- ▶ ensure universal, effective coverage: The health sector has focused primarily on access to RMNCH services, with inadequate attention to NCDs. Quality of care varies widely between states, levels of care, and even by the same doctor in public service vs. private practice. Metropolitan health outcomes during the COVID-19 pandemic reveal neglect of urban health systems; ineffective engagement of municipalities in health; and the consequences of urbanization. Service delivery needs to be redesigned for providing comprehensive primary health care (CPHC) that includes NCDs and mental health in addition to RMNCAH; building a people-centred health system focused on quality; and addressing the unique challenges of urban health care delivery.
- ▶ spend more and spend better: At just 1% of GDP, India's low levels of government health spending have resulted in insufficient service coverage and weak financial risk protection against the impact of high out-of-pocket expenditures by households. Increasing government spending on health, strengthening public sector systems and strategic engagement of the private sector will maximize the impact of health sector spending
- ▶ move toward a system of accountability for results: the focus needs to transition from inputs to outputs and outcomes. Reforming the center-state fiscal architecture would have a substantial

effect on: (a) health sector outcomes and convergence between states. A shift to outputs and outcomes would entail strengthening data systems, accountability based on monitoring outputs and outcomes, performance-based management, and gradual shifts in payment methods; (b) health sector outcomes and convergence between states. Revisiting inter-fiscal transfers that includes streamlining Centrally Sponsored Scheme (CSS) processes, focusing more on outputs and giving extra priority to states with the greatest needs; and (4) build a resilient public health system: The COVID-19 pandemic core public health functions have been neglected. Inadequate proactive engagement of the private sector has put a drag on India's health service delivery as well as self-sufficiency in production of essential inputs such as pharmaceuticals, diagnostics, and equipment. India needs to build a robust public health system resilient to shocks.

A complementary set of engagements supports this expansive and ambitious reform agenda. The proposed Program aims to support the government to address the first three reforms (universal, effective coverage; more, better public spending; and accountability for results). A package of state-level health system reform operations, city-level multi-sectoral operations, and health financing engagements also support these three reforms. A complementary Program is being proposed in parallel to address the third and fourth reforms (accounting for results; resilient public health system).

The recognition that the public health system needs to respond to outbreaks while continuing to deliver essential non-outbreak health services led to the launch of the Prime Minister's Ayushman Bharat Health Infrastructure Mission (AB-HIM) scheme. The AB-HIM has a three-pronged approach to health sector reform. First, it strengthens the public health system to deliver universal CPHC to address the current epidemiological and demographic transitions, a double burden of chronic and infectious diseases, and the unfinished agenda of RMNCH, which have collectively created an increasing demand for public health services. Second, it expands and builds an IT-enabled disease surveillance system. Third, it supports biomedical research and one-health approach to respond to epidemics. While the AB-HIM is a new initiative, it is layered on top of the National Health Mission (NHM) – an extensive national government program that aims to strengthen health systems, RMNCH, communicable diseases and NCDs – and Ayushman Bharat which aims to provide CPHC (Health and Wellness Centers - AB-HWCs) and offer financial risk protection (PM-JAY).

Given India's federal system and the corresponding decentralized nature of health service delivery, distinguishing between center and state roles and accounting for state capabilities will be critical in moving forward with health sector reforms. Health is a state subject in India with states responsible for delivering health services, in part by implementing national health guidelines and programs. In terms of health financing, states account for two-thirds of total government health spending and about one-third of financing for health flows from the national level to states largely through clearly defined CSSs. The overall levels of state spending, including the federal funding under CSS, vary significantly and to a great extent reflects the state's own income level, commitment and vision. With respect to organization of the public health sector, there is less variation with most states delivering primary care through sub-centers (SCs) and primary health centers (PHCs), secondary care through community health centers (CHCs) and district hospitals, and tertiary care through district hospitals and medical colleges. The level of community and local government engagement in the management of public health facilities, however, varies across states, from a basic minimum defined through central guidelines to a larger role of local governments. Organization vis-a-vis the role of the public sector vs the private sector also varies substantially by state with wide variation, with some state governments proactively seeking out private sector engagements and others focused on strengthening the public sector and only play a regulatory role with the private sector.

In terms of payment mechanisms and modalities, states are in the driver's seat to determine salaries and payment models for health sector staff and provide the bulk of financing for salaries resulting in significant variations in health sector staff payments across states. The regulatory function for the health sector remains primarily at the center, with little room for states to make decisions.

Thus, while some functions remain primarily at the national level (e.g., regulatory roles and guidelines), most others are either shared with states (e.g., financing) or rest primarily with states (e.g., organization, payment). Hence, availability and quality of public health facilities, service utilization, efficiency in the use of resources, and level of engagement of local authorities are largely dependent on state capabilities. Given this, the proposed Program implementation framework recognizes that the centre holds responsibility for providing financing, defining the overall policy framework, identifying priority results, developing performance monitoring frameworks and providing incentives to achieve results, providing technical assistance to states, and creating a platform for implementation research, cross-state learning, and knowledge exchange. States hold the responsibility for providing financing, implementing and achieving results, coordinating within the state (district, block, local bodies & private sector), and convergence across sectors and programs. The Program will incentivize the establishment of such a platform to provide a push to all the states to undertake and improve health reforms.

As the Program will be anchored on and enhance the efficiency and effectiveness of the government's existing well-defined health sector program, the Program for Results (PforR) is considered the most suitable financing instrument. The PforR instrument will enable a much-needed shift from inputs to outcomes, through a greater alignment of financing with results. The Government has already outlined this results' focus through clearly defined results areas and a program framework with prioritized interventions for the PM-ABHIM Program. This will be integrated within the Government's National Health Mission (NHM), which is the primary platform for health service delivery in the country, driving the proposed reform agenda. It will thus build on and strengthen the existing institutional capacity and fiduciary systems of the Ministry of Health and Family Welfare (MoHFW), which is critical for the health system to move to the next level of performance and well-aligned with the principles of a PforR operation.

B. THE GOVERNMENT OF INDIA'S PROGRAM

Several MoHFW initiatives and schemes support achievement of this goal and associated targets, including the NHM, Ayushman Bharat, quality of care initiatives and HRH reforms.

NHM, the MoHFW's flagship CSS (launched in 2005), aims to strengthen health systems, RMNCAH, and communicable and NCDs. While it was initially focused on rural health, urban health was eventually subsumed under it, though the urban health agenda has not progressed as much. While the extent of success has varied, NHM has served as the vehicle for some key health sector reforms, including decentralized decision-making to states, governance, financing, procurement, performance and innovation incentives, technology, and quality of care initiatives in public health facilities (e.g., National Quality Assurance Standards- NQAS). Several improvements have been made in enhancing the size, composition, competence and management of the health workforce deployed in the public sector including introduction of a program management cadre. Another key part of the government program is Ayushman Bharat (launched in 2018) that has two complementary programs - Health and Wellness Centers (AB-HWCs) and PM-JAY. The AB-HWC program (implemented through NHM) responds to

India's epidemiological transition by expanding primary health care from the existing limited package of maternal and child health (MCH) services to a comprehensive package preventive, promotive, curative, and rehabilitative and palliative services that cover MCH, NCDs and communicable diseases. The AB PM-JAY health insurance program offers cashless secondary and tertiary hospitalization coverage to the bottom 40 percent at over 20,000 public and private hospitals across India to provide financial risk protection against hospitalization.

In the wake of the COVID-19 pandemic, the GoI announced the AB-HIM scheme to strengthen delivery of healthcare services, including strengthening HWCs, especially in urban areas (rural HWCs will be supported in seven high focus states and three northeastern states; in other states, rural HWCs will be supported by FC-XV grants to local government bodies); enabling universal access to basic diagnostic and treatment services, including NCDs and mental health; building a trained frontline health workforce to respond to public health needs; and strengthening synergies and referral linkages with other programs to provide continuum of care. For pandemic preparedness, it also aims to expand and build an IT enabled disease surveillance system by developing a network of surveillance laboratories at block, district, regional and national levels, points of entry and in metropolitan areas, and strengthening public health institutions at the block and district levels to provide comprehensive treatment for infectious diseases without disruption to other essential health services and support research on COVID-19 and other infectious diseases.

C. BANK FINANCED PROGRAM SCOPE, OBJECTIVES, AND KEY RESULTS AREAS

The Government program ("p") is anchored on India's National Health Policy (NHP) 2017 which has a vision of "attainment of the highest possible level of health and well-being for all at all ages, through a preventive and promotive health care orientation, through increased access, improving quality and lowering the cost of health care delivery". NHP 2017 recognized four major trends affecting the country's health system: (a) improvements in maternal and child health (MCH) alongside a growing burden from NCDs and an unfinished agenda related to infectious diseases, (b) emergence of a robust health industry, (c) high rates of new and deeper impoverishment due to dependence on out-of-pocket (OOP) financing for health, and (d) availability of enhanced 'fiscal space' due to sustained economic growth (MoHFW, GoI 2017). Most notably, NHP 2017 called for a paradigm shift in primary health care from limited and selective care to provision of comprehensive services at frontline public facilities along with appropriate forward and backward referral links. For secondary and tertiary care, NHP emphasized the need for a move from input-based financing to output-based strategic purchasing from both public and private providers.

The Government is currently during implementing several transformational reforms in support of NHP 2017, the vision for which was operationalized with initiation of Ayushman Bharat (AB) - 'Long Live India' - reforms with one of the two pillars focused on establishment of HWCs as a platform to deliver comprehensive primary healthcare. This pillar of Ayushman Bharat focuses on upgrading of existing frontline primary health infrastructure into AB-HWCs that provide diagnostic tests, free essential medicines, and other CPHC services at health sub-centres (HSCs) and primary health centres as the first points of contact for India's public sector health system. While the AB HWC is premised on frontline primary health infrastructure, it leverages existing community level platforms to deliver population-based services.

The AB-HWC program rests on the institutional mechanisms, governance structures and systems created under the National Health Mission (NHM), a flagship CSS scheme for health systems strengthening and response to India's epidemiological transition. It endeavours to expand primary health care from the existing limited package of RMNCHA services to a comprehensive package preventive, promotive, curative, and rehabilitative and palliative services that cover MCH, NCDs, and communicable diseases. AB-HWCs leverages several NHM health systems reforms to deliver on the CPHC agenda. This includes decentralized decision-making to states, strengthening governance, financing, and procurement systems, provision of performance and innovation incentives, use of technology, deployment of quality-of-care initiatives in public health facilities (for example, National Quality Assurance Standards (NQAS), LaQshay and Kayakalp), and community ownership and engagement initiatives.

Several improvements have been made in enhancing the size, composition, competence, and management of the health workforce deployed in the public sector including introduction of a program management cadre. In the wake of the COVID-19 pandemic, the GoI announced the PM-ABHIM scheme in 2021 to strengthen delivery of health care services, which is also implemented through the NHM implementation platform. For supporting India's efforts for transforming CPHC, PM-ABHIM includes strengthening HWCs, especially in urban areas (rural HWCs will be supported in seven high-focus states and three north-eastern states; in other states, rural HWCs will be supported by the Fifteenth Finance Commission (XV-FC) grants to local government bodies) enabling universal access to basic diagnostic and treatment services, including NCDs and mental health; building a trained frontline health workforce to respond to public health needs; and strengthening synergies and referral links with other programs to provide continuum of care. Much of this is complementary to the efforts of AB-HWCs to advance the provision of CPHC and is focused on filling critical gaps in infrastructure and services. For pandemic preparedness, it also aims to expand and build an IT-enabled disease surveillance system by developing a network of surveillance laboratories at block, district, regional, and national levels, points of entry, and in metropolitan areas and by strengthening public health institutions at the block and district levels to provide comprehensive treatment for infectious diseases without disruption to other essential health services and support research on COVID-19 and other infectious diseases.

In addition, the Fifteenth Finance Commission (XV-FC) Report recommended several grants for health, and the GoI has now launched XV-FC grants to local bodies for health. These grants are intended to support primary care, including gaps in diagnostic infrastructure for PHCs, block public health units, and HWCs (both rural and urban). A substantial share of Finance Commission (FC) local grants is targeted to infrastructure for primary care and important social determinants of health (including water and sanitation, air pollution, and waste management). These grants are being allocated across states based on MoHFW guidance to help close gaps in primary health infrastructure. Given the complementarity with PM-ABHIM and AB-HWCs, the XV-FC local body grants provide a critical contribution to the realization of CPHC transformational agenda and necessitate not only coordination between the state health departments and local bodies but also improved state capacity of local bodies to ensure effective and efficient use of the FC local grants.

The states provide the service delivery platforms, match funding for federal programs (for example, in NHM, the central and state co-finance implementation using a 60:40 ratio (90:10 for smaller state) and additional state budgets to achieve the state level results to deliver on the CPHC agenda. The states are engaged in program implementation and tracking progress and addressing implementation bottlenecks.

The proposed PforR Program will support the GoI's ongoing implementation of an ambitious reform agenda to transform the delivery and quality of essential health services as well as underlying accountability mechanisms needed to enable such reforms. The proposed Program will tackle reforms related to ensuring universal, effective coverage; spending more and better; and moving toward a system of accountability for results. The Program has three key results areas with a combination of both technical interventions related to CPHC, quality of care and health financing, as well as transversal interventions to strengthen institutions and state capacity to focus on results to enable achievement of the expected outputs and outcomes in the Program Theory of Change. Figure 2 illustrates the PM-ABHIM components and underlying relevant Government programs that are included in this proposed PforR Program boundary. The selected seven priority states will be the focus for state-level interventions and results. TA will be provided at the national level and to priority states to enhance institutional and state capacity to achieve the results.

The proposed PforR Program ("P") is a well-defined subset of the Government program ("p") that includes PM-ABHIM and other supporting elements of focused on public health system strengthening (first area of focus for PM-ABHIM) to facilitate health sector transformation. Specific topics within the Government program (US$57.9 billion) that will be part of the PforR Program (US$ 12.4 billion) include CPHC reforms such as AB-HWCs; quality of care; training and career development; and data, monitoring, and accountability. The World Bank contribution to the Program Expenditure Framework (PEF) for five years will be US$500 million (equivalent to 4 percent of the total Program financing[7]). This estimate is being further refined and confirmed, but the Program is largely financed by the GoI with partners playing a supportive role.

Figure 2. PforR Program Boundary

Government program – NHP 2017 Goal: "Attainment of the highest possible level of health and well-being for all at all ages, through a preventive and promotive health care orientation, through increased access, improving quality and lowering the cost of health care delivery"
Government programs in support of NHP 2017 relevant to enhanced health service delivery: AB-HIM, NHM, AB-HWCs, PM-JAY & XVth FC grants

PforR-supported Program: Enhanced Health Service Delivery		
Redesigning service delivery to strengthen **comprehensive primary health care** (RA #1)	Strengthening quality of care to build a resilient and **high-quality health system** (RA #2)	Transforming health sector **governance, accountability** and institutional and management **capacity** (RA #3)

Underlying and complementary government programs that will be included in PforR Program: AB-HIM, AB-HWCs, NHM (the platform for delivering on the 3 Results Areas) with a focus on comprehensive primary health care reforms; quality of care; HRH reforms, medical education, training and career development; and governance and accountability

PROGRAM DEVELOPMENT OBJECTIVE(S)

The Program Development Objective is to expand provision of comprehensive primary health care services, improve quality of care, and strengthen governance of the health sector in India.

PDO LEVEL RESULTS INDICATORS

Achievement of the PDO will be assessed with progress on a select set of strategic indicators. The following are proposed at Concept stage and will be further refined in discussion with the government during preparation.

 v. Increased utilization of CPHC services (% female) [disaggregated by rural / urban]
 vi. % of diabetics and hypertensives on treatment with blood sugar/blood pressure controlled
 vii. % of HWCs accredited for quality of care [disaggregated by rural / urban]
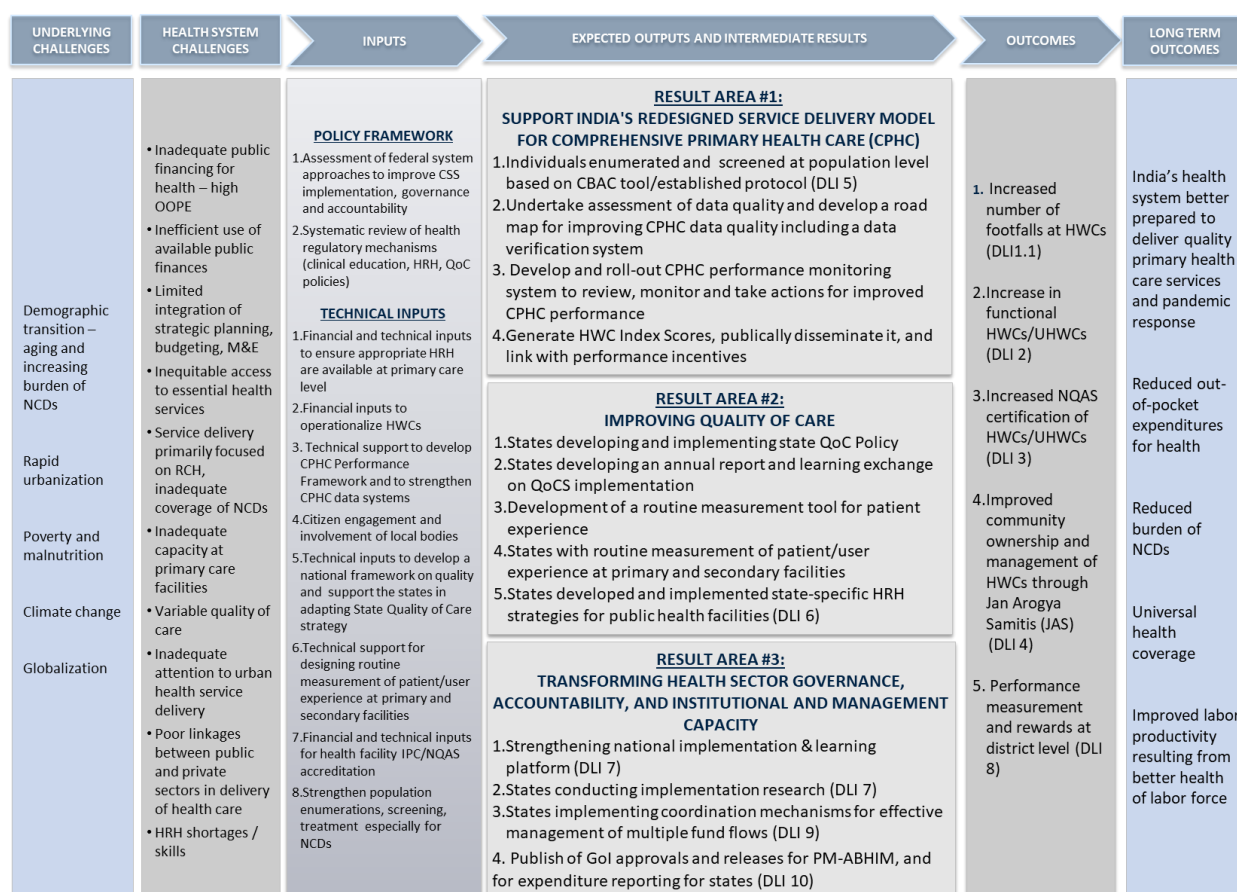 viii. Improved patient experience [disaggregated by rural / urban]

Figure 3 Program Theory of Change

PROGRAM GEOGRAPHIC SCOPE

The Program will be implemented across the country focused on a set of national level policy and programmatic results combined with a set of state-level results in the selected priority states comprising of Uttar Pradesh, Odisha, Tamil Nadu, Andhra Pradesh, Kerala, and Meghalaya.

RA#1: SUPPORTING INDIA'S REDESIGNED SERVICE DELIVERY MODEL FOR COMPREHENSIVE PRIMARY HEALTH CARE (CPHC)

Global experience has pointed to a number of factors that are essential for an effective CPHC approach, and these would be supported under RA#1 as part of India's efforts to implement CPHC nationwide. Worldwide, not many countries are implementing the type of full-fledged CPHC model that would be supported under this program and that too at a pan India level.

Based on global best practice, key characteristics of an effective CPHC system include: (i) assigning a primary health care (PHC) provider/facility to every household (including women-headed households, ST households and adolescent girls); (ii) ensuring linkages between each household and its primary care provider/facility through regular visits to all households by community agents (or equivalent) linked to the facility; (iii) appropriate activities conducted at the household visits, including population-based screening for NCDs, and with basic records of all households maintained at the facility; (iii) activities to increase visits by household members to PHC facilities, including enhancing the functionality of PHCs to ensure quality and completeness of care they provide, as well as identification of high-risk individuals during the population-based screening at the household level (who would need further screening at the facility level); (iv) referral and counter-referral linkages to higher-level health facilities; and (v) systems to closely monitor and incentivize performance by facilities and administrative units for different aspects of PHC service delivery. This will include operational support to strengthen last-mile monitoring systems to also reach women-headed households and improve provision of CPHC services for the population including for women and girls. RA#1 will also support interventions to strengthen CPHC data systems, including gender-disaggregation in data collection and usage, and better track CPHC performance at the HWCs. All of these will be supported under RA #1 to maximize the effectiveness of India's CPHC model, with support to be provide along four key dimensions as detailed below.

(a)   Increased footfalls at HWCs (DLI 1, CRI). The HWCs are the PHC providers in India's CPHC model, and a footfall is defined as a visit by an individual to a HWC (for any purpose). This indicator will be tracked under RA#1 and is expected to show steady progress if the Program is implemented as designed—as the functionality of the HWCs for provision of the expanded package of services increases and there is positive client experience with utilization of services, then it is expected that both supply of services and demand to use them will be enhanced, leading to increased utilization of these services. The package of services will include screening for cervical cancer, breast cancer, adolescent nutrition status, and prevalence of anaemia in adolescent girls. Additionally, service provisions at HWCs will include digital and technology-based tools to enable targeted information delivery for women, including women-headed households and adolescent girls.

(b)   Operationalization of the HWCs (DLI 2). According to NHP 2017, the GoI aims to have 150,000 HWCs established and operational by 2022. The goal is for all HWCs to eventually provide 12 core service delivery packages and 3 health promotion packages—thereby expanding service delivery at the primary care level beyond RMNCAH and communicable diseases, to also include NCDs; mental health; ear, nose, and throat (ENT); ophthalmology; palliative care; and trauma and emergency care.

These will increase early detection and treatment, hence reducing the overall burden of disease, and will also reduce overcrowding at the secondary and tertiary level facilities. The health promotion and clinical service delivery packages will facilitate continuum of care, timely referral, and reduced adverse events of the conditions that can be managed at the HSC/PHC level. The National CPHC Guidelines list various requirements on the supply side to operationalize HWCs linked to availability of human resources, equipment and essential drugs, as well as training of staff and number of service delivery packages offered. The Program will work with the GoI on reviewing the existing HWCs operationalization indicators, reporting, and processes. It will support the GoI's efforts to increase the number of fully operational HWCs across the country, and to expand the number of service packages offered, over time (DLI 2). (At present, the HWCs at most provide only 7 of the 12 service delivery packages.) The urban HWCs do have certain differences in context and implementation mechanism. The Program will specifically track and increase operationalization of HWCs in urban areas too.

(c)   Increasing coverage and effectiveness of population-based activities (DLI 5). Appropriate population-based activities are an essential element of an effective CPHC service delivery model. As part of the GoI's CPHC Guidelines, Auxiliary Nurse Midwife (ANMs) and Accredited Social Health Activist (ASHAs) (or equivalent) will be linked to an HWC, enumerate the entire population in the area covered by the HWC, and implement population-based screening for these households annually, through a Community-Based Assessment Checklist (CBAC) (DLI 4). The data from the screening, disaggregated by gender and social status, would be maintained at the relevant HWC, as part of family records for each household—with additional facility-level screening encouraged for those found to be of high risk during the initial population-based screening. For instance, teenage pregnancies, high-risk pregnancies, and anaemic young mothers will be identified at the HWC level for providing continuous care at the facility level. State-led innovations, including temporary stay facilities for pregnant women (third trimester) from tribal communities, mobile medical units, and transport facilities to improve institutional deliveries and post-natal check-up rates in aspirational districts will be reinforced and scaled-up under the Program. These are critical activities that will help in increasing utilization and will be supported under RA#1.

(d)   Strengthening existing CPHC data systems toward improved performance tracking and incentivization (DLI 4). A strong mechanism for monitoring key CPHC performance indicators is essential for good performance, and experience has shown that incentive payments based on such a mechanism can be very effective. At present, CPHC indicator reporting by the HWCs is being done through various reporting systems, mostly relying on self-reported data. There are no mechanisms for verification and validating the data entered, and anecdotal evidence from the field suggests significant inaccuracies in these data. The Program will work on developing a robust CPHC Performance Monitoring Framework, pooling existing data from various data sources, assessing data quality (timeliness, completeness, and correctness) for CPHC information systems to identify the gaps and develop a roadmap for improving the data quality. As the quality of the data is highly variable, one of the key aspects will be to build an independent verification system to strengthen the CPHC data system. A composite CPHC Health Index, based on performance on key CPHC indicators, will be developed at the HWC and district level, and will be disseminated to the public to build accountability. A performance incentive system for HWCs based on the HWC Index composite scores will be introduced to enhance HWC performance.

(e)   All of the above four DLIs are also results indicators, and all except DLI 4 are scalable. DLIs 1, 2, 5 and 4 have an allocation of US$XX million, US$XX million, US$XX million and US$XX

million, respectively. The first three of these will be tracked separately for urban, predominantly tribal, and other rural areas (feasibility is being confirmed). The footfalls indicator will also be tracked by gender. In addition, other DLIs in RA#3, that are transversal in nature, also support RA#1, for example, DLI 7 (Implementation research) and DLI 8 (performance monitoring).

RA#2: IMPROVING QUALITY OF CARE TO BUILD A RESILIENT AND HIGH-QUALITY HEALTH SYSTEM

RA#2 of the Program will emphasize the importance of quality of care in building a resilient and high-quality health system for the 21st century, to further support India's transformational CPHC reform agenda. While service coverage has seen significant improvements in India, quality of care continues to remain a critical challenge that needs to be addressed comprehensively. Moreover, to improve quality of care, there needs to be a paradigm shift from narrowly focusing on structural (input) quality to a more holistic approach encompassing competent care processes and patient experience. The Program will support the following core areas to build a high-quality health system: (a) improve quality of CPHC service delivery by supporting NQAS certification of HWCs, (b) create a knowledge sharing platform and an enabling environment for comprehensive quality of care improvement extending beyond certification and including meso- and macro-level interventions, (c) develop contextualized measurement tools for patient experience, and (d) strengthen the health workforce through adopting a comprehensive state-specific HRH strategy for public health care facilities.

Improved quality of CPHC service delivery. India has adopted the National Quality Assurance Scheme (NQAS), as a national framework implemented by individual states, to certify public health care facilities at primary and secondary levels, including the HWCs. The NQAS certifies a facility based on the inputs, processes, and a few outcomes, namely patient satisfaction. The NQAS process requires multiple levels of assessment and results in a facility receiving a certificate for a period of three years along with additional financial resources which it can use autonomously. Recently, India has updated this framework and released the Operational Guidelines for Improving Quality of Care (QOC) in Public Health Facilities (2021). Given the status of QOC reforms in India, especially in states with less advanced health systems, NQAS certification is an important initial step towards improving structural quality, as well as accountability by strengthening the feedback loops within health facilities and between facilities and the DOHFW in respective states. It provides a strong foundation to subsequently expand the reform agenda for QOC to focus on meso- and macro-level interventions. The Program will support the progress of NQAS certification of the HWCs, including UHWCs (DLI 3).

Create an enabling environment for comprehensive quality of care improvement at the federal and state levels. Based on lessons learnt globally and recommendations of the Lancet Commission on High-Quality Health System (HQSS), interventions for comprehensive QOC improvement should go beyond those at the micro-level, such as NQAS certification, to also include those at the meso- and macro-level. Given the current progress made towards QOC improvement in India, especially in some of the less advanced states, an expansion of the reform agenda for QOC would benefit from knowledge sharing, both between states and from global experiences, resulting in an enabling environment for introducing meso- and macro-level interventions over time. The Program will support India to develop a coherent framework for developing and implementing a state-specific Quality of Care Strategy (QOCS), enabling each state to create a roadmap for enhancing its efforts towards comprehensive quality improvement, including interventions at the micro-, meso- and macro-levels. Additionally, the Program will support the creation of a platform for documentation and learning exchange on global and national

(across states) experiences on High Quality Health Systems for micro, meso- and macro-level interventions.

Develop contextualized measurement tools for patient experience. The National Operational Guidelines for Improving Quality of Care (QOC) in Public Health Facilities (2021) recognize and underscore the importance of user/patient experience as an integral aspect of quality of care. However, the NQAS certification and initiatives such as Mera Aspataal have been focused on measuring patient satisfaction, which though similar, is a different construct from patient experience. The Program will support developing state-specific measurement tools for patient experience in the priority states. This will ignite the demand for quality in the population and strengthen the feedback loops between the population and health facilities.

Strengthen the health workforce. The Program will support the Government's efforts toward strengthening the health workforce, focusing on both increasing availability of qualified HRH and enhancing their performance to deliver quality services. One of the key interventions will be developing, adopting, and implementing a state-specific HRH strategy for public health facilities. The strategies would focus on improving production, introducing reforms in contractual arrangements and recruitment, and filling vacancies, capacity building, continuous professional development, functional human resources information system (HRIS), task sharing/shifting including creation of a public health cadre, and performance measurement, among others. In the Program priority states, the stock density of doctors and nurses varies from 2.04 and 4.6 per 10,000 population, respectively, in Odisha to 12.24 and 11.73 in Tamil Nadu. Each state has a unique set of challenges, ranging from imbalance in production of health workers and absorption capacity of the public sector (in Tamil Nadu and Andhra Pradesh), to systemic challenges in recruitment and performance measurement in the public sector (in Uttar Pradesh) to filling vacancies in geographically hard-to-reach areas (in Meghalaya). The approach to handle state-specific challenges would require developing a strategy that identifies these contextual challenges and aims to create a road map based on each state's needs, fiscal space and institutional capacity.

Two DLIs directly support this result area. DLI 3 is a scalable indicator with an allocation of US$XX million and DLI 6 is a scalable indicator with an allocation of US$XX million. DLI 3 supports the certification of public facilities. It is also a prior result, with the expectation that XX HWCs will receive NQAS certification before signing of the loan. DLI 6 supports development, adoption, and implementation of a state-specific HRH strategy. In addition, other DLIs in RA#3, that are transversal in nature, also support improvements in quality of care (DLI 7 (Implementation research) and DLI 8 (performance monitoring).

RA#3: TRANSFORMING HEALTH SECTOR GOVERNANCE, ACCOUNTABILITY, AND INSTITUTIONAL AND MANAGEMENT CAPACITY

While the first two result areas have a strong focus on the architecture of service delivery and quality of care, RA#3 shifts attention to the critical foundations of a high-performing health system, embracing issues related to governance, institutions, and accountability. Achieving progress on India's health system challenges requires navigating a complex multi-tier government from the center to states to districts and below, ultimately connecting to facilities and communities. There are multiple funding flows, implementing bodies, reporting relationships, and coordination challenges. RA#3 aims to support actions that will help strengthen accountability along four dimensions: (a) between tiers of government,

(b) between the state and providers, (c) between the state and citizens, and (d) between providers and citizens. This approach is aligned with the World Development Report (WDR) 2004 Framework for service delivery and has the potential to deliver a transformative impact across the service delivery results chain, from inputs to outputs to outcomes (and back again via higher funding in recognition of a stronger sectoral performance). A mapping of proposed DLIs and these key dimensions of accountability is summarized in table 1.

Note: (a) State-provider; provider-people; state-people.

The proposed Program places significant emphasis on moving beyond input-based, top-down approaches by embracing the accountability agenda as central to the success of any health system reform. The accountability agenda has played a central role in universal health care reforms around the world over the past 20 years. By revisiting the relationships between the tiers of government within India's health system, introducing new measurement frameworks to better manage key stakeholders and implementation entities, and harnessing the potential of the citizenry to play a key role in system oversight, the Results Framework at the heart of this operation seeks to support fundamental shifts in accountability with India's health system. RA#3 is articulated around three buckets of DLIs which pertain to strengthening the foundation for improving utilization, access, and quality of PHC services at the HWC level: (a) an implementation and learning platform that leverages the comparative advantage of the center and the states; (b) fostering social accountability; and (c) improving performance-based measurement at the district level. These are also shown in table 1.

Strengthening a national implementation and learning platform to scale up interventions fostering better utilization and quality of service provision (DLI X). The PforR-supported Program is planning the establishment/strengthening of an implementation and learning platform for the Enhanced Health Services Delivery (EHSD) Program that leverages the comparative advantages of the center and the states, whereby the national level will identify priority results and provide incentives while allowing states to innovate and achieve results adapted to their own context. Such a platform will enable implementation research to capture key factors critical to realizing results, knowledge exchange, and cross-state experience sharing in the areas of service delivery, quality assurance, and accountability. While the establishment of an implementation and learning platform is incentivized through a DLI, the component will coordinate TA in the areas of service delivery, quality assurance, and accountability to ensure that service providers, local panchayats, districts, and state authorities have the right technical support to implement the reforms embedded in the Program. A stronger institutionalization of the essential learning function to serve a complex program in a diverse federal state will represent a major step forward for continuous improvement of service delivery.

Developing a system for social accountability between providers and people to improve quality of service delivery at HWCs (DLI 8). The PforR Program is planning to strengthen relationships between provider-people by empowering citizens to participate in the management of HWC to improve the delivery of CPHC services through one DLI. This consists of aiming to improve community ownership and management of HWCs through JAS by institutionalizing a platform for community participation and management of HWCs through JAS according to the existing NHM guidelines. This DLI will measure the proportion of HWCs having a functional JAS. The functionality of JAS can be defined as HWCs preparing an annual report placed before the JAS and presented to the Gram Sabha (public reporting). A disbursement-linked results (DLR) on utilization of JAS funds will also be introduced to assess the effective implementation of JAS and avoid similar issues related to poor budget execution of

untied funds of Rogi Kalyan Samitis (RKS). The intent is that this indicator will help improve health service utilization and outcomes through enhanced community engagement and monitoring. Flexible funding at the facility level and community engagement are both important pillars of stronger service delivery systems, but their potential has not been fully maximized to date. This DLI aims to support actions that will help embed both pillars more deeply in the HWC context and serve as a springboard for improved service delivery. Furthermore, the program will incentivize states to improve representation of women grassroot leaders in JAS and strengthen linkages with Mahila Arogya Samitis (MAS) (women's health groups) for improved uptake of reproductive healthcare services, preventive care, and screening for NCDs such as cervical cancer and breast cancer. Additionally, women's health groups (MAS) will be involved in social audits, planning, and monitoring of health programmes in rural and urban areas, including slums. These groups led by women grass-root leaders will contribute towards improved understanding of women's health needs, planning and gender-informed monitoring at the health-facility level.

Operationalization of coordination mechanism for multiple resource pools (DLI X): Fund flows in the Indian health system landscape are quite complex and have become even more so during the past year with the launch of PM-ABHIM and the introduction of local body grants through the XV-FC. Without robust coordination mechanisms, there is a risk that budget planning, execution, and reporting will be inefficient and ineffective to achieve improved service delivery on the ground. To help mitigate this risk, this DLI will support the operationalization of a coordination mechanism at the district/local level to ensure streamlining of resource planning and implementation.

Strengthening social accountability between state-people through more transparent public finance management systems (DLI X1). The PforR Program is proposing a DLI to strengthen relationships between states and people by empowering citizens and other stakeholders to have access to better information to monitor resource allocation and expenditure that affect PHC service delivery. At present, it is difficult to track resource allocation by the center, fund releases to states, and expenditure at the state level. In fact, expenditures are not in the public domain. This DLI consists of establishing a mechanism whereby the MoHFW would clearly report key financial data for which it is responsible— allocations and fund releases for PM-ABHIM—while also creating the space for states to report expenditures (for example, as contained in financial management reports (FMRs) that are currently not publicly available) and encouraging peer comparison by drawing attention to which states have publicly shared this information and those that have not. If financial management (FM) reports are available in the public domain, citizens can make use of the data and better hold key stakeholders to account for effectively utilizing public resources. In addition, this DLI will build upon a prior result in Year 1 aimed at simplifying PFM data by reducing the number of budget lines and resources pools under the NHM. This measure can both reduce the administrative burden on states and encourage better budget execution by making transfers across pools more flexibly achieved. This step helps to address a long-standing issue regarding NHM implementation and can instigate a virtuous circle of improved budget execution and enhanced allocation of resources to the health sector. This DLR is a prior action under DLI 10.

Shifting the focus to a performance-based measurement and system at district level to improve quality of PHC services (DLI X): EHSD will help nudge the system towards a focus on outputs and outcomes rather than inputs and a one-size-fits-all approach with the GoI setting results priorities. This will be incentivized through a DLI aiming at introducing performance measurement and rewards at the district level. This approach also responds to a need for policy localization since the district has emerged as a key unit of policy focus, which, however, is lacking performance measurement. The development of a

Performance Measurement Framework at the district level will be guided mainly by the CPHC Performance Measurement Framework but can also draw upon the NITI Aayog State Health Index where appropriate. This performance framework could be published as a yearly district index report. The first two years of the PforR program will consist of developing and agreeing on a district measurement framework. Years 3, 4, and 5 will consist of publishing the annual district health index report for a proportion of districts and establishing a rewards framework (which could be monetary in the form of a budget bonus or non-monetary such as peer recognition and celebration). By elevating district performance as a critical ingredient of scheme success, this DLI aims to empower this tier of government to sustain momentum in implementation and ultimately ensure service delivery achievements on the ground.

41.   While the Program and its results areas are based on PM-ABHIM and NHM (AB-HWC), the states would continue to provide necessary additional resources to deliver on results under the PforR supported Program. The results areas are very clearly aligned to the different funding sources and programs and table below provides more details on the same:

Table 2: PforR-Supported Program, RAs and Linkages with Govt programs

Program/ Platform	What's covered as part of these RAs under EHSD		
	Result Area #1: Supporting India's redesigned service delivery model for comprehensive primary health care (CPHC)	**Result Area #2: Improving Quality of Care**	**Result Area #3: Transforming health sector governance, accountability, and institutional and management capacity**
Ayushman Bharat Health and Wellness Centres leveraging the NHM Platform)	Ongoing interventions under AB HWC, community engagement, ASHA program, service delivery program related to RMNCHA, NCDs etc. Including provision of free drugs and diagnostics would be leveraged to deliver on results related to increased footfalls, screening for NCDs etc.	Quality certification (NQAS) and other quality improvement programs under NHM would be relevant for this result area. In addition, HRH reforms would be synergized with efforts prioritized under NHM and will accelerate e implementation.	AB HWC community engagement and ownership initiatives such as Jan Arogya Samitis, cross-cutting NHM initiatives such as strengthening financial management functions (for resource pool and transparency related reforms), performance management systems etc. would be relevant for the indicators under this results area. The NHSRC, as part of nodal NHM technical resource provider would be relevant for strengthening of the learning platform

	PM-ABHIM would be the key government program to deliver on operationalization of increased number of HWC to improve service delivery to universalize access to HWCs	Resources for key inputs provided under PM-ABHIM would be relevant to improve structural quality of AB HWCs	
PM-ABHIM	PM-ABHIM would be the key government program to deliver on operationalization of increased number of HWC to improve service delivery to universalize access to HWCs	Resources for key inputs provided under PM-ABHIM would be relevant to improve structural quality of AB HWCs	
State Programs/ Budget	States would be instrumental in providing service delivery platforms, providing services, tracking progress and providing management system for implementation of the PforR-supported Program. Additional TA resources, if required (beyond AB HWC and PM-ABHIM), would also be provided for by the states to achieve the results.		

DISBURSEMENT LINKED INDICATORS

The DLIs for the Program, a combination of outcome and intermediate results, are as follows.
The DLI matrix and verification protocol in annex 2 indicate which DLIs are timebound, non-timebound, saleable, and non-scalable.

Table 3 Disbursement-Linked Indicators

DLI	Comprehensive Primary Health Care (RA#1)	Quality of Care (RA#2)	Governance (RA#3)
PDO Indicators			
Increased number of footfalls at HWC *(DLI 1.1, CRI)*	✓		
Increased number of operational/functional HWCs providing expanded healthcare service delivery packages of CPHC (including urban HWCs) (DLI 2)	✓		
Increased NQAS certification of HWCs/UHWCs (DLI 3)		✓	
Improved community ownership and management of HWCs through Jan Arogya Samitis (JAS) (DLI 4)			✓
Develop and implement performance measurement and rewards at district level (DLI 8)			✓
Intermediate Result Indicators			

Population enumerated and screened based on Community Based Assessment Checklist (CBAC) tool/established protocol (DLI 5)	✓		
Number of states developing, adopting and implementing a state-specific HRH strategy for public health facilities (DLI 6)		✓	
Strengthening national implementation and learning platform (DLI 7)			✓
Operationalization of coordination mechanism for multiple resource pools (DLI 9)			✓
Simplification and enhanced transparency of public financial management systems (DLI 10)			✓

The achievement of the prior results and DLIs would trigger World Bank disbursements to the Program. The DLIs reflect the critical areas that the Government of India must address to push health sector performance to the next level. They indicate the combined effect of a set of specific technical interventions and institutional strengthening interventions.

ALIGNMENT BETWEEN THE GOVERNMENT PROGRAM AND THE PFORR PROGRAM

Table 4: Alignment of Government Program with the PforR Program

Aspects	Government program	Program supported by the PforR (PforR Program)	Reasons for non-alignment
Objective	To attain the highest possible level of health and well-being for all, through a preventive and promotive health care orientation, through increased access, improving quality and lowering the cost of health care delivery	To expand health service delivery, improve quality of care and strengthen governance of the health sector in India	The Program will support a subset of the government program's objectives.
Duration	2017-2025	2022-2027	Supporting latter phase

Geographic coverage	All the country	Select 4-7 states	Priority engagement for the Bank and biggest impact of available financing
Results areas	NHM, AB-HWCs, PM-ABHIM Components	RA1-3	The Program will support a subset of the government program's focus areas and activities.
Overall Financing	US$27 billion	US$15.5 billion	The Program will support a subset of government program's objectives; as such, the Program expenditure framework is approximately 50 percent of the government program budget

PROGRAM EXPENDITURE FRAMEWORK

The PEF is premised on the following: (a) AB-HWCs as part of flagship NHM program of the GoI and a (b) newly launched PM-ABHIM. While the AB-HWCs is a CSS (GoI and state government funding in agreed ratio), the PM-ABHIM has both central sector schemes components (100 percent financing by the GoI) and CSS components. The GoI has prepared a costed plan for the implementation of the wider PM-ABHIM during FY22/23 to FY26/27. Considering the results areas and attributable program interventions, the overall expenditure framework of the Government program ("p"), based on the four areas mentioned earlier, for FY22/23 to FY26/27 is estimated at US$57.9 billion. The proposed PforR-supported Program ("P") is a subset of the Government program ('p) after taking out budgetary allocations and budget lines for activities to be excluded out of the three areas mentioned earlier. The key exclusions to arrive at the Program ("P") include (a) major civil work, (b) legal aspects around female feticides, (c) specific disease control programs (Integrated Disease Surveillance Program (IDSP) are not excluded and is part of the Program); and (d) AYUSH or Indian system of medicine. The total PEF for five years is estimated at US$12.4 billion, to which the World Bank contribution will be US$500 million (equivalent to 4 percent of the total Program financing). (THIS IS BEING WORKED OUT AND WILL BE FINALIZED PRIOR TO DM)

The expenditure projection has been arrived at by analysing trends of actual expenditures (FY18/19, FY19/20 and FY20/21) and budgetary allocation (FY21/22 and FY22/23) for the budget lines contributing to the three areas mentioned earlier and has been adjusted for inflation over the Program period. In addition, for the new initiatives, (that is, PM-ABHIM) the projections for the next five years are based on the approvals accorded by the GoI vide its Cabinet. The budget outturn in the past xx years

shows reasonably well-functioning budget allocation and execution, ranging from xx percent to xx percent. The Program budget by source of financing is provided in table 4.

Table 5: Expenditure Framework and Program Financing

PforR Program	Source	Amount (US$, millions)	% Of Total	Remarks
PM-ABHIM for 7priority states	GoI and State	366.63	3	Includes recurring expenditure for urban HWCs and block public health units
AB-HWC for 7 priority states	GoI and State	12,023	97	Excludes major constructions, and allocation to certain vertical disease programs not contributing to results areas
TOTAL		**12,390**	**100.00**	

D. PROGRAM IMPLEMENTATION ARRANGEMENTS

The Ministry of Health and Family Welfare (MoHFW) is the implementer of the proposed Program. Within the MoHFW, PM-ABHIM would utilize the existing delivery platforms of National Health Mission (NHM), including both National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM), and hence will be the platform for implementation of the Program as well since it's linked to PM-ABHIM. Additionally, five states selected for more focused implementation would be responsible to achieve state level results under the Program for disbursement purposes while the MoHFW would be delivering results agreed to for the federal level. These priority states would also be the showcase for remaining states in the country in terms of implementation of best practices.

The Joint Secretary (JS), NRHM, Policy and Planning would be overall lead of the Program and the focal for day-to-day coordination with the World Bank team. The JS, NRHM, P&P reports to Additional Secretary and Mission Director, NHM, MoHFW who reports to Secretary, MoHFW. The JS would be supported by a team of Directors managing technical, fiduciary and safeguards areas. Also, the JS would coordinate with other JSs in the MoHFW for smooth implementation of Program results

The Program would continue to be guided by the NHM governance structure at the federal level. The NHM maintains two high level committees at the federal level. **An Empowered Programme Committee (EPC) is an Executive Committee constituted under NHM**. The EPC is chaired by Secretary, Health and Family Welfare, MoHFW and Additional Secretary & Mission Director (NHM) is the convenor. The second committee, the **Mission Steering Group (MSG)** is the highest policy making and steering institution constituted under NHM. The Mission Steering Group (MSG) Provides broad policy direction to the mission and exercises the main Programme and governance for the health Sector and advise the EPC of the Mission in policies and operation. The MSG is chaired by the Union Minister of Health & Family Welfare and has members from different ministries and other non-

governmental organizations. All the Proposals brought before the MSG are first placed before EPC for examination. Also, the EPC is given flexibility to change financial norms approved by the MSG within a range of 25%. The exercise of delegated powers by the EPC is subject to the condition that a progress report regarding NHM, along with deviation in financial norms, modifications in ongoing schemes and details of new schemes are placed before Cabinet for information on an annual basis.

At the state level, **the State Health Society (SHS) managing NHM would be overall responsible for implementation** of relevant interventions at the state level in 5 priority states. As per the directions of the MoHFW, the states must implement PM-ABHIM through existing structures of the NHM and its administrative and financial management structures would be utilized. The Mission Director, NHM of the state along with State Program Management Unit (SPMU) would monitor and track implementation of the interventions under the Program. The SPMU would be supported by the District Program Management Units (DPMU) at district level and Block Program Management Units (BPMU) at the block level for implementation and monitoring of interventions at districts, blocks and facility levels. It is understood that the PM-ABHIM would be implemented through the existing structures of NHM in each of the priority states i.e., SPMU, DPMU and BPMU.
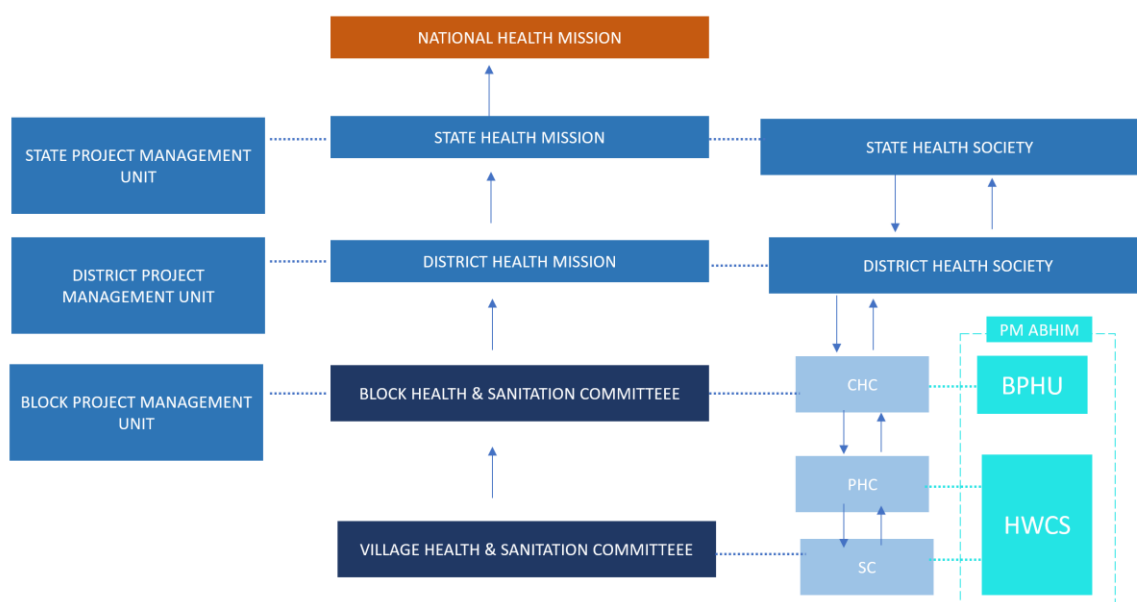
Figure 4 Public health institutional set up

Each of the seven priority states have different governance structures and varied implementation capacity. While all the seven states have standard directorates and societies to implement and monitor government programs, a few states (Kerala and Tamil Nadu) have established State Health System Resource Centres (SHSRCs), which, in line with NHSRC, provide technical support to the state governments. A few other states have public health institutes (Meghalaya has the Indian Institute of Public Health), and few others have technical support from development partners (Uttar Pradesh has support from BMGF). The Program will assess existing capacities of different states and provide technical assistance to augment the implementation capacity to achieve desired results. The form of

technical assistance will vary depending on the existing implementation structures, need and capacity of the state. It can include (but not limited to) provision of independent technical consultants at the state/ sub-state level or explore procuring services of a local technical agency to provide necessary guidance and support during program implementation. The program will also explore options for incentivizing states (monetary or non-monetary) on achievement of pre-defined results. The incentives may take the form of "Innovations Challenge Fund" which essentially be an untied fund to be spent by the states as per their needs and priorities. The innovations pursued by the states can be showcased at the knowledge sharing event planned under the RA#3. Exact nature of the innovations challenge fund would be finalized during the first year of the Program.

Central Government-State relationship. The NHM is a centrally driven program, and structures in terms of administration, powers, financing, and so on are largely the same as the PM-ABHIM. The NHM program is being implemented for more than a decade and a half has a well-established framework for center-state relationships. The PM-ABHIM Program is to follow the same central-state relationship. The agreed instrument for Program planning, the Program Implementation Plan (PIP), will continue to be the means for planning and approval of resources for the AB-HWC component within the NHM and PM-ABHIM. The Program will develop a performance-based management mechanism to drive positive competition among HWCs and districts to improve performance and provide incentives (financial and nonfinancial) based on the composite scores related to the HWC Health Index and the district level performance management system. These ideas are already included under the Results Framework and will be implemented during the Program period.

The Program focus on health sector governance, accountability, and institutional and management capacity would further strengthen the existing structures of the NHM and ensure enhanced planning, implementation, and monitoring systems. The Program would also leverage TA to support the MoHFW to further strengthen the ongoing interventions or make course corrections to achieve the agreed results.

Health & Hospitals, being a state subject, primary responsibility to strengthen public health infrastructure, lies with the respective State Government. The Central Government, however, provides technical and financial support to States under National Health Mission (NHM) for improving health care systems, based on their proposals subject to availability of resources. The overall health care delivery services are categorized as primary, secondary and tertiary care services and at state level being managed by different Directorates of the State Health Department. While the primary health care services by Sub-Centre (SC), and Primary Health Centre (PHC) are largely preventive and promotive, the Community Health Centre (CHC) works as the first referral unit for curative services. The district hospitals, sub-divisional hospitals form the core of the secondary services, which the medical college hospitals and super specialty hospitals forms part of the tertiary health services. The table below further details out the key functions of district hospital, CHC, PHC and SC. To ensure delivery of Comprehensive Primary Health Care (CPHC), all the existing SCs and PHCs (both Rural and Urban) are being upgraded to Health Wellness Centers (HWCs).

Table 6 Classification of Healthcare Centres

Type of Health Facility	Typology and Geographic Distribution	Biomedical waste management protocol	PM- ABHIM nomenclature

District Hospital	One in each district. District Hospital serves as secondary referral unit and provides comprehensive secondary health care services to the people in the district at an acceptable level of quality. Based on population size district are graded and varies from 100 bedded to 500 bedded hospitals] services include OPD, indoor and Emergency Services and will have OT and ICUs.	Every district has at least one District Hospital and there are more than 1,000 DH in the country. All DHs are mandated to comply with the BMW Rules (2018); most DHs are having tie-up with Common Treatment Facilities (CTF) for collection and disposal of BMW; while solid BMW is being managed, there are gaps in treating liquid wastes from DHs.	
Community Health Centres (CHCs) or Sub-Divisional Hospitals	CHCs are being established and maintained by the State government. It also works as a First Referral Unit (FRU). The standard norm for a CHC is at every 120,000 population in plain areas and every 80,000 population in hilly areas. In urban areas it is at 250,000 population.	Compliance with BMW Rules 2016 is generally satisfactory with respect to segregation of wastes, collection in coloured bins and final disposal. Liquid wastes are generally untreated. Staff trainings on BMWM is provided bur often refresher trainings are missing	All Block Headquarter level facility (variously referred to as Community Health Centres (CHCs)/ Sub- Divisional Hospitals (SDHs)/Block Primary Health Centres (PHCs), would be strengthened to become a **Block Public Health Unit. This will only be focused in UP and Odisha (program states)**
Primary Health Centres (PHCs)	PHC is the first contact point between village community and the medical officer. The PHCs were envisaged to provide an integrated curative and preventive health care to the rural population with emphasis on preventive and promotive aspects of health care. The standard norm for a PHC is at every 30,000 population in plain areas and every 20,000 population in hilly areas	Volumes of BMW are generally low, and disposal is done through deep burial pits located on site. BMW segregation is practiced but better training and monitoring is required at PHCs.	PHCs will be upgraded to Health Wellness Centre HWC-PHCs
Sub – Centre (SC)	The Sub Centre (SC) is the most peripheral and first contact point between the primary health care system and the community. The standard norm is one SC at every 5,000 population in plain areas and every 3,000 population in hilly areas	Generation of BMW is meagre, and disposal is done on site; disinfection is carried out with available disinfectants	SCs will be upgraded to Health Wellness Centre HWC-PHCs

E. DESCRIPTION OF PROGRAM ACTIVITIES AND IDENTIFICATION OF ENVIRONMENTAL AND SOCIAL EFFECTS

As required by PforR Financing, an Environmental and Social Systems Assessment (ESSA) has been conducted by the World Bank during project preparation. It was prepared in collaboration with the MoHFW and state health societies to assess potential adverse risks and impacts associated with the Program, and adequacy of the environmental and social systems of the program implementing and operating agencies, to identify specific measures to strengthen environmental and social systems and to outline the steps to be followed by the borrower to mitigate potential adverse impacts associated with the Program. The ESSA emphasizes appropriate institutional arrangements and coordination, systems, and capacity for the overall management of environmental and social risks and social inclusion aspects under the program. Activities that are likely to have significant adverse impacts on the environment and/or affected people will be excluded.

KEY ENVIRONMENTAL RISKS ASSOCIATED WITH THE PROGRAM centres on the biomedical waste generated at the health care facilities. With the upgradation of healthcare facilitates and package of services offered, there will be an incremental increase in the quantity of the waste generated in the country. Apart from BMW, e-waste, hazardous waste, and plastic waste from health care facilities is also likely to increase and require attention for its proper handling and disposal. Due to Covid-19 pandemic, the use of Personal Protective Equipment (PPE) has increased substantially. The periodic disposal of PPEs – particularly face masks, gowns and gloves also contribute additionally to the bio-medical waste. The inappropriate management of the infectious wastes and improper disposal (through burning, or through mixing with other wastes) poses the greatest risk through the program to the environment and public health.

Other risks and impacts include building safety, fire and electric safety in the healthcare facilities that will be refurnished; noise, dust and wastes generated through the refurbishment and renovation of the HWCs. These improvements will be carried out on the current footprint of existing facilities, and there will be no additional facilities that will be created. Thus, any direct, indirect impacts on physical cultural resources, or natural habitats can be ruled out. The third area is community and health workers' safety and health resulting from improper biomedical waste management (BMWM), wastewater disposal and lack of adequate infection control during the operation of the health care facilities. A range of minor civil works for repair and rehabilitation will be required in the HWCs and BPHU, but the risks and impacts associated with these activities (such as noise and dust pollution, waste management) will be localized and short-term.

KEY SOCIAL RISKS ASSOCIATED WITH THE PROGRAM INCLUDE The key social risks of the program are directly associated with the risks of exclusion particularly for STs and vulnerable groups in unserved areas, i.e., aspirational districts and ITDA blocks. The social systems assessment filtered Odisha and Tamil Nadu as focus states to decipher key social risks and institutional capacities in improving health service delivery in tribal blocks. **Four of the seven participating states have designated Schedule V and Schedule VI areas. Additionally, across seven states, the program covers 15 aspirational districts. Therefore social risks can be broadly divided into two pillars: I. Risks of exclusion in aspirational districts and ITDA blocks** (i) uptake and utilization of health

facilities by traditionally vulnerable groups in unserved and underserved areas, including tribal blocks and Schedule V areas of Odisha, Andhra Pradesh, Meghalaya and Tamil Nadu; (ii) utilization of health facilities by women-led households and adolescent girls for reproductive healthcare, NCD screening and preventive care; (iii) access to quality health care for the urban poor, including migrants and informal workers. **II: Functionality of community-level platforms (JAS, MAS) in aspirational districts and ITDA blocks** (i) low institutional capacities of JAS and MAS in tribal/unserved areas to manage health facilities, coordinate with VHSNCs and act as grievance redressal platforms as per Jan Arogya Samiti Guidelines.

From a social perspective, the assessment revealed that to meet the core principles on land acquisition and involuntary resettlement, a screening mechanism will be required to identify any potential adverse social impacts. The screening requirement for land acquisition will be embedded as a parameter in the current social audit monitoring system of the Jan Arogya Samitis. The MoHFW at the central level and the state health societies across seven states provide the institutional mechanism for equitable health program implementation along with detailed roles and responsibilities for district-health officials (DHOs) and sub-district-level officials (BPHUs and HWCs). Through India's flagship program - NHM, communities are regularly involved in the planning, management, and monitoring of civil works at the health facility level along with frontline workers. The Jan Arogya Samitis and tribal councils in Meghalaya regularly follows the process of social audits to create transparency, participation, and accountability of the program implementation at the health facility level. The MoHFW also has a clear focus on social inclusion and the differentiated needs of SC, ST, and Casen and women-headed households. To enable outreach, state health societies have undertaken several activities such as observing health days, specifically to generate awareness in tribal communities. The HWCs and CHCs attempts to provide all-rounded health care in an inclusive environment free from discrimination. From a policy perspective, the PM-ABHIM further addresses gender and social equity within a framework that is holistic and systemic. Additionally, the MoHFW has a special focus to improve delivery and quality of health care services in integrated tribal development blocks in participating states.

ASSESSMENT OF ENVIRONMENTAL EFFECTS

This section describes the activities to be implemented under each of the Results Areas followed by a discussion of the potential environmental and social effects that could arise from each activity. The sections below summarize the environment and social risks of the Program, followed by the environmental and social effects grouped under each Results Area.

ENVIRONMENTAL AND SOCIAL SCREENING

As per the Bank Guidance on 'Program for Results Financing Environmental and Social Systems Assessment, the proposed PforR operation was screened to determine whether, from an Environmental and Social perspective, the proposed Program is suitable and eligible for PforR financing. The first step in the screening exercise was to identify any activities within the proposed program of expenditures that, under the exclusionary principle of the Policy, should be excluded because of their inherently high risk. The second step was to review the proposed Program activities to determine whether the potential Environmental and Social effects (which may not meet the Policy's criteria for exclusion) include unacceptable adverse risks.

LIST OF EXCLUDED ACTIVITIES

The following activities are excluded from support under the proposed PforR Program:

1. Establishment and operation of Common Biomedical Waste Treatment Facility.
2. Construction of new buildings or any construction beyond the existing footprint of buildings
3. Activities involving Asbestos Containing Materials (AC roofing sheets, AC pipes, etc.) such as construction, demolition, dismantling, etc.
4. Construction of boundary walls, entrance, pavements, footpaths etc (in line with PM-ABHIM guidelines)
5. Any activity that may have potential involuntary resettlement will be excluded (screened out) from the Program Boundary

RISK SCREENING CHECKLIST

The objective of the initial Risk Screening was to identify potential risks and opportunities that may be associated with the Program that warrant further analysis through the ESSA. The Risk Screening was undertaken using the four criteria recommended in the Bank Guidance*8*: (a) the likely E&S effects; (b) the E&S context, including any risks to sustainability; (c) institutional complexity and borrower implementation capacity and track record; and (d) reputational and political risk.

Table 7 **Risk Screening Checklist**

Criteria for Risk Screening	Description	Risk Rating – Environment	Risk Rating - Social
Likely E&S effects	Environmental risks of the Program potentially include: (i) risks related to rehabilitation of existing healthcare facilities; (ii) risks related to increased biomedical waste management and disposal; and (iii) risk attributed to building and engineering safety of buildings and equipment and (ii) public and worker health and safety. This PforR will not cause potential loss or conversion of natural habitats or adversely impact physical ad cultural properties. most potential works are within existing HCFs. The key social risks of the program can be broadly divided into two pillars: I. Risks of exclusion in aspirational districts and ITDA blocks (i) uptake and utilization of health facilities by traditionally vulnerable groups in unserved and underserved areas, including tribal blocks and Schedule V areas	Moderate	Moderate

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	of Odisha, Andhra Pradesh, Meghalaya and Tamil Nadu; (ii) utilization of health facilities by women-led households and adolescent girls for reproductive healthcare, NCD screening and preventive care; (iii) access to quality health care for the urban poor, including migrants and informal workers. **II: Functionality of community-level platforms (JAS, MAS) in aspirational districts and ITDA blocks** (i) low institutional capacities of JAS and MAS in tribal/unserved areas to manage health facilities, coordinate with VHSNCs and act as grievance redressal platforms as per Jan Arogya Samiti Guidelines.		
E&S Context	The Program is not expected to have impacts on physical and cultural resources or natural habitats as the focus will be on upgrading existing health care facilities, and al refurbishment and operational expenditure will take place on the exiting footprint of HCWs. The Program will support minor rehabilitation works and equipping health centres with better quality facilities and medical waste disposal arrangements. The activities contributing to the program results areas are not expected to have any interactions with other planned activities that may trigger adverse impacts. 3 out of 7 participating states have ongoing World Bank operations in health which have dedicated components to strengthen their capacity, in BMWM and IMEP. Most urban PHCs are also under assessment under the Kayakalp Award Scheme. The relevant institutions regarding the environmental and social management have been established and their accountabilities and duties are clearly designated. The institutional capacities will be adequate to manage the environmental and social risk associated with the PforR The Program is not expected to have any impacts related to involuntary settlement of land acquisition. Based on secondary analysis and due diligence, the program is limited to the refurbishment of health facilities and setting up new HWCs in rented accommodations.	Moderate	Moderate

	As such, no identified sensitive 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.		
Institutional complexity and borrower implementation capacity and track record	MoHFW has demonstrated experience and institutional capacity to manage expected environmental and social risks and impacts. The executing agency is the MOHFW at the national level. According to the directions of the MoHFW, the states must implement PM-ABHIM through existing structures of the NHM and its administrative and FM structures would be utilized. The Mission Director, NHM of the state along with State Program Management Unit (SPMU) would monitor and track implementation of the interventions under the Program. The SPMU would be supported by the District Program Management Units (DPMUs) at the district level and Block Program Management Units (BPMUs) at the block level for implementation and monitoring of interventions at districts, blocks, and facility levels. It is understood that the PM-ABHIM would be implemented through the existing structures of the NHM in each of the priority states that is, the SPMU, DPMU, and BPMU In terms of environmental issues during operations that are of concern under this program, such as BMWM and IC, 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. From a social perspective, the operationalization of 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	Moderate	Moderate

	assessment confirmed program's involuntary resettlement impact as minimal. Any activity that may have potential involuntary resettlement will be excluded (screened out) from the EHSD program, consistent with the program's design to avoid involuntary resettlement impacts.		
	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 refurbishment of health facilities in hard-to-reach unserved areas will avoid land and other property acquisition and facilitate effective health service delivery by reaching the vulnerable and poorer sections across seven states including tribal development blocks. Virtual state consultations across seven states confirmed		
	that current health facilities and premises are well secured, with boundary walls. Hence, the proposed program will not have any negative social impacts, either permanent or temporary, on any individual or the community.		
	Four participating states have on-going health projects supported by the World Bank and have good experience of working with World Bank Environmental and Social Framework standards and safeguards policies.		
Reputational and political risk	The PforR does not appear to have high political risk, and the sector is not known to be controversial. As the PforR will involve investments in human resource capacity and small-scale rehabilitation of health facilities, environmental and social issues are expected to present reputational risks to the World Bank. The project will leverage and help deliver on Government of India guidelines and schemes such as (Swachhata guidelines for health facilities, Kalakalp Scheme guidelines, NAQS standards and infection management and environmental plan)	Low	Low
Overall Assessment	The proposed activities under this PforR, are suitable to be supported according to the World Bank PforR Policy, and Directive. The environmental risk is moderate and can be effectively managed under the current EHS and	Moderate	Moderate

		environment system. The social risk is moderate and can be effectively managed under current social system.		
	Aggregate Risk Rating	Moderate

ENVIRONMENTAL BENEFITS AND OPPORTUNITIES

The Program will transform PHCs and SCs into functional HWCs. This will include support for: (a) small scale renovations (e.g., minor repairs to damaged buildings), (b) provision of quality facilities (e.g., provision of water supply and flooring, windows, partitions, cleanliness and (c) bio-medical waste disposal arrangements (e.g., ensuring adequate facilities and management systems in the HWCs) (d) hiring of contract workers for health care cleanliness and housekeeping. The Program will support capacity building of health workforce on bio-medical waste management, occupational health and safety, infection control and occupational and public safety. It will also strengthen community multi-sector coordination mechanisms, between the Departments of health, environment, disaster management, rural, and urban.

LIKELY ENVIRONMENTAL EFFECTS

Most of the activities to be supported under the proposed Program will not have any significant negative effects. The program supports recurring expenditure within the HCWs and BPHUs, this will encompass service level improvements and upgradation/refurbishments in the healthcare facilities. These improvements will be undertaken within existing HCF premises – hence, they are not expected to encroach/degrade natural habitats or impact cultural heritage sites. The proposed small-scale interior construction works for the refurbishing of existing HCW and BPHU facilities and the associated environmental impacts would be limited and typically include dust, noise, on-site safety, and waste management. At this stage, the expected amounts of generated wastes cannot be estimated considering the very small scale of such interventions the expected quantities of refurbishing-related waste can be properly managed in accordance with the current practices and norms. All the above impacts are to be successfully mitigated through the application of good engineering and construction practices. The program will not support construction of new buildings, but only interventions to the existing ones under the same footprint.

However, the key environmental effect of the program is the increase in biomedical waste generation, wastewater, and liquid waste generation due to the potential increase in the number of HWC facilities delivering improved CPHC services. The inappropriate management of the infectious wastes and improper disposal (through burning, or through mixing with other wastes) poses the greatest risk through the program to the environment and public health. The increased waste would require (i) better multi sector planning to ensure connections with CBMWTF and decentralised disposal (ii) ensure that no waste is disposed incorrectly through open dumping or burning and (iii) ensure that liquid wastes and wastewater are appropriately treated and disposed so that they do not pose risk to human health and the environment. Other induced environmental impacts include the increased generation of e-waste, and plastic waste from health care facilities as they are modernised and upgraded which will require attention for its proper handling and disposal, so that they are appropriately recycled.

The HCWs and BPHUs will also depend on several contracted staff and outsourced agencies for (cleanliness, housekeeping, biomedical waste handling); so, there will be increased risk of occupational exposure to chemicals, infectious wastes, sharps, disinfectants and insecticides if workers are not rained adequately in handling and safety procedures. Safety of healthcare workers, patients' needs to be ensured so that infections are abated, sanitation and hygiene is maintained in the health care centres. To ensure the safety these workers would need structured training on occupational health and safety practices, safe handling of infectious wastes, safely operate medical equipments such as autoclaves, and safe use of reagents, disinfectants, and appropriate use of different types of PPE.

Table 8 Environmental Effects from Program Activities

Key areas relevant to EHS and OHS	Potential Environmental Affects	Level of Concern	Government policies and systems to address these risks	Institutional Responsibilities	Key gaps
Implications for Environmental Quality	Fugitive emissions (dust, noise) and waste generation (construction and demolition waste) from minor civil works	Moderate Scale of renovation is small and within existing HCF premises. Effects are site-specific and can be mitigated with measures such as dust screens, water spray, use of settling tanks, disposal of waste at permitted sites, use of low-noise equipment, prohibition of construction during night-time, etc. However, there is a need to strengthen the construction stage management system including contractual provisions, contractor compliance monitoring and reporting.	Air (Prevention and Control of Pollution) Act, 1981 Municipal Solid Waste (Management and Handling) Rules, 2000 Noise Pollution (Regulation and Control) Rules, 2000 Construction and Demolition Waste Management Rules, 2016 IMEP section 4.12 Construction of Management Guidelines	PWD/ Accredited agencies implementation SPCBs supervision	Training and provisions for contractors' teams to manage solid waste/ debris from refurbishment works Training on provisions of the National Hospital Safety Guidelines (NDMA)
	Bio-Medical Waste (BMW) generation	Substantial. The existing BMW management system is not	All facilities require license under BMWM rules to operate	HCF staff implementation	Strengthen the BMW system including facility provision, capacity building of staff (BMW / IC supervisor)

		robust: 79% of rural HWC-PHCs and 65% of urban HWC-PHCs have provision for BMW management. 46% of HWC-SCs have a deep burial pit for BMW management The quantity of bio-medical waste generated is likely to increase with increase in the services being offered under the Program. Most health care facilities do not treat liquid wastes before release9.	Bio-medical Waste Management Rules, 2016 (amended 2018, and 2020) These rules apply to all persons who generate, collect, receive, store, transport, treat, dispose, or handle bio medical waste in any form including hospitals, nursing homes, clinics, dispensaries, and research labs etc. Guidelines for Handling, Treatment and Disposal of Waste Generated during Treatment/Diagnosis/ Quarantine of COVID-19 Patients Guidelines for Bar Code System for Effective Management of Bio-Medical Waste	NHM health society-funding SPCBs supervision	monitoring and reporting, for compliance with the regulatory requirements. Trainings for housekeeping and sanitation staff on BMW should be conducted with healthcare staff.

9 *ADB, 2020. Program Safeguard Systems Assessment. India: Strengthening Comprehensive Primary Health Care in Urban Areas Program under PM-ASBY.*

			Guidelines for Common Bio-medical Waste Treatment and Disposal Facilities Guidelines for Environmentally Sound Management of Mercury Waste Generated from Health Care Facilities.		
	Liquid Waste (Wastewater, chemical reagents, and disinfectants)	Moderate effluent quality standard applicable.	Biomedical waste management Rules, 2016 ensure segregation of liquid chemical waste at source and ensure pre-treatment or neutralisation prior to mixing with other effluent generated from health care facilities. BMW rules also set effluent discharge standards for effluent discharge. ETPs are necessary if discharge from HCF relates to City's/Town's public sewerage network not having any terminal sewage treatment plant or if the HCF is not connected to public sewerage network. Treated wastewater	HCF staff implementation SPCBs supervision	The Periodical regular check, operational improvement and upgrading (as necessary) of the hospital ETP/wastewater treatment facility should be carried out to ensure the treated effluent will meet applicable standards, and that sludge is handed over to the Common biomedical waste management service provider The flow and composition of the medical wastewater should be monitored regularly based on the reformed capacity and service scope of the hospitals to ensure that the medical

			from healthcare facility should conform to the standards of liquid waste as listed in Schedule II of BMW Rules, 2016. Bedded HCFs with > 10 beds need to establish suitable Effluent Treatment Facility should have installed ETPs by Dec 2019		wastewater be collected and treated on site
	E- waste and other general waste	Moderate: With the upgrading of HCWs, and quality of service provided, the quality of e-waste generated with increase incrementally. (Tablets, Laptops, autoclave machines, monitors and medical diagnostic equipment)	e-Waste (Management and Handling) Rules, 2016 E-waste is not covered under BMWM Rules, 2016 As per the Rules, the producer of the electrical and electronic equipments shall be responsible for collection and channelization of e-wastes generated from the 'end-of-life' of their products under Extended Producer Responsibility (EPR). CPCB issues EPR authorisation to the Producers for	HCF staff implementation SPCBs supervision	SPCB should ensure better disclosure, Records of E-Waste transfer/sale and should maintain records for verification of the e-waste management. SPCB should provide these inputs to State BMW Advisory committee

			environmentally sound management of e-waste. If no EPR, the E-Waste is sent to an authorized E-Waste dismantling or recycling facility or an authorised collection centre of the Producer of the equipment.		
	Battery waste generation	Minimal. Improperly discarded used lead acid batteries can contaminate soil and water.	the lead acid batteries covered under the Batteries (Management and Handling) Rules, 2001 made under the Act.	HCF staff implementation SPCBs supervision	Strengthen awareness on the battery waste management system -capacity building of staff, monitoring and reporting, for compliance with the regulatory requirements.
Occupational Health and Safety	Occupational health and safety during renovation/ refurbishment works and management of COVID-19 amongst workers	Minimum. Scale of civil works is small. Safety risks can be mitigated with measures such as provision and use of PPE, protective fencing, etc.	The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 Guidelines for Environmentally Sound Management of Mercury Waste Generated from Health Care Facilities.	Contract workers/ PWD	Structured trainings for contract workers on OHS to ensure use of PPE, on-site cleanliness and sanitation

	Infection control	Moderate Inadequate adherence to safety protocols can lead to spread of infections.	Safety risks can be mitigated with measures such as provision and use of PPE, capacity building of staff, monitoring for compliance with the safety protocols.	Infection Management and environmental Plan NQAS standards	No gaps
	Accidents and Spills	Moderate	Biomedical waste management Rules, 2016 ensure reporting of all accidents and spills and action taken. The HCF in-charge submits the report to the SPCB annually according to agreed format	Biomedical waste management Rules, 2016	No gaps
Universal Access	Disabled persons access to HCWs and BPHUs	Minimal	All building design codes, include provisions of universal access for disabled persons in their frameworks and guidance	National Building Code of India 2016 The Central Public Works Department (CPWD) Harmonised Guidelines and Standards for Universal Accessibility in India 2021	No gaps

| Building Safety | Life and Fire Safety | Moderate

The risk of fire in health care facilities is a concern due to the storage, handling, and presence of chemicals, pressurized gases, boards, plastics, and other flammable substrates.

The building code mainly contains administrative regulations, development control rules, and general building requirements; fire safety requirements; stipulations regarding materials, structural design, and construction (including safety). It also mandates that an emergency plan for orderly and systematic evacuation, fire drills conducted at least once in six months. The code says that no alterations should be made in a building to reduce the number, width or protection of exits. | National Building Code of India 2016 Part – IV "Fire & Life Safety" in their building byelaws.

National Building Code of India covers the detailed guidelines for construction, maintenance and fire safety of the structures. Guidelines were issued to the States to incorporate the recommendations of National Building Code into their local building bylaws making the recommendations of National Building Code of India as mandatory requirement. | Public works department and HCF | No Gaps |
|---|---|---|---|---|---|

Structural Safety and Disaster Resilience		All PHCs should have Disaster Management Plan in line with the District Disaster management Plan Authority according to the Indian Standards for PHCs (Annex 4)	Public works department SDMA and HCF	No gaps

Table 9 Environmental Effects by RAs

Results Are	Program Activities/Inputs	Risks	Mitigation / risk management	Benefits/ Opportunities
RESULT AREA #1: SUPPORTING INDIA'S REDESIGNED SERVICE DELIVERY MODEL FOR COMPREHENSIVE PRIMARY HEALTH CARE (CPHC)	▶ assigning a primary health care (PHC) provider/facility to every household ▶ ensuring linkages between each household and its primary care provider/facility ▶ household visits, population-based screening for NCDs, and with basic records of all households maintained at the facility ▶ activities to increase visits by household members to PHC facilities ▶ referral and counter-referral linkages to higher-level health facilities ▶ systems to closely monitor and incentivize performance by facilities	▶ The resultant Increase footfall at HWCs, and provision of increased service delivery packages will result in incremental increases in biomedical waste, other wastes (plastics, organics, solids) and liquid wastes (wastewater, blood, reagents, and disinfectants) ▶ Packages such cancer screening will involve procurement of new and advanced medical imaging equipment which can lead to radiation exposure ▶ renovation works within HCF will cause dust, noise, wastewater, and general solid waste. Visitors/patients particularly the inpatients, may be exposed to noise and dust	▶ Trainings on OHS, use of PPE for all healthcare workers and contract staff ▶ Strengthened planning and monitoring of waste disposal (BMW, Plastic, E-waste and liquid waste) to prevent any improper disposal (burning, open dumping)	▶ Increase trainings and ToT on BMWM and Kalakalp scheme certification ▶ Opportunities to enhance systems for healthcare worker safety- airborne infection control, life and fire safety

	and administrative units for different aspects of PHC service delivery.	▶ Health care providers and personnel may be exposed to general infections, potential infectious materials during care and treatment, as well as during collection, handling, treatment, and disposal of health care waste		
RESULT AREA #2: IMPROVING QUALITY OF CARE	▶ improve quality of CPHC service delivery by supporting NQAS certification of HWCs ▶ create a knowledge sharing platform and an enabling environment for comprehensive quality of care improvement extending beyond certification and including meso- and macro-level interventions ▶ develop contextualized measurement tools for patient experience ▶ strengthen the health workforce through adopting a comprehensive state-specific HRH strategy for public health care facilities.	▶ Attainment of (NQAS), and CPHC services will involve inputs in the facilities and processes which may include minor civil works, and increase in the dust, noise and solid waste. ▶ The operation of the improved facilities will result in incremental increases in BMW and other wastes, as well as wastewater/ liquid waste and disinfectants. ▶ The risk of fire in health care facilities is a concern due to the storage, handling, and presence of chemicals, pressurized gases, boards, plastics, and other flammable substrates.	▶ Workers to use PPE and trained on OHS and ERP procedures. ▶ Contact workers undertaking rehabilitation works to be trained on OHS and environmental mitigations such as use of watering technique and Screens to prevent dust, use of low noise equipment, collection of debris and packaging wastes, prevention of	▶ Attainment of the NQAS standards /certification will involve facilities monitoring Their infection control practices, ensuring compliance to hand hygiene practices and usage PPE, maintenance of hygiene, sterilisation and disinfectant practices as well as management of Bio-Medical Waste. ▶ It also includes standards for cleanliness, infrastructure maintenance, removal of junk and condemned material and maintenance of equipment & instruments. ▶ Strengthen stakeholder feedback mechanisms for biomedical waste management, sanitation and cleanliness and infection control practices in HWCs.

			accidents and falls.	
RESULT AREA #3: TRANSFORMING HEALTH SECTOR GOVERNANCE, ACCOUNTABILITY, AND INSTITUTIONAL AND MANAGEMENT	▶ actions that will help strengthen accountability along four dimensions: (a) between tiers of government, (b) between the state and providers, (c) between the state and citizens, and (d) between providers and citizens.	Environmental quality and health and safety accountability (planning implementation, monitoring, supervision) needs to be clearly defined and not spread across an array of players.	Strengthen multi sector coordination on BMWM, IC, and safety in health care facilities.	community engagement and monitoring of biomedical waste

opportunity to support and promote awareness about Kayakalp scheme

Build stronger coordination mechanisms between environment, rural and health departments to tackle ad find solutions for decentralised waste management.

Institutionalise knowledge on biomedical waste management and infection control best practices |

ASSESSMENT OF SOCIAL MANAGEMENT SYSTEMS

The program has low likelihood of any negative social impacts, and the impacts of proposed investments and cluster of activities is largely anticipated to be positive. There is no land acquisition anticipated under the program. The program does not support any major construction and it is limited to minor renovation and repairs of existing HCF premises. Hence, it is unlikely that any additional land is required beyond the existing footprint of the health facility. The program further aims to enhance positive social outcome by addressing the issues related to inequalities in health services and quality of health care provision in poorer and backward districts are being addressed through quality of care and equity component of the program. The table below presents the key social risks and gaps with respect to main activity clusters of the program and potential measures to align with ESSA core principles.

As mentioned earlier, there is satisfactory institutional capacity among the functionaries participating health directorates on addressing the social concerns including the tribal health components of the ongoing program. The guidelines and procedures are defined and being followed. However, the proposed program intends to build overall capacity of the health care functionaries of all participating Directorates and Society(ies) by promoting continued medical education (CME) and helping develop policy and strategy to strengthen the gap areas in quality health care service provision. In addition, to effectively mitigate the impacts of COVID-19, there is a need to further strengthen the inter-institutional coordination mechanism for better program outcome. The institutional capacity to address environmental issues will require strengthening on some specific areas. For example, for improved capacity for monitoring and reporting on access and quality issues across the healthcare facilities.

In addition, consultations with states documented those states have adequate staff managing social safeguard-related impacts, as assessed, based on the record of the National Health Mission and on-going WB operations in Andhra Pradesh, Meghalaya, Tamil Nadu, and a closed WB operation in Uttar Pradesh. However, to strengthen their capacity, state nodal officials under the current program will be trained in tracking tribal health programming, as part of their orientation training and refresher training.

State-level assessment of social systems: A Snapshot *(Refer to Annex xx for a detailed analysis of state level social systems)*

STATE	STATE-LEVEL INTIATIVES FOR TRIBAL AREAS	STATE-LEVEL INTIATIVES FOR COMMUNITY STRENGTHENING
Andhra Pradesh	**Significant government focus to improve uptake of health schemes in ITDA blocks** • Peer educators creating awareness in schools • Nutritious diet in schools • Hostels for pregnant tribal women and policy emphasis on nutritional status of tribal women • TB camps	• Strengthening block-level systems and convergence for under-nutrition in tribal blocks • Community Nutrition Hub, community nutrition counsellors and community-led social audits • Consultations with specialists through tele-medicine

Kerala	>1% of population lives in areas with limited access • Mobile Medical units • Mobilization camps	• Community engagement: Arogya Ena health care volunteerism 25 per ward a total of 500 per 30,000 population. • Family health plan: Mapping health needs of FHC area, mapping the services that are being currently provided, identify new services that needs to be integrated, mapping the provider at each level. • Specific focus projects for tribal and marginalized population in urban and rural areas.
Meghalaya	Designated Schedule VI areas; policy focus on preventative care • Tribal health centre in Shillong	• Strengthening community ownership through Meghalaya Community Participation and Public Services Social Audit Act, 2017 • Village-level social audit committees to improve accountability of health care provision • Increase awareness and uptake of health services and public health facilities by community-level initiative
Odisha (Focus state for the ESSA)	Designated Schedule V areas: 40% of the population is SC/ST • Major investments by the state government to create awareness in tribal areas - shows for awareness, beneficiary identification & tracking. • Additional budgeting procedures at the state level and annual budget plans include special provisions for KBK districts (tribal districts in Odisha)	• Kalpana programme for better health – Dhenkanal, Odisha: Capacity building of primary care givers in preparing home-made nutritious food from locally available ingredients and counselling of mothers on family planning are also conducted here. • Gaon Kalyan Samiti (GKS): successful in demonstrating state-level health platforms
Punjab	*No notified tribes or designated schedule areas*	Strong engagement of women-led groups in supporting maternal and new-born health, through generating awareness on health and nutritional information and providing peer-to-peer support.
Uttar Pradesh	High levels of poverty; more than a crore population experiences health shocks due to OOPs payment • Improve institutional delivery and post-delivery care for women of the Tharu tribe	Strong engagement of women-led groups in supporting maternal and newborn health, through generating awareness on health and nutritional information and providing peer-to-peer support.

		Out-reach camps in urban areas for vulnerable groups including informal workers
Tamil Nadu (Focus state for the ESSA)	**Designated Schedule V areas; targeted initiatives for ITDA blocks** • Tribal waiting rooms, bed grant scheme, tribal counselors • Referral services • Mobile medical units • Specific interventions to improve institutional deliveries in tribal blocks of the state.	<u>Community based assessment checklist:</u> Hospital on Wheels Programme: Mobile Medical Units were launched to provide health care services in unserved areas of the state; Public health cadre

SOCIAL BENEFITS AND OPPORTUNITIES

The social systems assessment filtered Odisha and Tamil Nadu as focus states to decipher key social risks and institutional capacities in improving health service delivery in tribal blocks. Findings from the social systems assessment is summarized below: The Program will transform PHCs and SCs into functional HWCs and introduce accountability enhancing mechanisms that will improve capacities of Jan Arogya Samitis to manage HWCs. This will include support for: (a) small scale rehabilitation through minor civil works (e.g., minor repairs to damaged buildings), (b) provision of quality facilities (e.g., provision of water supply and sanitation facility in case of non-existent or inadequate facilities) and (c) Improved community ownership and management of HWCs through Jan Arogya Samitis (JAS). The Program will support capacity building of Jan Arogya Samitis across states to build community ownership and people-centric service delivery structures. Multi-sectoral convergence platforms envisaged under the Program provides opportunity for coordination between the state health societies and tribal welfare departments to improve service delivery in unserved areas and tribal blocks.

Table : Social Effects from Program Activities

Sl. No.	Activity Cluster	Key Social Risk and Gaps	Potential Measures to align with ESSA Core Principles
1	Result Area #1 (RA#1) will support interventions under the Program to strengthen the provision of CPHC services. In particular, it will support efforts to ensure effective coverage and provision of CPHC services through HWCs, with multi-	The proposed activities will benefit STs and vulnerable groups in aspirational districts and ITDA blocks in Schedule V areas/Schedule VI areas with improved quality of health care infrastructure and services. However, based on consultations with states and semi-structured interviews with focal points	To align with core principle #1, an environment and social risk management checklist is proposed that will have enabling

Sl. No.	Activity Cluster	Key Social Risk and Gaps	Potential Measures to align with ESSA Core Principles
	disciplinary teams operating at both the facility and household levels, and with referral linkages to higher-level health facilities. RA#1 will also support interventions to strengthen CPHC data systems and better track CPHC performance at the HWC and district level; a system of financial incentives based on this improved performance tracking will also be introduced.	from Odisha and Tamil Nadu, the ESSA found gaps in health programming and outreach in integrated tribal development blocks and aspirational districts.	provisions to fill the identified gaps. An inclusion template will be developed under the EHSD Program to strengthen service delivery in aspirational districts and ITDA blocks.
2	Interventions will be supported along the following key dimensions: (i) Increased footfalls at HWCs (ii) Operationalization of the HWCs; (iii) Increasing coverage and effectiveness of population-based activities (iv) Strengthening existing CPHC data systems towards improved performance tracking and incentivization	Low likelihood of any negative social risks with the proposed activities.	To align with core principles #1 and #3, training facilities will be expanded, and refresher trainings will be introduced and operationalization of HWCs will integrate social screening requirements.
3	The Program will support the following core areas to build a high-quality health	Low likelihood of any negative social risks with the proposed activities. Some	To align with core principles #1

Sl. No.	Activity Cluster	Key Social Risk and Gaps	Potential Measures to align with ESSA Core Principles
	system: (i) improved quality of CPHC service delivery (ii) create a knowledge sharing platform and an enabling environment for comprehensive quality of care improvement, (iii) develop contextualized measurement tools for patient experience, and (iv) strengthen the health workforce through developing a comprehensive state-specific Human Resources for Health (HRH) strategy for public health care facilities.	of the activities related to enhancing of quality services will help address the gender gap identified.	and #3, training facilities will be expanded, and refresher trainings will be introduced specifically on promoting sensitivities on inclusion.
6	Results Area #3 aims to support actions that will help strengthen accountability along four dimensions: (i) between tiers of government; (ii) between the state and providers; (iii) between the state and citizens; and (iv) between providers and citizens. This approach is aligned with the World Development Report 2004 framework for service delivery.[10]	This will help bridge the inequity between the bottom quintile districts with top quintile districts on access to health services across the participating seven states. However, in order to upgrade the grievance redressal architecture, some states may need to undertake gap assessments of existing feedback loops in tribal development blocks.	Already aligned with ESSA core principle #5 with culturally appropriate SBCC tailored to priority unserved areas, such as tribal blocks in Maharashtra, Odisha and AP and special focus to aspirational districts including the districts with tribal population.

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10 World Development Report 2004. Making Services Work for Poor People. The World Bank. 2003

Sl. No.	Activity Cluster	Key Social Risk and Gaps	Potential Measures to align with ESSA Core Principles
7	Citizen Engagement, Gender and Gender-based Violence	The activities related to enhancing the citizen engagement through VHSCs, JAS, women-led groups and MAS which are civic forums built on the Panchayati Raj system to boost citizen voice and agency. Additionally, to ensure equitable benefits of the program for women-headed households and adolescent girls, the following activities will be supported under the Program: • Gender-disaggregation in data collection and usage, and better track CPHC performance at the HWC and district level. • Early identification of teenage pregnancies, high-risk pregnancies and anaemic young mothers will be identified at the HWC level for providing continuous care at the facility level.	Already aligned with core principle #5 by giving special focus to community voice and agency to monitor the program outcome.

Table: Intra-state variations and shortfall in health facilities **11**

State	Estimated midyear Tribal Population (as on 1st July 2019 in tribal blocks)	Sub Centres (SCs)			PHCs		
		Required	Present	Shortage	Required	Present	Shortage

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11 *Ministry of Tribal Affairs, Government of India, 2019*

Andhra Pradesh	2266965	755	802	**	113	153	**
Uttar Pradesh	1147580	382	NA	NA	57	NA	NA
Odisha	9202138	3067	2701	366	460	427	33
Tamil Nadu	644645	214	432	**	32	105	**
Meghalaya	2314912	771	477	294	115	118	**
Kerala	285346	95	831	**	14	137	**
Punjab *(no notified tribes)*	0	0	0	0	0	0	0

III ASSESSMENT OF ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEMS AND IMPLEMENTATION CAPACITY

A. INTRODUCTION

This section provides a summary assessment of whether the program's environmental and social management systems are adequate for and consistent with the core principles and key planning elements contained in the PforR Policy, as relevant to the Program. It also assesses whether the involved institutions have the requisite capacity to implement these systems' requirements. An in-depth description and analysis of the Program's systems and implementation capacity and gaps are found in Annex 2 and a list of applicable policies and guidelines are found in Annex 5, and a complete list of the standards for primary health care facilities is in Annex 3.

As noted earlier, the PforR Policy requires the proposed Program to operate within an adequate environmental and social management system that can manage environmental and social effects (particularly adverse impacts and risks) identified during the ESSA process. This includes (a) an adequate legal and regulatory framework and institutional setting to guide environmental and social impact assessment and the management of environmental and social effects, and (b) adequate institutional capacity to effectively implement the requirements of the system.

This section **assesses whether the Program's environmental and social management systems are consistent with the core principles and key planning elements contained in the PforR Policy and whether the involved institutions have the requisite capacity to implement these systems' requirements**. Both elements (e.g., Program systems and capacity) are necessary towards ensuring that the environmental and social effects identified in Section II are effectively managed. Through both analyses, the ESSA team has identified gaps in both areas, which are addressed in Inputs to the Program Action Plan and Supplemental actions.

Program systems constituted by the rules and "arrangements within a Program for managing environmental and social effects," including "institutional, organizational, and procedural considerations that are relevant to environmental and social management" and that provide "authority" to those institutions involved in the Program "to achieve to achieve environmental and social objectives against the range of environmental and social impacts that may be associated with the Program." This includes existing laws, policies, rules, regulations, procedures, and implementing guidelines, etc. that are applicable to the Program or the management of its environmental and social effects. It also includes inter-agency coordination arrangements if there are shared implementation responsibilities in practice.

Program capacity is the "organizational capacity" the institutions authorized to undertake environmental and social management actions to achieve effectively "environmental and social objectives against the range of environmental and social impacts that may be associated with the Program." This ESSA has examined the adequacy of such capacity by considering, among other things, the following factors:

i. Adequacy of human resources (including in terms of training and experience), budget, and other implementation resources allocated to the institutions.

ii. The adequacy of institutional organization and the division of labor among institutions.

iii. Effectiveness of interagency coordination arrangements where multiple agencies or jurisdictions are involved; and

iv.   The degree to which the institutions can demonstrate prior experience in effectively managing environmental and social effects in the context in projects or Programs of similar type and magnitude.

This ESSA examines and discusses only those aspects of the proposed Program's environmental and social management systems and related capacity that the ESSA Team found to be relevant considering its identified environmental and social effects. This section provides a summary assessment of the Program's systems and capacity as they relate to each of the core principles and key planning elements. The text and tables below clarify the instances in which one or more of the Core Principles or Key Planning Elements are not relevant to the Program and are thus inapplicable. More in depth discussion and analysis of the Program's systems and capacity are found in Annex 2.

Overall, the applicable environmental management systems are generally adequate to address underlying environmental and social risks, and noteworthy strengths are strong regulations and guidelines on biomedical waste management, general waste management, and infection control. The provisions of the existing environmental legal and regulatory framework are adequate but require enabling institutional and technical capacity for compliance. While the provisions of the Biomedical Waste Management & Handling) Rules, (as amended on March 2018), Infection Management and Environment Policy Framework (IMPS) are being implemented, provisions of other relevant environmental acts such as, hazardous, solid, plastic and e-waste Rules applicable to the Program require additional capacity building efforts.

The applicable environmental and social management systems is generally adequate to address underlying environmental risks, and noteworthy strengths are having national regulations and guidelines in place for bio-medical and other waste management, general infection control, national building codes for life and fire safety and building and construction worker safety, though efforts are required to strengthen implementation, and institutional coordination to achieve sustainable outcomes. Gaps identified through the assessment are proposed to be addressed through a set of actions which are compiled as Environmental and Social inputs to the Program Action Plan.

B.   PROGRAM SYSTEMS: LEGAL, REGULATORY SYSTEMS AND FRAMEWORKS

The Government of India and the state government have enacted a range of laws, regulations, and procedures relevant to managing the environmental and social effects of the proposed Program. Table 8 below lists legal instruments that manage the biomedical and other wastes, pollution prevention, labor, occupational health and safety, community/public health and safety, and building safety (life and fire safety) related aspects relevant to the program results areas.

Table 10 Applicable GoI Policies and Regulations

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
1	Infection control	Infection Management and Environment Plan is a policy framework which	Highly relevant and Applicable in all healthcare facilities

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
		lays out detailed guidelines for infection control in SCs, PHC, CHC.	
2	Bio-medical Waste Management Rules, 2016	Schedule 1: Categorization and Management Schedule 2: Standards for treatment and disposal of BMW Schedule 3: Prescribed Authority and duties Schedule 4: Label of containers, bags and transportation of Bio-Medical waste The provisions under the rules provide for both solid and liquid medical wastes. Liquid waste should be treated with 1% hypochlorite solution before discharge into sewers. Hospitals not connected to municipal Waste Water Treatment Plants (WWTPs) should install compact on-site sewage treatments (i.e. primary and secondary treatment, disinfection) to ensure that wastewater discharges meet applicable thresholds	Highly relevant -As per Accreditation requirements, healthcare facilities are required to develop Standard Operating Procedures (SOPs) in the handling of medical solid, liquid and radioactive wastes. On solid BMW there is good overall capacity and compliance. On liquid BMW, there are significant gaps in treatment and disposal of wastewater from hospitals. -The requirements in MOEFCC Notification-G.S.R.234 (E), dated 28th March, 2016 are found to be equivalent to the WBG EHS Guidelines for Healthcare Facilities as they cover good international industry practice (GIIP) such as labelling and symbols for hazardous materials and waste, waste reduction, segregation, storage, transportation (manifest), treatment and handling (with autoclave, incineration), health workers occupational health and safety and public health and safety. The effluent standards are also equivalent or better than the World Bank Group (WBG) EHS Guidelines for Health Care Facilities (Performance Monitoring); for example, 100mg/L for COD (India) and 250 mg/L (WBG Guidelines).
2	Construction and Demolition Waste Management Rules, 2016	Waste comprising of building materials, debris and rubble resulting from construction, re-modelling, repair and demolition of any civil structure	Relevant as there will be construction waste generated. CPCB guidelines on Environmental Management of C&D Waste Management in India (2017) will be applicable.

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
3	E-Waste (Management and Handling) Rules 2011as Amendment up to 2018	To address leakage of e-waste to informal sector at all the stages of channelization. The 2016 Amendment brought health care facilities (with turnover over INR 20 crores or more than 20 employees).	Relevant as it is applicable for consumers or bulk consumers. The disposal of E-wastes to be done at the specified collection centers and reported annually.
4	Plastic Waste Management Rules 2016	All institutional generators of plastic waste, shall segregate and store the waste generated by them in accordance with the Solid Waste Management Rules, and handover segregated wastes to authorized waste processing or disposal facilities or deposition centers, either on its own or through the authorized waste collection agency	Relevant as hospitals are generators of large quantity of plastics, including non-reusable types.
5	E-waste (Management) Rules, 2016	Shall apply to every manufacturer producer, consumer, bulk consumer, collection centers, dealers, e-retailer, refurbisher, dismantler, and recycler involved in manufacture, sale, transfer, purchase, collection, storage, and processing of e-waste or electrical and electronic equipment listed in Schedule I, including their components, consumables, parts, and spares which make the product	Relevant as it is applicable for consumers or bulk consumer. The disposal of E-wastes to be done at the specified collection centers and reported annually. • All programs, where E-Waste is generated including electrical/electronic equipment • As per rules, the manufacturer has to collect back E-Waste and channelize for collection/disposal; Producer (seller of the assembled product under own brand) shall arrange end-of-life disposal under Extended Producers Responsibility and create awareness on this; and collection centers established by producer /dealer (lighting agencies/dealers) can also collect e-waste on behalf of dismantler, refurbished, and recycler including those arising from orphaned products.

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
		operational but shall not apply to - (a) used lead-acid batteries as covered under the Batteries (Management and Handling) Rules, 2001 made under the Act; (b) micro enterprises as defined in the Micro, Small and Medium Enterprises Development Act, 2006 (27 of 2006); and (c) radioactive wastes as covered under the provisions of the Atomic Energy Act, 1962 (33 of 1962) and rules made thereunder.	
6	Water (Prevention and Control of Pollution) Act 1974 Air (Prevention and Control of Pollution) Act 1981 Environment Protection Act (and Rules), 1986 & 1996	Provisions are largely to prevent air and water pollution by not releasing untreated effluents and harmful emissions. Most provisions are already discussed under the Bio-Medical Waste Rules	Relevant and largely complied with; gaps exist in disposal of liquid wastes from healthcare facilities
6	Air PollutionNo.14 of 1981, [29/3/1981] - The Air (Prevention and Control of Pollution) Act 1981, amended	To provide for the prevention, control, and abatement of air pollution in India.	Relevant. to transport of materials for up-gradation, repairs, and other materials, etc., through unpaved roads Transport of wastes from construction, demolition, and other wastes Use of fuels in DG set

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
	1987 and rules thereof		Use of paint / other material with hazardous contents
7	Solid Waste Management Rules, 2016	Apply to every municipal authority responsible for the collection, segregation, storage, transportation, processing, and disposal of municipal solid wastes.	Relevant. Majority of wastes generated from healthcare facilities, laboratories and PoE health organizations is general solid waste e.g. paper, packaging, dry leaves, food wastes etc. and needs to be collected, stored, handled and treated separately from hazardous wastes. Storage, transport, handling, recycling/reuse, disposal of solid wastes including packaging materials under all program activities
8	Building and Construction Workers Act, 1996	An Act to regulate the employment and conditions of service of building and other construction workers and to provide for their safety, health and welfare measures and for other matters connected therewith or incidents.	Relevant. to public health workers, contracted workers employed by Works Department for refurbishment of HCFs and frontline workers.
9	Insecticides Act 1968	This Act governs the use of registered insecticides and non-use of banned insecticides. It is relevant to all health facilities and hostels that undertake pest control operations	Applicable to maintenance and cleaning of new toilet/WASH structures and also for vector control Exclusion of banned insecticides Safe storage of insecticides avoid spills, spill management, and safe usage
10	National Building Code 2016 and relevant standards of the Bureau of Indian Standards (BIS)	The Code provides regulations for building construction by departments, and public bodies. It lays down a set of minimum provisions to protect the safety of the public about structural sufficiency, fire hazards and health aspects. The Code mainly contains	Relevant for any building being constructed or upgraded.- maintaining safe work, construction typology standards, and guidance, mitigation/management measures, training, monitoring Life and Fire safety Structural Safety

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
		administrative regulations, development control rules and general building requirements; fire safety requirements; stipulations regarding materials, structural design and construction (including safety); building and plumbing services; signs and outdoor display structures; guidelines for sustainability, asset and facility management, etc.	
14	Prevention of Sexual Harassment at the Workplace Act, 2013	The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act was passed in 2013. It defined sexual harassment, lay down the procedures for a complaint and inquiry, and the action to be taken. It broadened the Vishaka guidelines, which were already in place.	Relevant to public health workers and contract workers in participating states under the EHSD Program
15	Right to Information Act, 2005	Provides a practical regime of right to information for citizens to secure access to information under the control of Public Authorities. The act sets out (a) obligations of public authorities with respect to provision of information; (b) requires designating of a Public Information Officer; (c) process for any citizen to obtain information/disposal of	Provides framework for disclosing information to the public.

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
		request, etc. (d) provides for institutions such as Central Information Commission/State Information Commission	
16	Construction standards & Disaster Related	Disaster Management Act, 2005 National Policy on Disaster Management 2009 National Disaster Management (NDM) Guidelines – Hospital Safety 2016: -	Codes for construction in disaster-prone areas National Policy (2009) focuses on prevention, mitigation, preparedness, and response. Universal Access Electrical safety Structural Safety Fire Safety Emergency response plans It describes the institutional and financial arrangements, capacity development, knowledge management, etc.
17	The Hazardous and Other Waste Management Rules, 2016	The H&OW Management Rules, 2016 provide for generation, collection, treatment, transport, import, storage and disposal of hazardous wastes. Improper storage, handling, transportation, treatment and disposal of hazardous waste results in adverse impact on ecosystems including the human environment.	Relevant to all health programmes
18	The Occupational Safety, Health and Working Conditions Code, 2020	This code on occupational safety, health and working conditions applies to all establishments with 10 or more workers and includes building and construction workers. It is applicable to all infrastructure works supported under the	Relevant for all workers and construction activities.

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
		program. The Occupational Safety, Health, and Working Conditions Code ("Code") is enacted to consolidate and amend the laws regulating the occupational safety, health, and working conditions of the persons employed in an establishment, and for the connected and incidental matters. The Code also lists benefits to the inter-state migrant workman such as the benefits of the insurance and provident fund benefits either in the native state or the state of employment, portability of benefits of the inter-state migrant worker working for building or other construction work out of the building and other construction cess fund in the destination State where such inter-state migrant worker is employed. It also mandates free health check-ups for who attained the age of forty-five years for prescribed industries such as factories, mines, plantations, workers employed in hazardous process.	

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
19	The Epidemic Diseases Act 1897 The Epidemic Diseases (Amendment) Ordinance, 2020	The Epidemic Diseases Act 1897 provides for better prevention of the spread of dangerous diseases. The Epidemic Diseases (Amendment) Ordinance, 2020 was promulgated on April 22, 2020. The Ordinance amends the Epidemic Diseases Act, 1897. The Act provides for the prevention of the spread of dangerous epidemic diseases. The Ordinance amends the Act to include protections for healthcare personnel combating epidemic diseases and expands the powers of the central government to prevent the spread of such diseases.	To ensure safety of communities, workers and project staff especially during this period of COVID pandemic. The ordinance includes provisions for protection of health and safety of health workers from the acts of violence and aggression during management of Covid-19 response in the health facilities and communities.
20	Workmen's Compensation Act, 1923 & Rules 1924	The Act provides for compensation in case of injury by accident arising out of and during employment.	Relevant to the program and applicable for sub-projects involving construction.
Important Guidelines relevant to the Program			
1	PM ABHIM Operational Guidelines	The PM ABHIM operational guidelines cover the guiding Principles, Implementation Mechanisms, Planning, Appraisal and Approval Process of HCWs and BPHUs under the Program.	Relevant - The guidelines provide information on illigible expenditure, guiding policies (such as BMWM Rules, 2016) and factors to be considered, while planning

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
2	XV Finance commission technical and operational guidelines	The technical and operational guidelines are intended for state and district programme managers, and the representatives of state and district rural and urban local bodies to plan new infrastructure under PMABHIM	PM- ABHIM Health centres follow the guidelines of the XV Finance commission. – this provides the layout of the healthcare centres, the needed infrastructure for maintaining environment health, safety, and cleanliness.
3	NQAS Operational Guidelines For Improving Quality In Public Health Facilities	To strengthen and improve; Quality of care, provide recognized/accepted standards, measurement system and quality improvement interventions in congruence with universal quality and safety goals.	Relevant- Sets standards for infection control
4	*Swachhata* Guidelines	These guidelines have been developed for States to use in maintaining cleanliness in their health facilities. Quality in public health facilities encompasses much more than hygiene and cleanliness.	Relevant to all healthcare facilities under PM ABHIM
5	*Kalakalp* Award Scheme	Aim of initiative which to improve and promote the cleanliness, hygiene, waste management and infection control practices in public health care facilities and incentivize the exemplary performing facilities. The scheme is intended to encourage and incentivize Public Health Facilities	Relevant to all HCWs and BPHUs under PM ABHIM · To inculcate a culture of ongoing assessment and peer review of performance related to hygiene, sanitation, and infection control. · To incentivize and recognize public healthcare facilities that show exemplary performance in adhering to

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
		(PHFs) in the country to demonstrate their commitment for cleanliness, hygiene and infection control practices. Initiated from District hospitals in 2015, the scheme expanded to PHC level (2016) and then covered all Urban Health Facilities by 2017.	standard protocols of cleanliness, infection control and sanitation · To create and share sustainable practices related to improving cleanliness in public health facilities which lead to positive health outcomes
6	Swachh Bharat Mission	Swachh Bharat Mission (SBM), Swachh Bharat Abhiyan, or Clean India Mission is a country-wide campaign initiated by the Government of India in 2014 to eliminate open defecation and improve solid waste management.	Relevant to the program- preventing inappropriate SWM disposal and encouraging good sanitation and hygiene practices.
7	NDMA Hospital Safety guidelines	The guidelines on Hospital Safety have been developed to ensure health care centres are structurally and functionally safer from disasters, such that the risks to human life and infrastructure are minimized.	Relevant • To ensure structural safety of hospitals (especially of critical facilities). • To ensure that all professionals involved in the day-to-day operation of hospitals are prepared to respond to disasters; and, • To ensure that every hospital in the country has a fully functional and regularly tested Hospital Disaster Management Plan
8	Indian public health standards for primary healthcare facilities	Indian Public Health Standards (IPHS) for Sub-centres, Primary Health Centres (PHCs), Community Health Centres	Relevant -Provides the standards and guidelines for critical EHS parameters such as firefighting, storage of insecticides, biomedical waste management and infection

S. No.	Applicable Act/ Regulation/ Policy	Objective and Provisions	Relevance to the Project and key Findings
		(CHCs), have been used as the reference point for public health care infrastructure planning and up-gradation in the States and UTs.	control at the primary healthcare facility level (refer Annex 3)

Findings: Government of India has a robust set of policies and standards to manage (i) all wastes generated from healthcare facilities (ii) pollution control from construction and operation of healthcare facilities (iii) occupational health and safety, and infection control practices and lastly (iv) healthcare building safety aspects (life and fire safety, disaster preparedness, emergency response and universal access. This effectively addressed all key environmental effects identified under the program. Overall, it was found that the legal, and regulatory landscape and guidance provided by the centre was adequate in covering the environmental effects of the program. This was further elaborated in Table 6. All states follow the national policies and guidelines but defer in implementation capacity of the regulations.

The provisions of the existing environmental legal and regulatory framework are adequate but require enabling institutional and technical capacity to comply with. While the provisions of the Biomedical Waste Management & Handling) Rules, 1998 – as amended up to March 2018 are being implemented, provisions of other relevant environmental Acts, such as, hazardous, solid, plastic and E-waste Rules 2016 require additional capacity building efforts. Efforts are required to improve the monitoring of the management of different kinds of wastes.

C. PROGRAM CAPACITIES: INSTITUTIONAL AND ORGANISATIONAL ASSESSMENT

ENVIRONMENT

The MoHFW has over the past 20 years implemented about 15 World Bank financed projects/programs in the areas of COVID-19 emergency response, tuberculosis elimination, AIDS, vector borne disease control, disease surveillance, immunization, nutrition, reproductive and child health, child development services, etc. A recent operation (approved in 2019) is a PforR, the 'Program Towards Elimination of Tuberculosis' having a moderate risk rating on Environmental and Social. As noted in the most recent Implementation Status Report of the Bank (February 2021) the MoHFW is implementing the PforR satisfactorily.

Among the participating states, Andhra Pradesh, Tamil Nadu and Uttar Pradesh have implemented World Bank supported projects/programs: Andhra Pradesh Health System Strengthening Project (P167581, 2019-2024), Tamil Nadu Health System Reform Program (P166373, 2019-2024), Uttar Pradesh Health System Strengthening Project (P100304, 2011-2019). The states of Odisha and Punjab

have experience of implementing a UNIDO supported project – Environmentally Sound Management of Medical Wastes in India (2011-2019). See Annex 6 for further details.

Considering the scale and the nature of the activities under the Program (as detailed in Chapter 2), none of the activities requires a standalone environmental impact assessment. The Program systems operate within a legal and regulatory framework that is adequate to guide environmental impact mitigation, management and monitoring of the limited, site-specific impacts and issues associated with the refurbishment works, generation of biomedical and other wastes, infection control, occupational health and safety and building safety. A detailed assessment of the institutional roles, responsibilities, and capacities was undertaken in Annex 2, and key gaps identified. A deep dive was undertaken into the biomedical waste management institutional responsibilities, implementation capacity and performance of states in annex 8.

The program environment systems are robust, with a clear regulatory framework, implementation arrangements, budget, and program activities to mitigate negative environment effects on human health and communities especially from BMW and infection risks. The stakeholders have adequate capacity to deal with likely issues from implementation.

Table 11 Institutional Capacity Gaps on EHS

| Institution	Capacity Gap Analysis
Ministry of Health and Family Welfare (MoHFW) and Department of Health (state level)	MOHFW is well equipped to handle their current programmes and have well laid out guidelines and processes for implementation within the applicable legal and regulatory framework. All programs adopt the IPHS and implementation of the Biomedical Waste Management Rules and the Infection Management and Environment Plan (IMEP). This is usually managed by biomedical waste management officer, or quality control officer, but need dedicated capacity on environment, health and safety issues to look at EHS, OHS, holistically.
Central Pollution Control Board	There is No dedicated "Bio-medical Waste Management Cell" in central or state Pollution Control Boards with dedicated manpower to deploy experts to the states, provide states with technical assistance to find solutions for BMWM, Plastic and E waste management.
State Public Works Department (PWD)	The Department of Public Works will not have designated Environmental Safeguards personnel. The Chief Engineer is responsible within the institution to oversee environmental management related to construction. Need to enhance capacity in managing issues related to contracted labour. Need to improve health and safety of workers at construction sites and follow good construction management practices
State Disaster Management Authority	Institutional coordination mechanisms with MoH&FW (national and state), BIS, and NHSRC need to be strengthened to making safety provisions mandatory in the design, construction and functioning of hospitals

Institution	Capacity Gap Analysis
State Pollution Control Board	SPCBs need to strengthen enforcement capability and capacity for adequate monitoring, (violations on waste burning etc.), data from online CEMS, and for management of plastic waste and e-waste.
State Bio Medical Waste Committee	Establishment of BMW committees was not fully completed. Coordination and participation among different stakeholders—in particular, state environmental and health agencies, local authorities, health care facility representatives, academia, and NGOs are also needed. The State level committee constituted should look at all wastes generated as part of HCF operations – e-waste, plastics, hazardous wastes and liquid wastes and submit recommendations based on the site conditions
Committee on Biomedical Waste Management and Infection Control (SC-BMW/IC) under the District Health Society	The District Level Monitoring Committee constituted should look at all wastes generated as part of HCF operations – e-waste, plastics, hazardous wastes and liquid wastes and submit recommendations based on the site conditions (of the disposal facilities, CTFs, pits etc.) and prevailing issues (flooding, fires, COVID-19 peaks, natural disasters etc.) within the districts in the half- yearly report to the State Advisory Committee.
Urban and Rural Local Bodies	RLBs and ULBs need to establish stronger coordination mechanisms with SPCBs, health and Sanitation departments, and water resource departments to identify sites for disposal pits (decentralised management).

SOCIAL

COMMUNITY OWNERSHIP OF HEALTH AND WELLNESS CENTRES AND GRIEVANCE REDRESSAL PROCESS

Background: Under Ayushman Bharat, -Health and Wellness Centres (AB-HWCs), Sub Health Centres (SHCs) and Primary Health Centres (PHCs) are being transformed to Health and Wellness Centres to provide Comprehensive Primary Health Care (CPHC) services. Such a transformation is expected to enable these AB-HWCs to serve as the first port of call for a range of primary health care services spanning preventive, promotive, curative, rehabilitative and palliative care to the population in their coverage area. AB-HWCs are also expected to play a critical public health role and focus on collective community action for Social and Environmental Determinants of Health and support Social Accountability and Community Feedback processes.

Institutions supported by community-led platforms:

Fig 1 - Institutions for Effective Health Planning
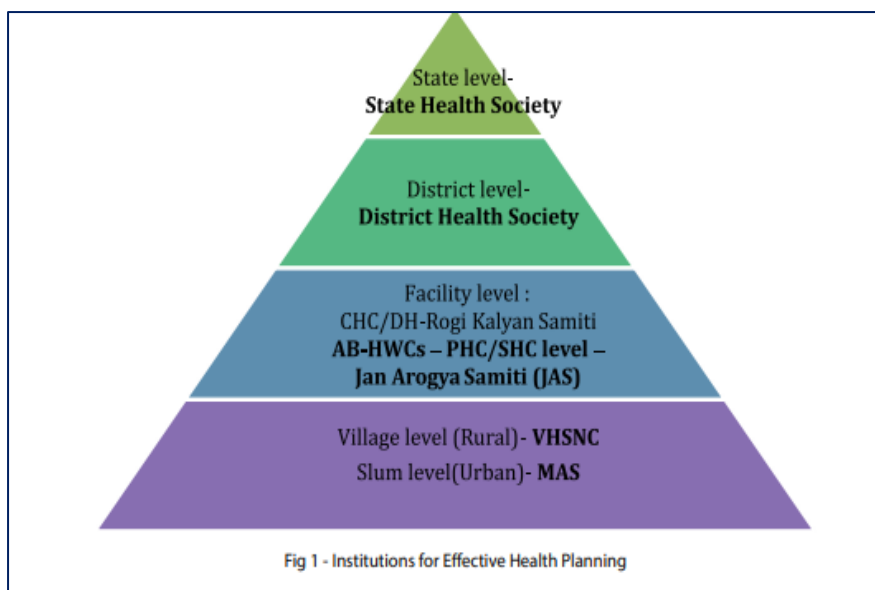
Role and functions of the Jan Arogya Samitis:

JAS work as the platform for planning and supporting multi-sectoral action on Social and Environmental Determinants of Health, especially to address a) Non-Communicable Diseases (NCDs), b) Water Sanitation and Hygiene (WASH), and (c) Malnutrition, Stunting and Anaemia. These platforms co-ordinate the celebration of annual health calendar days at HWC-SHC and facilitate and support VHSNCs to undertake the celebration of Annual Health Calendar Days. These JAS across states, including Uttar Pradesh, Punjab and Tamil Nadu support the HWC team in effective community level implementation of programmes like, Population Based Screening for NCDs, Eat Right Campaign of FSSAI (using Eat Right Tool Kit developed by FSSAI), and SABLA (Rajiv Gandhi Scheme for Empowerment of Adolescent Girls), etc.

Additionally, the JAS (addressed as Gaon Kalyan Samitis in Odisha) ensure community level collective action on Water Sanitation and Hygiene (WASH), using the handbook of VISHWAS (Village based Initiative to synergize Health Water and Sanitation) Campaign, using the structure of 11 monthly campaign days which are part of the VISHWAS Campaign. The JAS also engage with women groups/SHGs/ Farmers Groups/Cultural groups / MAS / Milk Unions and other unions, etc to –

- ensure greater participation of women to enable gender equity and promotion of women's health issues.
- promote regular exercise and sports for adoption of healthy lifestyles, and initiate preventive and health promotive actions against the use of alcohol, tobacco and other forms of substance abuse.
- Promote awareness about services and entitlements under various government schemes for health and financial risk protection making optimal use of community radios, social media etc.

Role of JAS in Catalysing Grievance Redressal:

The JAS is responsible for setting up of a system to register complaints (Patient Feedback can be recorded through Patient Satisfaction surveys. The process and methods of making complaints is widely

advertised at the HWC premises and in the villages under the AB-HWC. The grievance redressal process adopted by JAS across states is outlined below:

- JAS will periodically review the functionality of the system of complaints and ensure AB-HWC team's response to them.
- JAS in its every meeting shall hear patient or user's concerns in accessing quality healthcare services at AB-HWC. The members shall facilitate timely and appropriate action on feedback.
- JAS shall encourage respective VHSNCs to take feedback from community regarding the services at the AB-HWC level and outreach services in the community and share them with JAS on a regular basis.
- The JAS shall also act as Grievance Redressal Platform for families who access healthcare, under different healthcare schemes provided at the facility.
- JAS shall, as appropriate, escalate relevant issues and complaints by sending its representation (oral or written as per the requirement) to the PHC / CHC level (JAS/RKS) and the District Health Society (DHS).

Role of JAS in Social Accountability exercise:

JAS enables and facilitate smooth conduct of social accountability exercise of its ABHWCs (in both SHC and PHC). It also ensures that all necessary information/data and logistics support to the Team are provided. JAS also facilitates the public hearing as part of the Social Accountability process. JAS also follow-ups on issues highlighted in the Social Accountability exercises.

Untied Fund of JAS as per MoHFW guidelines:

- The purpose of the un-tied fund is to make available a flexible fund, to cater to unanticipated minor requirements, based on decisions taken at the AB-HWC level, in consultation with JAS.
- Under Ayushman Bharat, an annual untied fund is provided @ Rs. 50,000 for SHC level AB-- HWCs and Rs.1,75,000 for PHC level AB-HWCs.
- Ensuring basic amenities and services to the patients and citizens and supporting community level health promotion are two cornerstones for prioritizing expenditures from untied funds. The fundamental principle that should be adhered to, is, that the expenditure must be made based on the local needs and priorities.
- Untied Funds should be used only for the common good and not for individual needs, except in the case of referral and transport in emergency situations. In exceptional circumstances to meet urgent health care needs of a destitute woman, an impoverished single elderly or disabled persons, small amounts (upto Rs 500) can be utilized. Any such expenditure shall be duly ratified in the next meeting of JAS. JAS can also mobilize resources/contributions from the local community for supporting such needs. JAS shall record such contributions in its meeting proceedings and may even consider honouring such contributors at health promotion days or at the annual public dialogue or social accountability events.

Sexual Exploitation and Abuse at the Workplace (for public health workers, formal and contractual workers):

- The 2013 POSH Act mandates employers to take steps to protect female employees from sexual harassment in the workplace and to provide procedures for resolution, settlement, or

prosecution. It widened the definition of the workplace and covered the informal sector, including domestic workers. It protects all workers in any place visited by the employee during her employment, including transportation. The law builds upon the 1997 "Vishakha Guidelines" set out by the Supreme Court, mandating that employers take steps to protect female employees from sexual harassment at work.

- The POSH Act requires employers to create an Internal Committee at each office with 10 or more employees. For other establishments with less than 10 employees and for women working in the informal sector, the state government's district officer or collector is required to form a Local Committee in each district.

- These committees handle complaints and recommend actions ranging from a written apology to termination of employment, providing an alternative to filing a criminal complaint with police. Under the POSH Act, the government is also responsible for developing training and educational materials, organizing awareness programs, monitoring implementation of the law, and maintaining data on the number of sexual harassment cases filed and resolved in the workplace. But studies show that many of these Local Committees simply do not exist, and when they do, there is no publicly available information on how to access them.

- Participating states under the EHSD Program will set up Internal Complaints Committee as applicable. For contractual workers, including ASHAs, outreach and sensitization activities will be undertaken to deliver safe workplace environments for frontline workers.

Findings from the social systems assessment:

Land Acquisition and management: The program is limited to the refurbishments of existing HCFs and during preparation, no identified sensitive social settings could impede successful performance of the program. Land acquisition or horizontal expansion of structures outside the HCF premises will be excluded, and no legacy or unresolved issues on the across seven states 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 the World Bank to reputational risks. There have been no known safeguards complaints from the previous state-level financed operations and/or ongoing operations.

Equity and Inclusion: The assessment reviewed the social policies and procedures (both at National and State level) for the Government Program – PM-ABHIM and found them to be adequate. The assessment finds an enabling policy, regulatory and legal framework that will promote decentralized planning, implementation and monitoring, active redressal of grievances through Jan Arogya Samitis (JAS) and effective participation and safeguarding the interests of vulnerable sections (scheduled tribe communities, schedule case communities, women-headed households, and adolescent girls).

Social risks: However, residual social risks related to exclusion of vulnerable groups particularly in aspirational districts and Integrated Tribal Development Blocks (ITDA blocks) in Schedule V and VI areas remain. **The anticipated social risks are manageable and can be mitigated through localized implementation strategies, better local oversight and enhanced accountability of JAS and Mahila Arogya Samitis (MAS).**

D.   ASSESSMENT OF CORE PRINCIPLES

CORE PRINCIPLE 1 – ENVIRONMENTAL AND SOCIAL MANAGEMENT

Program E&S management systems are designed to: (a) avoid, minimize, or mitigate adverse impacts; (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects.

Summary Findings: Applicable

India has an adequate legal framework for environmental, health and safety, backed by a set of comprehensive laws, regulations, technical guidelines, and standards, which apply nationwide, and apply to all the environmental effects identified in the program. Over the decades, it has gradually evolved into a comprehensive system that is generally consistent with the PforR principles. In the seven states, the NHM health directorates have well-established institutional arrangements with qualified staff and technical expertise for managing the EHS and OHS aspects of health care facility operations. The NHM has been providing manpower and funds which also covers BMW and IC prevents and measures for providing satisfactory oversight. There is also growing evidence, national guidelines, and standards for health facilities to maintain clean water supply, hygiene and sanitation and safe disposal of wastes. There is regular monitoring of BMW and IC measures in the HCWs and the CBMWTF (site inspections, annual reports, etc.) conducted by the health and environmental regulators (details provided in annex 8) A complete set of regulatory and legal framework related to healthcare facilities is presented in Table 8 and Annex Accreditation systems and standards such as NAQS (Annex 3) also set out standards for adequate BMWM and IC practices in the healthcare facilities. The Indian Public Health Standards for Primary Healthcare facilities also outlines critical EHS and OHS measures that must be adopted in the healthcare facilities (annex 3)

The quantity of civil works associated with the HCW recurring expenses entail small refurbishment works, the impacts and risks associated with this are small and temporary (increase in dust, noise, debris). There is existing legislation which mandated management of these impacts with appropriate mitigation and monitoring. For health facility renovations and improvements there are guidelines listed under the IMEP section 4.12 and technical and operational guidelines for implementation of PM-ABHIM which lists compliances with Biomedical waste management rules.

While there is no exclusive process to screen and assess environment impacts before undertaking any program supported activities (as this is not infrastructure intense program) the Bank program has built in a clear exclusion criteria/ negative list that program expenditure framework will not support (this is listed in Chapter V)

The key risk associated with the implementation of the Program is the incremental increase in BMW and other wastes (solid, plastic, e-waste and liquid wastes). Further, with increase in package of services, and incentives through Kalakalp scheme, more HCWs will adopt better protocols and performance on sanitation, cleanliness and infection control. Hence, the quantity of liquid and solid waste associated with use of cleaning reagents, disinfectants and PPE will also increase. With the upgrading of HCWs, and quality of service provided, the quality of e-waste generated with increase incrementally. (Tablets, Laptops, autoclave machines, monitors and medical diagnostic equipment). With the increase in BMW this could lead to cumulative impacts (at a country level) while at a facility level this would be small. The government has the necessary coordination mechanisms (BMWM committees) in place to predict/ project waste qualities and plan for waste treatment options, and site selection of disposal facilities (centralised and decentralised)

The public health eco-system in India has three-tiered, robust consultation, grievance redressal and feedback mechanism. Rogi Kalyan Samities (RKS) established under the National Health Mission (NHM) in health care facilities at the level of the PHC and above. RKS are active local level institutional platforms that enable feedback provision and action for improvement in the availability and quality of hospital infrastructure and services and promote a culture of accountability amongst service providers in the public health system. The Jan Arogya Samitis (JAS): Serve as institutional platform of SHC/PHC level AB-HWCs (similar to RKS at PHC /CHC), for community participation in its management, governance and ensuring periodic stakeholder consultations and accountability, with respect to provision of healthcare services and amenities. JAS also act as Grievance Redressal Platform for families who access healthcare services at ABHWCs, ensuring availability and accountability for quality services. Additionally, JAS are primary vehicles of stakeholder consultations; these platforms leverage existing organized volunteers [NSS, NCC, Red cross, Scouts and Guide, Youth groups] for patient follow up, counselling, community mobilization, conducting surveys and other related action. Mahila Arogya Samitis (MAS): Women-led groups that actively participate in consultations with women-headed households, widows, adolescent girls and other excluded groups for drawing attention to women's health and reproductive health.

Key Gaps Identified

1.   The capacity to manage environment health and safety risks in PM-ABHIM is spread across an array of institutions and sectors (health, environment, disaster remediation, water and sanitation, urban and rural departments). All sectors have also provided their own set of guidelines and good practices, there is no dedicated capacity in MoHFW that can look at EHS in consolidated manner.

2.   Through PM-ABHIM implementation there will be an increase in biomedical waste, and other wastes aggregated, while many states have unutilized capacity remaining in the central treatment facilities, there is a need for future planning especially for decentralised waste disposal facilities and areas that do not have access to CBMWTF due to terrain and weather conditions. This would require appropriate siting of deep burial pits, soak pits, septic tanks so that they do not pose risk to the environment or nearby communities. Strengthened data collection and planning mechanism that includes environment, health, urban and rural local bodies.

3.   At present, there is no formal mechanism adopted for screening and identifying any potential environmental and social issues before undertaking any works. However, given the nature of the works the impacts are predictable (dust, noise, debris) and temporary, and measures can be worked into the contract bill of quantities (such as fencing, screens, watering, low-noise equipment etc.). and a plan to mitigate accordingly.

4.   BMW committees look only at BMW generated, they need to look at both solid and liquid wastes and their management and future planning that needed to manage and dispose wastes. Accordingly make recommendations to the State Government on site selection, and alternatives that could be considered for decentralised management.

5.   The organizational arrangements and provisions, such as, designated biomedical waste supervisor in the HCWs and BPHUs and infection control committees should be nominated, and information disclosed publically to set accountability and expectations for EHS.

CORE PRINCIPLE 2 – NATURAL HABITATS AND PHYSICAL CULTURAL RESOURCES

> Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical cultural heritage are not eligible for PforR financing.

Summary Findings: Not Applicable

The Bank program will support only recurring expenditure in the PM-ABHIM HCWs and BPHUs, and not support any capital expenditure. Further, the recurring expenditure includes minor refurbishment works which will be carried out within the existing HCFs, and footprint of the existing HCFs, hence program supported expenditures do not pose any risk to natural habitats and physical and cultural resources. HCWs in urban areas are connected to city sewerage networks, of ensure safe disposal of effluents. HCWs in rural areas are established in existing villages and towns and do not pose any risk to natural habitats.

CORE PRINCIPLE 3 – PUBLIC AND WORKER SAFETY

> Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

Summary Findings: Applicable

Rehabilitation Works: the renovation and rehabilitation works for HCWs under recurring expenditure involve some improvements within the facility. The public works department and central public sector undertaking institutions undertake such works and have long track record of such works. However, given that there will we several packages of such works in the states, there is an opportunity to strengthen the occupation health and safety practices, uses of PPE, and environmental mitigation controls (dust, noise, and waste management) through trainings which can be standardised at the state level.

Operation of facilities and worker safety: the generation of additional biomedical wastes associated with PM-ABHIM On an individual healthcare facility and laboratory level, biomedical waste generated might not be significant, but on an aggregate basis, this could overwhelm the existing capacity, particularly for collection and transport to final disposal site if not adequately planned. Healthcare workers and the public would be exposed to risks associated with exposure to biomedical waste, and associated infections. In addition, wastewater, liquid wastes (blood etc.) and uncollected biomedical waste pose threats to communities in exposing them to pathogens, and vector borne diseases.

Occupation practices for maintaining infection control, sanitation, cleanliness in the HCFs, and addressing accidental spills, reporting accidents is well documented through the IMEP, Swachhata guidelines and Biomedical waste management rules and integrated into SOPs, operational procedures of PM-AMBHIM. The program will involve increase in human resources of several types of workers, core healthcare staff, contract labour, and contracted housekeeping, sanitation, and biomedical waste collectors. It is critical that all human resources are trained adequately in infection control practices,

use of PPE, fire safety procedures, occupational health and safety and biomedical waste management. Existing guidance, and national building codes for life and fire safety and emergency response planning are in place, HCWs have been mandated to follow such guidance. All primary care facilities, according to national guidelines/standards have to have Disaster Management Plan in line with the District Disaster Management Plan (Annex 4)

Key Gaps:

1. Occupation safety to update knowledge on occupational risk management, and good environmental mitigation practices for dust and noise control.

2. Contracted workers (sanitation, housekeeping, and cleanliness) need trainings on safe handling of BMW, operation of equipment, use of PPE (depending on the type of cleaning reagents used, and type of room)

3. BMW supervisors to keep daily record of wastes generated according to format maintained in the annex 2 of the Guidelines for Management of Healthcare Waste Management Rules, 2016 by Health Care Facilities to keep track of the incremental increase of wastes. Data from these sheets will be collected to inform the state on future planning on central treatment facilities.

4. Multi sector Coordination with BIS, NABH and SDMA on hospital safety standards.

CORE PRINCIPLE 4 – LAND ACQUISITION

System and Capacity Assessment: <u>Avoid or minimize land acquisition and related adverse impacts: Avoid or minimize displacement, and assist the affected people in improving, or at the minimum restoring, their livelihoods and living standards.</u>

<u>Summary findings: Not applicable</u>

The planned investments under the Program will be restricted to existing land available for Health Facilities. The ESSA does not foresee risks related to land acquisition, loss of livelihoods and/or involuntary resettlement at the preparatory stage. The E&S screening checklist will include a screening criterion on land availability and ownership to rule-out any isolated instances of forced acquisition and involuntary resettlement.

Key Gaps Identified:

Consistent with the requirements of the Bank PforR Policy, the proposed PforR operation does not support activities that pose high social or environmental risks. There will be no large-scale infrastructure, only minor refurbishments, upgradation-related works within health facilities. **Therefore, risks of land acquisition and involuntary resettlement are not applicable under the Program.**

Additionally, the ESSA negative list, reproduced below, is in complete adherence with World Bank's PforR guidelines*12*:

12 Operational Guidelines for State Health Societies; PM-ABHIM, Ministry of Health and Family Welfare, Government of India

- Land should be available for the selected facilities and land purchase cost should not be covered under PM-ABHIM.
- Repair and Renovation works already undertaken under the National Health Mission (NHM) Funds.

Recommendations:

The key recommendations are:

- E&S screening mechanism is to be instituted during the planning phase of any new construction under the program to identify any adverse social risks and impact.
- Though both land acquisition and/or resettlement is not anticipated during preparation, but in rare scenarios, if any need arises, World Bank's ESF policy, particularly ESS5 on land acquisition and resettlement will be followed and due process to be instituted in consultation with World Bank task team.
- The ESSA includes a screening template for monitoring land requirements at the HC level, if required.

CORE PRINCIPLE 5 – INDIGENOUS PEOPLES AND VULNERABLE GROUPS

System and Capacity Assessment: Give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of vulnerable groups.

Summary findings: Applicable

Key Gaps Identified:

- ▶ **Risks of exclusion in aspirational districts and ITDA blocks** (i) uptake and utilization of health facilities by traditionally vulnerable groups in unserved and underserved areas, including tribal blocks and Schedule V areas of Odisha, Andhra Pradesh, Meghalaya and Tamil Nadu; (ii) utilization of health facilities by women-led households and adolescent girls for reproductive healthcare, NCD screening and preventive care; (iii) access to quality health care for the urban poor, including migrants and informal workers.
- ▶ **Functionality of community-level platforms (JAS, MAS) in aspirational districts and ITDA blocks** (i) low institutional capacities of JAS and MAS in tribal/unserved areas to manage health facilities, coordinate with VHSNCs and act as grievance redressal platforms as per Jan Arogya Samiti Guidelines.

Recommendations:

- ▶ Development of an **inclusion monitoring template** to track roll-out of PM-ABHIM in aspirational districts and integrated tribal development blocks (ITDA) blocks in select states. States with aspirational districts and Schedule V and VI areas will adopt the inclusion template to monitor a) specific KPIs to track tribal health programming and outreach and b) functionality of Jan Arogya Samitis in ITDA blocks. *(Four of the seven participating states under the EHSD Program have designated Schedule V and VI areas. In addition, across 7 states,15 aspirational districts are included under the Program).*

CORE PRINCIPLE 6 - SOCIAL CONFLICT

System and Capacity Assessment: <u>Avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.</u>

<u>Summary findings: Not Applicable</u>

Key Gaps Identified: There are no social conflict-affected areas in the Program Areas. And, in any case, the program interventions do not exacerbate any social conflicts as it supports the strengthening of health services in seven states leading to overall improved health outcomes. Also, exclusion of any groups in terms of caste, religion, and/ or geography by the program activities is not expected.

Recommendations: No relevant recommendations.

IV CONSULTATION AND DISCLOSURE

A. SUMMARY OF DISCUSSIONS AND MULTI STAKEHOLDER CONSULTATION WORKSHOP

Consultations have been conducted both at the national level with MoHFW officials, NHSRC officials and at state level with officials from seven state health societies as part of Environmental and Social Systems Assessment (ESSA) preparation process. Given COVID-19 restrictions, virtual consultations were organized with MoHFW and seven participating states on April 4, 2022.

State officials responsible for bio-medical waste management, tribal health programming and community strengthening initiatives were consulted to receive information regarding the existing due diligence mechanisms for management of E&S aspects at the state level. Virtual consultations with state nodal officials for E&S systems found that 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.

Overall, During the consultations it was understood that both at the federal and state level there is adequate capacity to manage E&S risks. The ESSA team proposed a due diligence screening form as a part of the EHSD program which will improve the awareness and monitoring capability of representatives during evaluation and monitoring of E&S aspects.

It was mentioned during the first consultation with state nodal counterparts that states do not have any track record of non-compliance regarding environmental or social laws and regulations that are applicable to the Program Boundary. The state nodal officials also outlined various initiatives that are likely to mitigate the identified social risk of exclusion experienced by tribal communities.

A stakeholder consultation workshop was undertaken on 4 April 2022 on virtual format with MoH&FW and the states. The participants included representative from various Government Departments including from State Health Directorates, NHM directors, TNHSP Society, Biomedical waste supervisors, quality control officers A list of participants is appended to the minutes. The workshop started with introductory remarks by Mr Vishal Chauhan, Director Policy followed by which the World Bank team presented the process of undertaking the Environment and Social Systems Assessment, applicability of core principles, and identified risks regarding the program activities. The comments and suggestions were invited on the assessment scope, and practices currently being undertaken at the state level. The key discussion points, comments and suggestion from the participants and next steps that emerged are given in the table below.
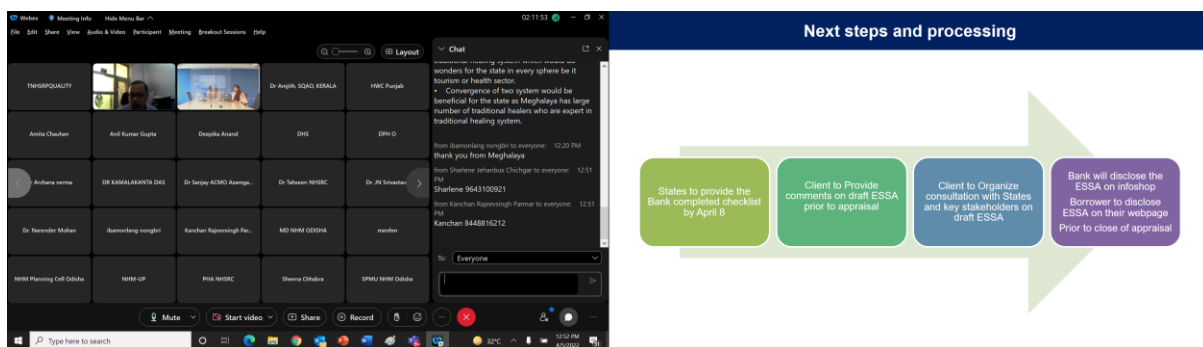
Table 12 State level experiences on BMWM and IC management

Suggestions and good practices from Participating Stakeholders	How the Program Design Can Addresses These
Meghalaya – decentralized treatment biggest challenge as most of the state is rural and hilly environment. Currently, biomedical waste is largely being managed at the facility level through waste segregation and management. A system-level improvement is required since in the absence of such a facility.	Strengthen training curriculum on decentralized management of healthcare waste.
Kerala- BMW equipment management EPR, all works carried out by accredited agencies	Accreditation criteria for agencies will be looked into if it includes environment and social criteria to scale up/ apply in other states.
Odisha- currently have 6 CBMWTF but plans for 6 new to meeting CPCB guidelines	Current coverage as per 2019 data odisha has significant gaps. However, the state informed that 6 new CBMWTFs are planned which will provide sufficient coverage for treatment
Tamil Nadu- CBMWTF has been established for the next 10 years, each facility has an infection control officer	Good practices can be shared with other states. The Program design will include measures for disseminating learnings nation-wide

Table 13: State-level initiatives and experiences shared by states on tribal health programming is outline below

STATE	SUMMARY
Andhra Pradesh	*Significant government focus to improve uptake of health schemes in ITDA blocks* • Peer educators creating awareness in schools

	• Nutritious diet in schools • TB camps
Kerala	*>1% of population lives in areas with limited access* • Mobile Medical units • Mobilization camps
Meghalaya	*Designated Schedule VI areas; policy aims to focus on preventative care* • Tribal health centre in Shillong
Odisha (Focus state for the ESSA)	*Designated Schedule V areas: 40% of the population is SC/ST* • Major investments by the state government to create awareness in tribal areas - shows for awareness, beneficiary identification & tracking • Budget allocation and expenditure tracked for KBK districts and tribal blocks
Punjab	*No notified tribes*
Uttar Pradesh	*High levels of poverty; more than a crore population experiences health shocks due to OOPs payment* • Improve institutional delivery and post-delivery care for women of the Tharu tribe
Tamil Nadu (Focus state for the ESSA)	*Designated Schedule V areas; targeted initiatives for ITDA blocks* • Tribal waiting rooms, bed grant scheme, tribal counselors • Referral services • Mobile medical units • Special interventions to improve institutional deliveries in tribal blocks and unserved areas.

A list of officials from MoHFW and states is provided below:

Sr. No.	Names of officials
1	Mr. Vishal Chauhan, JS (Policy), MoHFW
2	Dr. Sachin Mittal, Director, NHM, MoHFW
3	Dr Dareez, MD NHM, Tamilnadu
4	Ramkumar, MD, National Health Mission, Meghalaya and Project Director, Meghalaya Health Strengthening Project.
5	Suresh K, State Admin & HR Manager & Nodal Officer for NHM PIP & PMABHIM, Kerala
6	Dr J N Srivastava, Advisor Quality Improvement & Officiating ED NHSRC
7	Dr. Narinder Mohan, Deputy Director, PHSC, Punjab
8	Dr. Kamalakant Das, Additional Director (BMWM), Odisha
9	Dr Himanshu Bhushan, Advisor - Public Health Administration, NHSRC
10	Dr Poonam, PHA Division, NHSRC
11	Dr. Amit kumar Ojha DGM NATIONAL PROGRAM COMMUNICABLE DISEASE, Uttar Pradesh
12	Dr. Aashima Bhatnagar, PHA Division, NHSRC
13	Dr. Abu Talha, DGM -DHS , IMEP, UP

14	Dr. R. M. Meenakshi Sundari, Team Lead, Quality Improvement Cell, TNHSRP.
15	Abhay Diwedi
16	Adil Shafie
17	Gaurav Anand Shukla,
18	Md Ataur Rab, DGM-CP & CPHC, NHM-UP
19	Kaushal Singh Bisht
20	Moiz Ahmad
21	Suresh KS,
22	VK Mishra, GM, NP, NHM, UP
23	Dr. Shipra Pandey, UP
24	Ibamonlang Nongbri
25	Dr. Simran Dahiya
26	Dr. Guranam Deep, Punjab
27	Anil Kumar Gupta, Public Health Expert, ADB, MoHFW

B. DISCLOSURE

*This section will be updated during appraisal *

The draft ESSA report will be disclosed by the World Bank and the MoHFW for receiving feedback from government officials, industry associations, non-governmental organizations, civil society organizations, public health associations and other relevant stakeholders. Additionally, virtual consultations with nodal officials and district-level representatives from participating states, NGOs, CSO, think-tanks and business associations will be organized on before close of appraisal. Stakeholders included state level nodal officials from the participating states - Punjab, Uttar Pradesh, Tamil Nadu, Kerala, Meghalaya, Odisha and Andhra Pradesh. Main issues discussed at the stakeholder workshop were as follows (i) Training priorities for bio-medical waste management; (ii) Compliance with Public Health and Safety aspects; (iii) E&S compliance: Challenges faced by states for tribal health programming in aspirational districts and Schedule V and VI areas; (iv) Awareness raising and training campaigns; (v) community-led platforms and functionality of JAS and MAS platforms level; and (vi) barriers experienced by women-headed households and adolescent girls in accessing healthcare.

The Consultative Workshop was instrumental to secure information to support the major findings and recommendations emerging from the ESSA process. The MoHFW, participating state officials and other stakeholders contributed to the emerging recommendations of the draft ESSA report.

V CONCLUSIONS AND RECCOMENDATIONS

A. INTRODUCTION

The ESSA concludes that the Program has a moderate environmental risk and moderate social risk. The Program risks on dealing with BMW and other wastes, are well covered but will require efforts to address other environmental challenges emerging from disposal of other wastes and liquid effluents. The risks pertaining to building safety, life and fire safety, universal access are also adequately covered in national policy and guidelines, institutional capacity to implement these guidelines is in place, but there are some gaps in institutional coordination (with disaster management authorities, environment, urban and rural departments) which need to be addressed to strengthen implementation capacity.

The PM-ABHIM operational guidelines and HCW refurbishment guidelines adequately cover BMWM, Infection control, sanitation, worker health and safety and building safety norms, and designate implementation arrangements and funding around these various functions. The ESSA has shown that proposed Program interventions are not likely to cause social safeguard impacts. MoHFW and the state health societies will ensure that 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.

The institutional setup has the potential to develop required capacity, institutional strengthening measures for monitoring and supervision oversight to deal with the potential environmental risks and challenges. The systems are in line with the core principles and key planning elements as defined in the Bank Policy for PforR. The Program will require increased coordination among various departments, agencies on environmental and social aspects to further support implementation, such as environment, water and sanitation, disaster management authorities, urban and rural local bodies. The process and criteria for monitoring, enforcement and reporting on environmental and social measures will be part of overall Program reporting. The above requirements, processes and systems will be included in the Program Operations Manual. Monitoring and supervision of the ESSA implementation will be a part of World Bank supervision.

Environment

21.   Overall, the applicable environmental management systems are generally adequate to address underlying environmental and social risks, and noteworthy strengths are strong regulations and guidelines on biomedical waste management, general waste management, infection control, building and worksite safety. 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.

22.   The provisions of the existing systems require strengthening institutional and technical capacity, and multi sector coordination. While the provisions of the Biomedical Waste Management & Handling) Rules, Infection Management and Environment Policy Framework (IMPS) are being implemented, provisions of other relevant environmental acts such as, hazardous, solid, plastic and e-waste Rules applicable to the Program require additional oversight. Additionally, as there will be more outsourced

agencies and contract workers, it is critical that they undergo structured trainings on OHS, waste management and infection control practices. Gaps identified through the assessment are proposed to be addressed through a set of actions which are compiled as Environmental and Social inputs to the Program Action Plan.

1. The capacity to manage environment health and safety risks in PM-ABHIM is spread across an array of institutions and sectors (health, environment, disaster remediation, water and sanitation, urban and rural departments). All sectors have also provided their own set of guidelines and good practices, there is no dedicated capacity in MoHFW that can look at EHS in consolidated manner.

2. Through PM-ABHIM implementation there will be an increase in biomedical waste, and other wastes aggregated, while many states have unutilized capacity remaining in the central treatment facilities, there is a need for future planning especially for decentralised waste disposal facilities and areas that do not have access to CBMWTF due to terrain and weather conditions. This would require appropriate siting of deep burial pits, soak pits, septic tanks so that they do not pose risk to the environment or nearby communities. Strengthened data collection and planning mechanism that includes environment, health, urban and rural local bodies.

3. At present, there is no formal mechanism adopted for screening and identifying any potential environmental and social issues before undertaking any works. However, given the nature of the works the impacts are predictable (dust, noise, debris) and temporary, and measures can be worked into the contract bill of quantities (such as fencing, screens, watering, low-noise equipment etc.). and a plan to mitigate accordingly.

4. BMW committees look only at BMW generated, they need to look at both solid and liquid wastes and their management and future planning that needed to manage and dispose wastes. Accordingly make recommendations to the State Government.

5. As part of PMABHIM many contracted workers/ outsourced agencies would be hired to undertake cleanliness, housekeeping, biomedical waste collection services, which may not fall under the ambit of the formal training programs under NHM/ PMABHIM. Trainings need to be provided to all outsourced agencies teams on infection control practices and biomedical waste handling to ensure health and safety of workers and patients

6. Public works departments and other accredited agencies will carry out works related to upgradation of the HCWs, while national laws and standards exist for labour work safety, due to the small nature of these works, these contracts are also often outsourced to smaller contactors. It is important that these contractors' teams undergo structured and formal trainings in occupational health and safety management, use of PPE, and maintaining cleanliness, sanitation and to ensure minimal disruption to the environment, and visitors.

7. States do not have all CBMWTF connected to the online CEMS monitoring systems to supply data on emissions from the treatment facilities.

B. RECCOMENDATIONS FOR PROGRAM EXCLUSIONS

LIST OF EXCLUDED ACTIVITIES (BASED ON ENVIRONMENTAL AND SOCIAL RISK)

The following high-risk activities will be excluded from support under the proposed PforR Program expenditure:

i. Establishment and operation of Common Biomedical Waste Treatment Facility.

ii. Construction of new buildings or any construction beyond the existing footprint of buildings

iii. Activities involving Asbestos Containing Materials (AC roofing sheets, AC pipes, etc.) such as construction, demolition, dismantling, etc.

iv. Construction of boundary walls, entrance, pavements, footpaths etc (in line with PM-ABHIM guidelines)

v. Any activity that may have potential involuntary resettlement will be excluded (screened out) from the Program Boundary

C. RECOMMENDATIONS TO BE INCLUDED IN THE PAP

The assessment identified certain areas for improvement of the implementation of the environmental and social systems, which can be addressed through the implementation of the following recommendations:

Table 14: Recommended E&S Actions for Program Action Plan (to be discussed with MoHFW)

Action Description	Responsibility	Timing	Completion Measurement
Hiring of E&S Specialists (*separate roles for Environment and social management)* as a part of the PMU for the EHSD Program to institutionalise best practices (BMWM, IC, HCW safety and cleanliness)	MoHFW, GoI	After 3 Months of Effectiveness	Hiring of qualified staff, scope of work including preparation of E&S guidance and monitoring the implementation of E&S actions (with Nodal E&S persons at state level) and reporting protocols, as in Annex xx of the ESSA and relevant templates
Development of guidance to states for updating terms of references for state-level BMWM advisory committee to look holistically at management of all wastes	MoH&FW	After 3 Months of Effectiveness	Guidance issued to states and disclosed on MoHFW website
Strengthen qualification/accreditation	MoH&FW	After 6 Months of Effectiveness	States to report back to MoH&FW regarding updating

Action Description	Responsibility	Timing		Completion Measurement
standards of BMWM/IC supervisor linked to management of sanitation, accident and spills, fire safety, emergency response preparedness, and complaints handling on BMWM (in HCWs)				TORs of the BMWM and IC supervisor's role under PM ABHIM
States to ensure continuous occupational health and safety training to all outsourced agencies engaged in the cleanliness activities for HWCs	MoH&FW	Recurring		States to include action and costing in their annual work plans submitted to MoH&FW, and MoH&FW to approve
Develop an **inclusion monitoring template** to track roll-out of PM-ABHIM in aspirational districts and integrated tribal development blocks (ITDA) blocks in select states. * *(States with aspirational districts and designated Schedule V and Schedule VI areas)*	MoHFW, GoI	TBC with MoHFW before close of appraisal		Development and adoption of an inclusion template to monitor a) specific KPIs to track tribal health programming and outreach and b) functionality of Jan Arogya Samitis in ITDA blocks. * *(Adoption by states with aspirational districts and designated Schedule V and Schedule VI areas)*
Develop a Bi-annual ESSA monitoring report will be produced and submitted to WB based on a desk review of the quarterly progress reports, other information sources, and sample-based field monitoring visits in states.	MoHFW, GoI	Due Date	TBC with MoHFW before close of appraisal	Regular reporting in Implementation Support Missions

Table 15 Inputs to Program Implementation Plan

	Action Description	Responsibility	Timing	Completion Measurement
1	Each state to disclose details regarding BMWM supervisor in HCWs and BPHUs in the healthcare facilities, to fix responsibility and accountability.	NHM Health Society	As HCWs and BPHUs are upgraded	All HCWs and BPHUs to disclose information in the reception area on the BMW officers/ supervisors with contact details.
2	Disclose details of BMWM oversight committees at the state level and district level on SPCB. DoHFW website	NHM Health Society	12 months after effectiveness	Details of BMW committee at state and district level disclosed on SPCB website
3	Include in the contractor's scope of work collection and disposal of all debris and solid waste after refurbishment works	PWD/ accredited agency along with State NHM health society	Recurring	
4	Deploy qualified biomedical experts to the states that can support states in developing integrated waste management strategies for the HCWs based on local conditions.	MoH&FW and CPCB	Recurring	
5	Strengthen the supervision and enforcement capacity of responsible agencies (monitoring committees for BMW and IC etc.) to ensure adequate action on non-compliance	MoH&FW and CPCB	Recurring	Training programs on strengthening enforcement
6	Sensitization and outreach to strengthen the implementation of the POSH Act and Internal Complaints Committee for contracted			

	Action Description	Responsibility	Timing	Completion Measurement
	workers and frontline workers.			
7	Periodic trainings and IEC material disseminated for Jan Arogya Samitis and Mahila Arogya Samitis			
8	MoHFW to issue environment screening checklist (annex 9) and land checklist (annex 8) to states to be adopted as good practice			
9	SPCBs to ensure that all data from all CBWTFs CEMS connected with CPCB server and transmit data	SPCBs	Recurring	All data from CBMWTFs CEMS transmitted to CPCB to check compliance on air emissions.

ANNEX 1: LIST OF DOCUMENTS REVIEWED

1. Ministry of Environment, Forest & Climate Change (MoEFCC) notified amendment to the EIA Notification 2006 published vide MoEFCC Notification of S.O. 1142 (E) dated April 17,

2. Bank Guidance on 'Program for Results Financing Environmental and Social Systems Assessment', September 18, 2020.

3. ADB, 2020. Program Safeguard Systems Assessment. India: Strengthening Comprehensive Primary Health Care in Urban Areas Program under PM-ASBY.

4. National Health Mission, Government of Uttar Pradesh. Viewed at http://upnrhm.gov.in/Home/MonitoringAndEvaluation on 15 April 2021.

5. Annual Report on Bio-medical Waste as per Bio-medical Waste Management Rules 2016 for the year 2019. CPCB.

6. Overview of Comprehensive Primary Health Care and HWCs. (Presentation); Induction Training Module for Community Health Officers. NHM. Viewed at http://nhsrcindia.org/sites/default/files/Induction%20Training%20Module%20for%20CHOs.pdf.

7. Indian Public Health Standards (IPHS). Guidelines for Primary Health Centers. 2012.

8. Guidelines for Village Health and Sanitation Committees, Sub-centers, PHCs and CHCs. Viewed at https://nhm.gov.in/images/pdf/guidelines/nrhm guidelines/guidelines_of_untied_funds_nrhm.pdf on 16 April 2021.

9. *Environmental and Social Management Framework. Andhra Pradesh Health System Strengthening Project (P167581). Viewed at http://documents1.worldbank.org/curated/en/882191549366417695/pdf/SFG5048-V1-REVISED-EA-P167581-PUBLIC-Disclosed-2-26-2019.pdf*

10. Garg S, Basu S, Rustagi R, Borle A. Primary Health Care Facility Preparedness for Outpatient Service Provision During the COVID-19 Pandemic in India: Cross-Sectional Study. *JMIR Public Health Surveill*. 2020;6(2):e19927. Published 2020 Jun 1. doi:10.2196/19927. Viwed at https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7265797/ on 14 April 2021.

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13. Annual Report on Biomedical Waste Management 2019. State Pollution Control Board, Government of Odisha. Viewed at http://ospcboard.org/wp-content/uploads/2020/10/Annual-Report-of-BMW-2019.pdf.

14. Annual Report on Biomedical Waste Management 2019. State Pollution Control Board, Government of Tamil Nadu. Viewed at https://tnpcb.gov.in/Waste_MGT/AnnualRptBMW2019.pdf.

15. Implementation Completion and Results Report. Uttar Pradesh Health Systems Strengthening Project (P100304). Viewed at http://documents1.worldbank.org/curated/en/305891586198590786/pdf/India-Uttar-Pradesh-Health-Systems-Strengthening-Project.pdf on 12 April 2021. .

16. Annual Report on BWM as per SMWM Rules 2016 for the year 2019. CPCB.

17. Annual Report on Biomedical Waste Management as per Biomedical Waste Management Rules 2016 for the year 2019. CPCB. Viewed at https://cpcb.nic.in/openpdffile.php?id=UmVwb3J0RmlsZXMvNDYwXzE1MDIxNzAwNzJfbWVkaWFwaG90bzEwMDg0LnBkZg== on 11 April 2021.

18. Strategy for Promoting Processing of C&D Waste and Utilization of Recycled Products. Draft. 5 November 2018. Niti Ayog, Government of India. Viewed at https://niti.gov.in/writereaddata/files/CDW_Strategy_Draft%20Final_011118.pdf on 11 April 2021.

19. Kumar, A., Panigrahi, A. Occupational health hazards among health care personnel working in public health facilities in Bhubaneswar, India. *J Public Health (Berl.)* (2019). https://doi.org/10.1007/s10389-019-01167-0

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25. SOP for Covid Waste Disposal https://mpcb.gov.in/sites/default/files/biomedical-waste/CPCBSOPforCOVIDWastemanagementatHWCTFsFeb29092021.pdf

26. CPCB Guidelines for Imposition of Environmental Compensation Charges against Healthcare Facilities and Common Biomedical Waste Treatment Facilities https://mpcb.gov.in/sites/default/files/biomedical-waste/CPCBBMWECCGuidelines29092021.pdf

27. BMWM Toolkit https://mpcb.gov.in/sites/default/files/biomedical-waste/Toolkit_BMWM_Rules_201613032020.pdf

28. Biomedical waste annual report format https://www.wbpcb.gov.in/writereaddata/files/BMW-Annual%20Report-2016-website.pdf

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http://qi.nhsrcindia.org/sites/default/files/Swachhta%20Guidelines%20for%20Public%20Heal th%20Facilities.pdf

ANNEX 2: DESCRIPTION OF ENVIRONMENTAL AND SOCIAL MANAGEMENT SYSTEM AND CAPACITY AND PERFORMANCE ASSESSMENT

Institution	Roles and Responsibilities	Capacity Gap Analysis
National Level		
Ministry of Health and Family Welfare (MoHFW) and Department of Health (state level)	▶ Deals with health care, including awareness campaigns, immunisation campaigns, preventive medicine, and public health services ▶ Administratively control many national health programmes such on HIV/ AIDs, TB, Cancer, Filaria, Iodine deficiency, Leprosy, Mental health, Blindness and Deafness, Tobacco Control, Vector Borne Diseases, on Prevention and Control of Diabetes, CVD and Stroke, and Universal immunization ▶ Heads many statutory bodies, such as, Medical Council of India (MCI), Indian Nursing Council, Dental Council of India, and Pharmacy Council of India (PCI) ▶ Provides funds for BMWM. State health departments also have provided assistance to government hospitals for HCW management in the form of personnel training, waste management auditing, preparation of hospital-specific plans, procurement of materials and supplies, and construction of on-site disposal facilities. ▶ Grant of license to health care facilities or nursing homes or veterinary establishments with a condition to obtain authorization from the prescribed authority for bio-medical waste management. ▶ Monitoring, Refusal or Cancellation of license for health care facilities for violations of conditions of authorization or provisions under BMWM Rules. ▶ Publication of list of registered health care facilities with regard to bio-medical waste generation, treatment, and disposal. ▶ Undertake or support operational research and assessment with reference to risks to environment and health due to bio-medical	▶ No significant gaps identified ▶ MOHFW is well equipped to handle their current programmes and have well laid out guidelines and processes for implementation within the applicable legal and regulatory framework. Health schemes are quite inclusive and well implemented. But **need dedicated capacity on environment, health and safety issues. This is currently being managed part- time by technical officials**. ▶ All programs integrated under the NHM are committed to adoption of the IPHS and implementation of the Biomedical Waste Management Rules and the Infection Management and Environment Plan (IMEP). ▶ MoH&FW has access to comprehensive high quality national guidelines on BMWM, Infection Control, Construction safety, HCW cleanliness and maintenance, HCF Swachhata, and Hospital Safety (NDMA). The MOH&FW should focus on how the best practices from these guidelines can be mainstreamed into MoH&FW guidance to states. Knowledge gained from implementation of these guidelines should be institutionalised.

Institution	Roles and Responsibilities	Capacity Gap Analysis
	waste and previously unknown disposables and wastes from new types of equipment. ▶ Coordinate with State Pollution Control Boards for organizing training programmes to staff of health care facilities and municipal workers on bio-medical waste. ▶ Constitution of Expert Committees at National or State level for overall review and promotion of clean or new technologies for bio-medical waste management.	
MoEF&CC Central Pollution Control Board	▶ The MoEFCC is the nodal agency for planning, promoting, coordinating and overseeing the implementation of environmental programs. The Hazardous Substances Management Division in the MoEF is responsible for the overall implementation of the rules related to waste management (solid and healthcare). ▶ The Central Pollution Control Board (CPCB) establishes standards, compiles data and plays an advisory role to the MoEF on technical matters. ▶ The CPCB is the key authority at national level for regulation of air pollution, water pollution with regards to construction activities and disposal of construction wastes. ▶ CPCB, the State Pollution Control Boards (SPCB) and Pollution Control Committees (PCC) enforce environmental legislations in the states and in union territories, respectively. Both CPCB and SPCBs/PCCs are scientific/technical organization which are also responsible for setting the technology ▶ standards of equipment, issuance of authorizations and licenses for operations of health-care facilities and their waste treatment equipment (incinerators, autoclaves etc.) ▶ CPCB is the key authority for provide consent to establish CBMWTFs, monitoring performance, and reporting on BMW handling and disposal, accident reporting from health care facilities. ▶ CPCB Prepares Guidelines on bio-medical waste Management and submit to the Ministry of Environment, Forest and	▶ No significant gaps identified ▶ Although the MoEFCC/ CPCB has notified the BMWM Rules, 2016 implementing agencies specified in the rules (such as municipalities, hospitals and district authorities) do not fall under its administrative control. Attempts at enforcement therefore need to be strengthened, especially within the public health-care sector. Better institutional coordination could help strengthen BMW management. ▶ Collection, Transport and final disposal of BMW is in most cases done by certified agencies in the private sector that provide the colour coded bags and bar codes, CPCB monitors this aspect through annual reports from SPCBs and CBMWTFs along with online monitoring. ▶ There is **No dedicated "Bio-medical Waste Management Cell"** in central or state Pollution Control Boards with dedicated manpower and infrastructure for monitoring and implementing provisions of the Bio-Med Rules. However, suufient technical knowledge and capacity exists.

Institution	Roles and Responsibilities	Capacity Gap Analysis
	Climate Change, and Conducts training courses for authorities dealing with management of bio-medical waste ▶ Lay down standards for new technologies for treatment and disposal of bio-medical waste (Rule 7) and prescribe specifications for treatment and disposal of bio-medical wastes (Rule 7). ▶ Lay down Criteria for establishing common biomedical waste treatment facilities in the Country. ▶ Random inspection or monitoring of health care facilities and common bio-medical waste treatment facilities.	
State Level Institutions		
State Health Society National Health Mission (NHM)	▶ Works to pool all resources available in implementation of the programmes ▶ All National Health Programmes at the State and District level are brought under one umbrella of NHM ▶ Provides funding allocation for support for BMWM and IC activities ▶ According to the directions of the MoHFW, the states have to implement PM-ABHIM through existing structures of the NHM and its administrative and FM structures would be utilized. The Mission Director, NHM of the state along with State Program Management Unit (SPMU) would monitor and track implementation of the interventions under the Program. The SPMU would be supported by the District Program Management Units (DPMUs) at the district level and Block Program Management Units (BPMUs) at the block level for implementation and monitoring of interventions at districts, blocks, and facility levels. It is understood that the PM-ABHIM would be implemented through the existing structures of the NHM in each of the priority states that is, the SPMU, DPMU, and BPMU. ▶ Additional Chief Secretary/Secretary/Principal Secretary/Secretary (Health) in the States/UTs as the chairperson of EC of the State	▶ No significant gaps identified on the social side except a better coordination will help bring synergy between BMW and IC committees, and better public awareness and feedback on these issues ▶ While adequate funding is provided, need to improve monitoring of BMWM. ▶ NHM health society have experience in managing health centres in urban and rural areas. There are no significant capacity gaps in allocation of funds for NHM. PM- ABHIM HCWs are clear guidelines on HWC facility design which accounts for BMWM, Infection Control, worker safety, cleanliness and good sanitation. Use of energy efficient equipment, and renewable energy resources is also encouraged.

Institution	Roles and Responsibilities	Capacity Gap Analysis
	Health Society, will be responsible for monitoring the progress and implementation status of various components of PM Ayushman Bharat Health Infrastructure Mission under the scheme ▶ Similarly, at the district level, the District Health Society, headed by the District Collector, will play a crucial role in not only planning as per the guidelines and also, for effective implementation and robust monitoring of the units of various components under PM Ayushman Bharat Health Infrastructure Mission, under the overall supervision of the District Collector. ▶ States have the responsibility to do quality check of the new AB-HWCs as per the norms set by the State in accordance with the other construction works undertaken. The State should ensure third party monitoring and quality checks (as pertinent to the GLs under FC-XV Health Grants) to ensure that the works undertaken meet the required quality parameters and are constructed as per the terms and conditions decided by the State.	
State Public Works Department (PWD)	▶ Constructs and maintains buildings of various Government Departments, in line with Bureau of Indian Standards (BIS) and National Building Code of India which covers the detailed guidelines for construction, maintenance and fire safety of the structures. ▶ Will construct or rehabilitate and repair healthcare facilities and laboratories including for TB unit	▶ The Department of Public Works will not have designated Environmental Safeguards personnel. The Chief Engineer is responsible within the institution to oversee environmental management related to construction. ▶ Need to **enhance capacity in managing issues related to contracted labour** ▶ Need to improve health and safety of workers at construction sites and follow good construction management practices
State Disaster Management Authority	▶ Both Health and Disaster Management ▶ along with the state public works department, will play a crucial role in implementing these building safety guidelines on the ground. ▶ of hospitals	▶ Institutional coordination mechanisms with MoH&FW (national and state), BIS, and NHSRC need to be strengthened to making safety provisions mandatory in the design, construction and functioning of hospitals ▶ Wherever necessary, the National Disaster Management Authority, the Bureau of Indian Standards, technical institutions like IITs and

Institution	Roles and Responsibilities	Capacity Gap Analysis
		other relevant agencies extend their support to further the agenda of Hospital Safety in our country.
State Pollution Control Board	► The 'prescribed authority' for enforcement of the provisions of BMW rules in respect of all the health care facilities is the respective State Pollution Control Board (SPCB)/ Pollution Control Committee (PCC). ► State pollution Control Board is entrusted with monitoring and ensuring compliance to environmental regulations including Biomedical Waste Management Rules, 2016 ► Grant of authorization to Common Biomedical Waste Treatment Facilities. ► Action against health care facilities or common bio-medical waste treatment facilities for violation of these rules. ► Monitoring CBWTFs and Healthcare Facilities to ensure compliance to BMW Rules, 2016, and issue of notices, orders and penalties etc. for non-conformance as per Environment Protection Act, 1986. ► Organize training programmes for staff of health care facilities and common bio-medical treatment facilities and State Pollution Control Boards or Pollution Control Committees Staff on segregation, collection, storage, transportation, treatment and disposal of bio-medical wastes. ► Inventorisation of Occupiers and data on bio-medical waste generation, treatment & disposal. ► Grant consent to and publish the list of registered or authorised Recyclers. (E -Waste)	► SPCBs are generally understaffed for adequate monitoring, and enforcement capacity (violations on waste burning etc.) but have adequate technical capacity and role clarity.

Institution	Roles and Responsibilities	Capacity Gap Analysis
	▶ Undertake and support third party audits of the common bio-medical waste treatment facilities in their State	
State Bio Medical Waste Committee	▶ Each state needs to constitute a committee to advise the state government and the SPCBs about implementation of the BMW rules. under the chairmanship of the respective health secretary include representatives from the Departments of Health, Environment, Urban Development, State Pollution Control Board or Pollution Control Committee, urban local bodies or local bodies or Municipal Corporation, representatives from Indian Medical Association, common bio-medical waste treatment facility and non-governmental organisation. ▶ The Advisory meets at least once in six months and review all matters related to implementation of the provisions of these rules in the State.	▶ Establishment of BMW committees was not fully completed. Coordination and participation among different stakeholders—in particular, state environmental and health agencies, local authorities, health care facility representatives, academia, and NGOs is also needed. ▶ The State level committee constituted should look at all wastes generated as part of HCF operations – e-waste, plastics, hazardous wastes and liquid wastes and submit recommendations based on the site conditions
▶ *District and Sub-District Level Institutions*		
Committee on Biomedical Waste Management and Infection Control (SC-BMW/IC) under the District Health Society	▶ A District Level Monitoring Committee is set up in each district under the chairmanship of District Collector or District Magistrate or Deputy Commissioner or Additional District Magistrate to monitor the compliance of the provisions of these rules in the health care facilities generating bio-medical waste and in the common bio-medical waste treatment and disposal facilities. The committee submits its report once in six months to the State Advisory Committee and State Pollution Control Board or Pollution Control Committee concerned for taking further necessary action. ▶ The District Level Monitoring Committee comprises of District Medical Officer or District Health Officer, representatives from State Pollution Control Board or Pollution Control Committee, Public Health Engineering Department, local bodies or municipal corporation, Indian Medical Association, common bio-medical	▶ The District Level Monitoring Committee constituted should look at all wastes generated as part of HCF operations – e-waste, plastics, hazardous wastes and liquid wastes and submit recommendations based on the site conditions (of the disposal facilities, CTFs, pits etc.) and prevailing issues (flooding, fires, COVID-19 peaks, natural disasters etc.) within the districts in the half-yearly report to the State Advisory Committee.

Institution	Roles and Responsibilities	Capacity Gap Analysis
	waste treatment facility and registered nongovernmental organisations working in the field of bio-medical waste management and if necessary and the District Medical Officer shall be the Member Secretary of this Committee.	
Urban and Rural Local Bodies	▶ Provide or allocate suitable land for development of common bio-medical waste treatment facilities in their respective jurisdictions as per the guidelines of CPCB ▶ Collect other solid waste (other than the biomedical waste) from the health care facilities as per the Municipal Solid Waste (Management and handling) Rules, 2000 or as amended time to time.	▶ Coordination mechanisms with RLBs to identify sites for disposal pits (decentralised management), better monitoring of waste burning and disposal of liquid wastes such as reagents and disinfectants need to be strengthened. ▶ ULBs capacity to manage environment health and safety aspects has been given suffient emphasis through the pandemic, in the maintenance of hygiene cleanliness, worker safety and immunisation. There are gaps in some hilly states with difficult terrain where solid waste is not collected on daily basis by ULBs. ▶ Efficient monitoring in the SWM dumpsites for BMW needs to be reported (through citizen monitoring committees and ULB officials)
District and Village Health and Sanitation Committee (under NHM)	One of the key elements of the National Rural Health Mission is the Village Health , Sanitation and Nutrition committee (VHSNC). The committee has been formed to take collective actions on issues related to health and its social determinants at the village level. They are particularly envisaged as being central to 'local level community action' under NRHM, which would develop to support the process of Decentralised Health Planning. Thus, the committee is envisaged to take leadership in providing a platform for improving health awareness and access of community for health services, address specific local needs and serve as a mechanism for community based planning and monitoring	▶ DHSC and VHSC can also work with RLBs to institute community Monitoring and Supervision of biomedical waste disposal, burial pits, and general waste management from HCWs

There are a few other ministries important for elements of the health programs, e.g., Water and Sanitation with respect to water supply and sanitation and water borne disease management, Power for supply of electricity to run boilers; Industries with respect to supply and recycling of electrical and electronic equipments; and Bureau of Indian Standards (BIS) which is the National Standard Body of India for the development of standardization, marking and quality certification of goods (relevant for certifying energy efficiency and safety of equipments)

ANNEX 3: GOI PUBLIC HEALTH AND ENVIRONMENTAL STANDARDS FOR PRIMARY HEALTHCARE

(Points relevant to Environment, Health and Safety)

- The PHC should have a building of its own.
- The surroundings should be clean.
- It should be centrally located in an easily accessible area.
- The area chosen should have facilities for electricity, all weather road communication, adequate water supply and telephone.
- PHC should be away from garbage collection, cattle shed, water logging area, etc.
- PHC shall have proper boundary wall and gate.
- It should be well planned with the entire necessary infrastructure. It should be well lit and ventilated with as much use of natural light and ventilation as possible.
- For all new upcoming facilities in seismic 5 zone or other disaster prone areas: Building and the internal structure should be made disaster proof especially earthquake proof, flood proof and equipped with fire protection measures.
- Earthquake proof measures - structural and non-structural should be built in to withstand quake as per geographical/state govt. guidelines. Non-structural features like fastening the shelves, almirahs, equipment, etc. are even more essential than structural changes in the buildings.
- PHC should not be located in low lying area to prevent flooding as far as possible.
- Firefighting equipment – fire extinguishers, sand buckets etc. should be available and maintained to be readily available when needed. Staff should be trained in using fire fighting equipment.
- All PHCs should have Disaster Management Plan in line with the District Disaster management Plan. All health staff should be trained and well conversant with disaster prevention and management aspects. Surprise mock drills should be conducted at regular intervals.
- Waiting area: Should have adequate space; Toilets with adequate water supply separate for males and females should be available; Safe drinking water should be available; Surroundings should be kept clean with no waterlogging and vector breeding places in and around the centre.
- Outpatient Department: Rooms shall have provision for ample natural light and air; Windows shall open directly to the external air or into an open verandah; Adequate measures should be taken for crowd management.
- Wards: There should be facilities for drinking water and separate clean toilets for men and women; There should be utility room for dirty linen and used items; Cooking should not be allowed inside the wards for admitted patients; Cleaning should be carried out at regular intervals.
- Labor room: Provision of hand washing and containment of infection control; Room should be well-lit and ventilated with an attached toilet and drinking water facilities; Separate areas for dirty linen, baby wash, toilet, sterilization; Regular washing and mopping with disinfectants to maintain cleanliness; Fumigation at regular intervals.
- General store: Area should be well-lit and ventilated and rodent/pest free; Inflammable and hazardous material shall be secured and stored separately.
- Waste management: 'Guidelines for HCWs for Waste Management and Infection Control in PHCs' are to be followed.
- Waste disposal pit: As per CPCB guidelines.

- Environment-friendly features: The PHC should, as far as possible, be environment-friendly and energy efficient; Rain water harvesting and solar energy use and use of energy efficient equipment should be encouraged.
- Adequate water supply and water storage facility (over head tank) with pipe water should be made available.
- Statutory and Regulatory Compliance: PHC should fulfill all the statutory and regulatory requirements and comply with all the regulations issued by the local bodies, state and union of India. PHC shall have a copy of these regulations/Acts. The statutory and regulatory compliances include, inter alia:
  - No objection certificate from the competent Fire Authority.
  - Authorization under Bio-medical Waste Management Rules 2016.
  - Hazardous Waste Management Rules 2016.
  - Authorization from Atomic Energy Regulation Board (if x-ray facility is available).
  - Excise permit to store spirit.
  - Insecticides Act 1968.

NAQS INFECTION CONROL STANDARDS FOR HWCS

Area of Concern - F: Infection Control	
Standard F1	**The facility has established program for infection prevention and control**
ME F1.1	Facility ensures that staff is working as team and monitor the infection control practices
Standard F2	**The facility has defined and Implemented procedures for ensuring hand hygiene practices**
ME F2.1	Hand Hygiene facilities are provided at point of use & ensures adherence to standard practices
Standard F3	**The facility ensures standard practices and equipment for Personal protection**
ME F3.1	The facility ensures availability of personal protection equipment and ensures adherence to standard practices
Standard F4	**The facility has standard procedures for disinfection and sterilization of equipment and instruments**
ME F4.1	The facility ensures availability of material and adherence to Standard Practices for decontamination and cleaning of instruments and followed by procedure/patient care areas
ME F4.2	The facility ensures standard practices and materials for disinfection and sterilization of instruments and equipment
Standard F5	**The facility has defined and established procedures for segregation, collection, treatment and disposal of Bio-Medical and Hazardous Waste**
ME F5.1	The facility ensures segregation and storage of Bio-Medical Waste as per guidelines
ME F5.2	The facility ensures management of sharps as per guidelines
ME F5.3	The facility ensures management of hazardous & general waste
ME F5.4	The facility ensures transportation & disposal of waste as per guidelines

GUIDING PRINCIPLES FOR BUILDING NEW HEALTH INFRASTRUCTURE

per the FC XV to be followed for PM-ABHIM HCWs and BPHUs

The infrastructure for SC-HWCs, PHC-HWCs and CHCs should follow the rules and regulations as laid down in the state by-laws and the associated National Building Code and are friendly for differently abled, patient friendly with appropriate culture and gender sensitive amenities.

There should be availability of drinking water, hand-washing area, separate female and male toilets, parking area, waiting area, laundry facilities and waste disposal as per BMWM Rules, 2018.

i.   All new infrastructure should be environment friendly with scope for enough natural light, water harvesting, solar energy, etc.

ii.   Availability of an open area for management of any disasters or emergency cases.

iii.   The facilities should be in line with the national and state disaster management plan / National Disaster Management Plan for hospital safety, 2016 issued by NDMA, GoI.

iv.   Regular piped water supply and reliable electricity for service delivery should be made available at the site of new construction. This should be ensured in collaboration with the concerned departments and if required, facilitation should be done at the district level. The water storage along with the required equipment also needs to be provided.

v.   New electrical appliances should have a minimum 3-star rating from Bureau of Energy Efficiency or equivalent recognized organization to minimize the energy input. When choosing the technology, guidelines and standards issued by the Ministry of New and Renewable Energy must be adhered to (Gazette of India April 16, 2018, No 1456).

vi.   To ensure compliance with **safety norms**, all new hospital buildings should comply with provisions prescribed for seismic zone IV and V and mitigation measures to be undertaken as per National Building Code if such buildings are situated in these zones.

3.3. Layout Plan: The flow of services should be in alignment with the IPHS 2012 guidelines or the most recent ones released by GoI and as given in the Appendix 3).

The essential areas to be planned for all health care facilities:

i. <u>Waiting area -</u> For patient registered at registration counter, there should be seating arrangement for them while they wait for their consultation. Adequate seating arrangement/ chair should be available.

ii. <u>Consultation room</u> – Room of Community Health Officer / Medical Officer and Specialists, should have enough space to accommodate desks and chairs, where interaction with patients can be undertaken with confidentiality and dignity. It should be well lit and ventilated.

iii. <u>Examination room</u> (This can be combined with the Consultation room if there is a space constraint). It should be co-located with consultation room or Can be clubbed with the consultation room with due privacy features for the patient. It should have adequate space for accommodating an examination table (wheeled, wall mounted, single piece), space for free movement around examination table, curtains for privacy and wall mounted cupboard where essential equipment, etc. can be kept.

iv. <u>Record keeping:</u> Every HWC must plan to ensure safe upkeep of the necessary records preferably utilizing IT systems.

v. <u>Day care beds:</u> The facility may sometimes require the patient to be under medical supervision for a period of a few hours at Sub-Centre and PHC-HWCs.

vi. <u>Store:</u> Adequate and spacious stores located away from patient traffic with facility for storing drugs, consumables, records, linen, furniture, equipment and sundry articles. GoI Guidelines for safe disposal of expired drugs and vaccines should be adhered to.

vii. <u>Support services – Drinking water / Handwashing facilities:</u> Washroom facility, laundry facilities and waste disposal as per BMWM Rules, 2018 should be part of planning.

Table 8: Suggestive area for facility:

S.No.	Type	Suggestive Area in sq. ft
1.	Primary Health Centre	
	PHCs / PHC level HWCs	8,369.8
2.	SHC – HWC with residential facilities	3,766.0
	SHC - HWC building without Residence	2,098.0
3.	Community Health Centre (30 bedded)	22,596.0

ANNEX-4 ENVIRONMENTAL AND SOCIAL BASELINE DATA CHECKLIST (SHARED WITH STATES)

Questionnaire for NHM/ State Health Society

Name of State_____

Environment Management Aspects: Questions

Section 1	Medical Waste Disposal (including biomedical, E-waste and Hazardous)

Q1   How many Common Bio-medical Waste Treatment Facility (CBWTF) established in the state?

Q2   What is the total volume of biomedical waste generated and treated? Is there a gap in installed capacity and biomedical waste generated, especially after COVID-19 pandemic?

Q3   Are district level and tertiary healthcare facilities treating liquid waste (including laboratory and sewerage) before final disposal?

☐ Yes

☐ No

If no, please provide specific details

Q4   What percentage of healthcare facilities at the state/district levels have functional ETPs/STPs or connected?

Q5   Are CPCBs guidelines for COVID-19 waste disposal followed?

Q6   Please describe briefly describe method of disposal of
   a.   hazardous waste _____
   b.   e-waste _____
   c.   plastic waste _____
   d.   chemical waste (expired medications, radioactive, cytotoxic, cytostatics)
   _____

Q7   Are there any budgetary gaps in terms of required budget and actual budget made available for BMWM?

☐ Yes

☐ No

If no, please provide specific details

Q8   Are Biomedical Waste and infection control committes established, and at what level? State/ District/ etc. and are they functional? (Tick all that apply)

☐ Yes (State, District, Block)

☐ No

If no, please provide specific details

Section 2	Healthcare facility refurbishment

Q1   Which departments are involved in undertaking rehabilitation/ refurbishment/? renovation works at Health Care Facilities?

Q2   If there is a screening procedure, are any of the following criteria considered as

part of the screening of a site for Health Care Facility for undertaking rehabilitation/ refurbishment/ renovation works? (Tick all that apply)

☐ Presence of any nearby sensitive receptors (that may get disturbed or impacted because of the rehabilitation/ refurbishment/ renovation works

☐ Presence of hazardous construction materials such as Asbestos Containing Materials (roofing sheets, pipes, insulation material, etc.) in the existing Health Care Facility building

☐ Structural safety of the existing building

☐ Other (please specify)

Section 3   Healthcare Worker Safety

Q1   What measures exist in enforcing occupational health and safety practices for labor is engaged in any civil/ construction work in the health sector?

Q2   What is the mechanism to ensure that labor laws are being adhered to in any of the civil works? Are they being monitored?

Q3   What is the approved strategy/ guideline for immunization programs for workers

Q4   What is the strategy/ arrangement for monitoring occupational health and safety Facilities

Q5   Is there a record of occupational accidents (especially accidents that could result in lost work time, disability, fatalities), diseases and dangerous occurrences maintained for the HCFs?

☐ Yes

☐ No

If no, please provide specific details

Q6   Management and Infection Control Practices? (tick all the records that are regularly maintained)

Check all that apply.

☐ Record of Authorization from State Pollution Control Board under Bio-medical Waste Management Rules

☐ Record of formal agreement with Common Biomedical Waste Treatment and Disposal Facility for collection and treatment of Bio-medical Waste

☐ Record of Bio-medical Waste generation, collection/disposal

☐ Record of Annual Reports submitted to State Pollution Control Board under Bio-medical Waste Management Rules

☐ Record of Accident Reports submitted to State Pollution Control Board under Bio-medical Waste Management Rules

☐ Record of minutes of meetings of Bio-medical Waste Management Committee (for Health Care Facilities with more than 30 beds)

☐ Record of Batteries Wastes handed over to authorized sellers/dealers/recyclers Record of Recyclable Wastes handed over to authorized recyclers

☐ Record of quality test results of effluent generated

☐ Record of trainings provided to staff on Bio-medical Waste Management Record of immunization of all employees

☐ Record of annual health check-up of all employees

☐

Q7   Do Health Care Facilities with more than 30 beds have a Biomedical Waste Management Committee?

☐ Yes

☐ No

If no, please provide specific details

Do Health Care Facilities with less than 30 beds have a designated Biomedical Waste Management Supervisor?

    ☐   Yes

    ☐   No

        If no, please provide specific details

Q8   Is there adequate coordination between Health Care Facilities and Local Government Authority (Municipality, Panchayat, etc.) for management of General Waste?

    ☐   Yes

    ☐   No

        If no, please provide specific details

Section 4   Community Health & Safety

Q1   What measures are used in avoiding, minimizing, and/or mitigating community risks while the construction work is in progress?

Q2   Do HCF buildings incorporation siting and safety engineering criteria/ international, national building codes to prevent failures due to natural risks posed by earthquakes, flooding, landslides and fire? (Please state which are the guidelines followed)

    ☐   Yes

    ☐   No

Q3   Do buildings meet life and safety objectives? And are Life and fire safety systems and equipment installed in HCFs?

    ☐   Yes

    ☐   No

        If no, please provide specific details

Q4   Transportation of high-risk materials (infectious waste, laboratory samples etc.) Tick all that apply

    ☐   Containers properly labelled with the quantity of the contents, and its associated hazards in addition

    ☐   Workers involved in the transportation are trained regarding emergency procedures

Q5   Are wastewater outflows from hospitals adequately connected to city sewerage system? are there any gaps?

    ☐   Yes

    ☐   No

        If no, please provide specific details

Q6   What control strategies are adopted for vector borne diseases

Q7   Are there occurrences where BMW service providers have not picked up waste within 48 hours?

Section 5   Training and Capacity Building on BMW and IC practices

Q1   Is there a training and capacity building plan available for the health sector staff/workers at different levels on biomedical waste management and infection control?

Q2   What are the institutional arrangements for providing training/capacity building?

Section 6   Stakeholder Consultations

Q1   Please describe the process of collecting feedback from healthcare facility users. Who reviews this feedback and how is it acted up on?

Q2   If any problems and issues are observed on Biomedical Waste Management and Infection Control Practices in SCs, what action is taken (select all that apply)?

Check all that apply.

☐ Instructions are given to staff
☐ Issue is reported to responsible authority No action is taken
☐ Other:

Social Management Aspects: Questions

Section 1: Tribal development blocks and aspirational districts

Q1. Does the state have a monitoring system for HCFs located in aspirational districts and tribal development blocks?

- Yes
- No
- If yes, please provide specific details

Q2. Does the state have a specific strategy/mechanism/policy/guideline to improve access and quality of health services in rural areas/aspirational districts/tribal blocks?

- Yes
- No
- If yes, please provide specific details

Q3. Does the state health department coordinate with the Tribal Welfare Department to improve the Health and Nutrition programming amongst tribal communities?

- Yes
- No
- If yes, please provide specific details.

Q4. Does the state health department coordinate with the Panchayati Raj Department to improve the Health and Nutrition programming amongst rural communities?

- Yes
- No
- If yes, please provide specific details.

Q5. Does the state health society receive central funding for implementation of the tribal sub-plan or SC component for disadvantaged groups? Please provide details on utilization.

- Yes
- No
- If yes, please provide specific details.

Q6. Do aspirational districts/tribal districts have additional budget allocations to improve functioning of HCFs?

- Yes
- No
- If yes, please provide specific details.

Section 2: Adolescent girls and Rashtriya Kishor Swasthya Karyakram

Q1. Does the state have specific strategies for reaching adolescent girls (age 11-18 yrs)?

- Yes
- No
- If yes, please provide specific details.

Q2. Does the state health department coordinate with Women and Child Development Department on health and nutrition programming of adolescent girls?

- Yes
- No
- If yes, please provide specific details.

Section 3: Institutional Assessment and state capabilities

Q1. Does the state health society coordinate with the urban local bodies to improve the Health and Nutrition outcomes amongst slum dwellers, daily wage workers and urban poor?

- Yes
- No
- If yes, please provide specific details.

Q2. Does the state health society maintain a record of land disputes across HCFs?

- Yes
- No
- If yes, please provide specific details.

Q3. Please provide the number of female employees currently employed in technical positions across HCFs.

Q4. Please provide the number of male employees currently employed in technical positions across HCFs.

Q5. Please provide the number of female employees currently employed in non-technical positions across HCFs.

Q6. Please provide the number of male employees currently employed in non-technical positions across HCFs.

Section 4: Citizen Engagement, information outreach and grievance redressal

Q1. Does the State Health Society have a functional Internal Complaints Committee, as per requirements of the POSH Act?

- Yes
- No

Q2. Does the State Health Society develop and roll-out awareness and outreach campaigns?

Q3. Please provide details of the budget allocated the outreach campaign vis-à-vis the expenditure for the last two years.

Q4. What are the main components/key priorities of the outreach campaign?

Q5. Has the State Health Society undertaken any measures to improve uptake of health insurance amongst rural communities?

Q6. Has the State Health Society undertaken any measures to improve uptake of health insurance amongst urban poor?

Q7. Does the state have a functional Grievance Redressal Mechanism to address complaints received from patients at HCFs?

Q8. If yes, can the State Health Society please share details of complaints/queries received and redressed over the last 6months?

Q9. Does the State Health Society have a citizen engagement platform/dashboard to engage with citizens and private service providers?

Q10. Has the State Health Society developed/introduced feedback monitoring mechanisms/tools to gather feedback from patients?

Q11. Does the State Health Society coordinate with W&CD and Police Department to improve the responses to domestic violence/abuse?

Q12. Does the State Health Society have guidelines for HCFs regarding responses to victims of domestic violence?

Q13. Does the State Health Society have good practice examples/anecdotal evidence of improving public health response for victims of gender-based violence?

Section 5: Community engagement

Q1. What were the community-based/community engagement structures in place leveraged by the State Health Society for implementation of NHM? How?

Q2. Are there barriers to engaging with women-led groups in existing community engagement structures? Please provide details.

Q3. Do women-headed households/widows/single women in the state experience specific barriers in accessing health care? Please provide details on the initiatives undertaken by the State Health Society to reach women headed households/widows/single women.

ANNEX 5: LIST OF APPLICABLE REGULATIONS AND GUIDELINESTO THE PROGRAM

Waste Management

1. Bio Medical Waste Management Rules, 2016,
2. Guidelines for Handling, Treatment and Disposal of Waste Generated during Treatment/Diagnosis/ Quarantine of COVID-19 Patients
3. Guidelines for Bar Code System for Effective Management of Bio-Medical Waste
4. Guidelines for Common Bio-medical Waste Treatment and Disposal Facilities
5. Guidelines for Environmentally Sound Management of Mercury Waste Generated from Health Care Facilities.
6. Plastic Waste Management Rules, 2016
7. Water (Prevention and Control of Pollution) Act, 1974
8. e-Waste (Management and Handling) Rules, 2016
9. NQAS standards
10. Construction and Demolition Waste Management Rules, 2016
11. Solid Waste Management Rules, 2016
12. The Hazardous and Other Waste Management Rules, 2016
13. Management of Solid Health Care Waste at Primary Health Center: A Decision-Making Guide: WHO
14. World Health Organization (WHO) in "PQS Performance Specifications: Safety Box for disposal of waste sharps" Document number: WHO/PQS/E10/SB01.

Worker Safety

1. The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996
2. National Disaster Management guidelines, 2016
3. IMEP section 4.12 Construction of Management Guidelines
4. Noise Pollution (Regulation and Control) Rules, 2000
5. National Building Code of India 2016 Part – IV "Fire & Life Safety"
6. Workmen's Compensation Act, 1923 & Rules 1924
7. The Occupational Safety, Health and Working Conditions Code, 2020
8. The Epidemic Diseases Act 1897
9. The Epidemic Diseases (Amendment) Ordinance, 2020
10. Insecticides Act 1968

Infection Control

1. MoH&FW Swachhata Guidelines
2. IMEP Policy Framework: MOHFW India
3. NQAS standards for infection Control

Table 16 Implementation Experience of Program States

State	*Project*	*Remarks on E&S management*
Andhra Pradesh	World Bank supported Andhra Pradesh Health System Strengthening Project (P167581, 2019-2024). Implementing agency: Department of Health, Medical and Family Welfare, Government of Andhra Pradesh.	Current (January 2021) rating for Environment & Social Risk: Moderate.
Tamil Nadu	World Bank supported Tamil Nadu Health System Reform Program (P166373, 2019-2024). Implementing agency: Department of Health and Family Welfare (DoHFW) Government of Tamil Nadu.	Current (January 2021) rating for Environment & Social Risk: Moderate. The SPCB conducted and publicly disclosed the Annual Performance Audit of CBWTFs. The DoHFW has provided trainings to health workers on COVID-19 waste management, infection control and occupational safety. However, training on biomedical waste management, especially related to liquid wastes, needs strengthening.
Uttar Pradesh	World Bank supported Uttar Pradesh Health System Strengthening Project (P100304, 2011-2019). Implementing agency: Department of Medical Health and Family Welfare, Government of Uttar Pradesh.	An Environment and Social Action Plan was implemented – albeit with some delay due to slow decision making owing to leadership changes. The project made significant progress in improving the biomedical waste management. A performance-based contract with innovative use of information technology for monitoring of bio-medical waste collection and treatment by CBWTF was implemented covering 129 District Hospitals and 140 Community Health Centers.

ANNEX-7: STATE LEVEL ANALYSIS OF SOCIAL SYSTEMS

The following annex analyses the state health practices across Andhra Pradesh, Kerala, Meghalaya, Odisha, Punjab and Uttar Pradesh under the 4 categories a) tribal health, b) community strengthening c) GRM systems and d) innovations, if any.

Scheme	Andhra Pradesh	Kerala	Meghalaya	Odisha	Punjab	Uttar Pradesh	Tamil Nadu
Tribal Health							
Community Strengthening							
GRM systems	🟢	🟢	🟢	🟢	🟢	🟢	🟢
Innovations							

🟢 Satisfactory   🟡 Average   🔴 Needs Improvement

⚫ Not Applicable/

STATE FOCUS: ANDHRA PRADESH

Andhra Pradesh: Disease Burden Profile, 1990 to 2016

1990 life expectancy
Females: 58.4 years Males: 57.7 years

2016 life expectancy
Females: 71.9 years Males: 67.3 years

How much did the under-5 mortality rate change from 1990 to 2016?
Under-5 mortality rate, both sexes combined, 1990-2016

● Andhra Pradesh under-5 rate ● India under-5 rate ● Comparative average rate globally for similar Socio-demographic Index as Andhra Pradesh
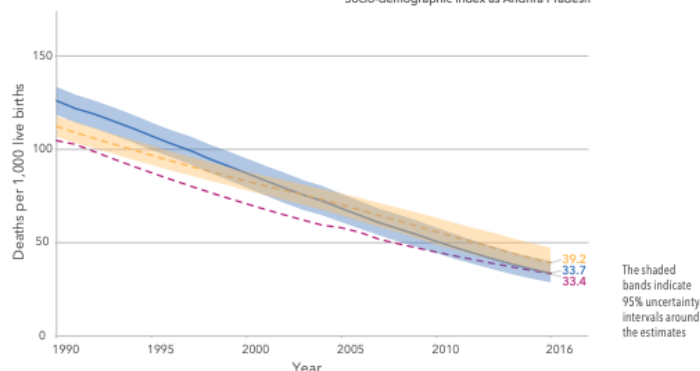
13

STATE SPECIFIC CONCERNS:

- As per the recent survey conducted by the Comprehensive School Health Programme on predefined conditions in tribal areas the Health situation/conditions is very poor. It is found that 76% are diagnosed under this category and 11% are coming under referral, which is alarming. The reasons found to be non-safe drinking water, un-healthy life styles, poor diet and nutrition.
- Every year there are several incidents of tribal deaths in the agency areas of Andhra Pradesh due to various health reasons. One of the major reason for the death of the ST students studying in Tribal Welfare Educational Institutions is due to various types of anemia viz., 23 % children are critical anemic (i.e., <8mg>) and 65% children are anemic (i.e., <8mg><11mg>)
- Most of the children are diagnosed positive under predefined conditions which results in school drop-out.
- To counter this Tribal Welfare Department has initiated to improve quality Health and Education to reduce OOPE (Out of Pocket Expenditure) to implement Comprehensive (Pregnancy- 18 Yrs) in coordination with Health, WDCW & Education Dept, thereby Inclusive of Development from 1. Maternal,2. WD&CW,3. RBSK, 4. SSA, 5. RMSA & 6. RKSK
- **In spite of taking all the necessary steps, as internalizing the provisions of the schemes are slow in tribal areas, the performance of health status in tribal areas is not up to expectations**

KEY INITIATIVES TO BRIDGE GAPS:

CHINNARI VAIDYULU

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13   *Burden   of   disease: https://www.healthdata.org/sites/default/files/files/Andhra_Pradesh_-_Disease_Burden_Profile%5B1%5D.pdf*

- In every school for each section two active students are nominated as Chinnari Vaidyulu as peer educators. One Chinnari vaidyudu to each 10-15 students with a minimum of 12 Chinnari Vaidyulu in each school .
- These educators cover health related topics such as communicable diseases, non-communicable diseases, menstrual hygiene
- Another element of the program is to create Awareness through Chinnari Doctors.

SYSTEMATIC ACTIVE CASE FINDING EFFORTS IN TRIBAL TB UNITS

- Burden of TB is high in tribal population and owing to their cultural practice of staying in clusters/close hamlets transmission is likely to be higher. Difficult geographic terrain makes it difficult for them to approach Health facilities frequently. India mainly uses passive case finding to detect tuberculosis (TB) patients through the Revised National Tuberculosis Control Programme (RNTCP). Systematic Active case finding activities can bring TB services closer to the Tribal community.
- The Tribal communities gather in large numbers at certain specific places like weekly markets, bus stations, during patient-health care provider meetings, Gram sabhas, monthly religious rituals etc.
- The Medical Officer of the Primary Health Centre, the RNTCP Supervisory staff and the Laboratory Technician participate in the camps. House to house awareness campaigns are conducted throughout the year by the Health staff about these camps. These camps are called 'Shandy Camps' and act as Sputum Collection Centers. All patients with symptoms are encouraged to give spot sample of sputum for testing and asked to report with early morning sample at the nearest Health facility.

STATE FOCUS: KERALA*14*

- Tribals form more than 1% of the State's total population and they belong to 35 communities. 22% of them are still living in the forest areas. Wayanad district with 1,36,062 Tribal population, Idukki district with 50,973 and Palakkad district with 39,665 account for the majority of the tribal population of Kerala
- In order to provide primary Health care services for the tribals living in the remote and hard to reach tribal settlements, 13 tribal Mobile Medical units are functioning in the state. Five of these units are functioning in the Wayanad district, two each in Idukki and Palakkad districts and one each in Kasaragod, Malappuram, Kannur and Trivandrum districts. These units are conducting on an average 20 medical camps per month in the remote tribal settlements under the leadership of a medical officer with the supporting para-medical staff like pharmacists, staff nurse etc.
- The field workers and the supervisors of the respective areas do the mobilization of the community to the camps. In these camps the essential primary health care needs of the community namely the treatment of the basic illnesses, antenatal and postnatal care, immunization services, prevention and control of the communicable diseases etc. are provided. Also necessary health education programmes including the prevention of waterborne diseases are imparted through these medical camps.

STATE FOCUS: MEGHALAYA*15*

State's policy: The current health system in the State has put priority on curative care, the policy aims to shift this to preventive care which would focus on positive health care. The policy will take steps to ensure that citizens are

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14 *Kerala NHM website: https://arogyakeralam.gov.in/2020/03/27/tribal-health/*

15 *Meghalaya State Health policy: https://meghealth.gov.in/docs/Meghalaya%20Health%20Policy%202021.pdf*

empowered with the right knowledge to take better care of themselves; citizens will also made aware of various health milestones (check-ups, immunizations) that they should keep track of in order to bring about healthy living.

STATE SPECIFIC CONCERNS:

- Maternal and Infant Mortality Rates are of great concern to the State with 197 MMR (SRS, 2016-18) and 3.4% IMR (34 deaths per 1000 live births) as per HMIS, Apr-Sept 2020. These can be attributed mainly to teenage pregnancy, multiple gravida and untimely healthcare intervention. The State is proactively taking steps to ensure the safety of mother and child during pregnancy.
- According to NHFS-4 , 43.8 % of children under 5 are stunted in Meghalaya. Factors that contribute to stunted growth and development include poor maternal health and nutrition, inadequate infant and young child feeding practices, and infection
- According to an HMIS report based on the immunization dashboard, in 2018-19, Meghalaya ranked the lowest in immunization rates on having achieved 44%. There has been significant improvement in 2019 and 2020 with state achieving 84% and 91% respectively. This has been attributed to the proactive response of the State by using PDIA techniques which the State will propel forward in other aspects of healthcare.
- As per State data, only 29 % of children receive proper nutrition and diet.

TRIBAL HEALTH WELLNESS CENTRE - SHILLONG

- In its bid to develop health tourism in Meghalaya, the State Government is now going to promote ayurveda in convergence with Khasi traditional healing system which would do wonders for the state in every sphere be it tourism or health sector.
- Convergence of two system would be beneficial for the state as Meghalaya has large number of traditional healers who are expert in traditional healing system.

STATE FOCUS: TAMIL NADU *16*

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16 *Tamil Nadu Health Policy*

Tamil Nadu: Disease Burden Profile, 1990 to 2016

1990 life expectancy
Females: 61.9 years Males: 59.4 years

2016 life expectancy
Females: 73.5 years Males: 68.9 years

How much did the under-5 mortality rate change from 1990 to 2016?
Under-5 mortality rate, both sexes combined, 1990-2016

● Tamil Nadu under-5 rate   ● India under-5 rate   ● Comparative average rate globally for similar Socio-demographic Index as Tamil Nadu

The shaded bands indicate 95% uncertainty intervals around the estimates

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CURRENT SITUATION:

- The Maternal Mortality Ratio (MMR) has been considerably reduced to 60 as per the SRS 2016-18. The State has achieved nearly 100% institutional delivery and 97.6% Antenatal mothers are registered within the first trimester of pregnancy.
- The Infant Mortality Rate which was 37 per 1000 Live Births in 2005 has been reduced gradually to 15 per 1,000 live births in 2018 as per the Sample Registration System. Tamil Nadu is the second lowest among the major states in the country.

FOCUS ON TRIBAL HEALTH:

ACCREDITED SOCIAL HEALTH ACTIVISTS (ASHAS):

In tribal / hilly / remote / difficult areas, 2,650 ASHAs are being engaged in PHCs to deliver health services. Since ASHAs are from the same tribal community, they motivate the tribal mothers for regular antenatal checkups in Health SubCentres and Primary Health Centres, which results in promoting the institutional safe delivery practices and also create awareness about health schemes.

BIRTH WAITING ROOM IN 17 TRIBAL PHCS:

In non-motorable roads and villages with a long 152 distance to a health facility, the tribal mothers are being admitted two weeks before the Expected Date of Delivery in birth waiting rooms established in 17 PHCs in the foot hills of tribal areas for safe delivery under institutional care. In Birth Waiting Room (BWR), nutritious diet is provided to the antenatal mother & attender during their entire period of stay. Since April 2020- March 2021 totally 1,601 Tribal Antenatal mothers have benefitted through the tribal birth waiting rooms.

REFERRAL SERVICES IN TRIBAL DISTRICTS:

The State has a well-established emergency referral transport system established through National Ambulance Services. In order to reach those tribal villages which are inaccessible by regular ambulances, four-wheel drive vehicles suitably equipped as ambulances have been provided in 76 identified points in tribal / hilly areas. These vehicles ensure timely referral of tribal people to higher referral centers and prevent adverse outcomes in the tribal community.

TRIBAL BED GRANT SCHEME:

Tribal Bed Grant is a Scheme where free Diagnostics, Drugs for IP patients, Surgeries & diet are being given to the tribal people who are hospitalized in tribal areas. This scheme is being operated through NGOs. This Scheme has increased the health seeking behavior in the tribal Community, access to quality health care and has reduced out of pocket expenditure. 704 tribal patients have benefited through this scheme during 2020-21.

TRIBAL COUNSELLORS:

Tribal Counsellors have been placed in the 10 Government Hospitals in the tribal districts. They act as ambassadors between the health systems and tribal community. They also function as health activists in the institution where they not only create awareness on health and its determinants but also motivate the community towards healthy living practices.

PREVENTION AND CONTROL OF HEMOGLOBINOPATHIES:

Among the South Indian States, Tamil Nadu is the first state to implement Prevention and Control of Hemoglobinopathies program for early detection of Hemoglobinopathies like Sickle Cell Anaemia, Thalassemia among the tribal population. NHM-TN along with other Directorates are screening for Hemoglobinopathies (Sickle Cell Anaemia& Thalassemia) in adolescent children studying in 10th and 12th standard and unmarried school dropouts above the age of 14 in 30 selected tribal blocks in 13 Districts since November 2017.

MOBILE MEDICAL UNITS:

Mobile Medical Units have been provided to all blocks of Tamil Nadu under NHM and they are functioning since 2009 to cover remote, hilly/tribal and inaccessible areas. This scheme has been renamed as Hospital on Wheel Programme with additional staff of one Laboratory Technician and Attendant. The Hospital on wheels is manned by one Medical Officer, one nurse, one lab technician, one driver and one attendant. Each Mobile Medical Unit covers 42 villages on an average being visited on fixed days as per the Fixed Tour Program (FTP). During the year, April 2020 to March 2021 totally 1,63,39,805 people were benefited through 2,22,720 camps conducted by 396 vehicles.

STATE FOCUS: ODISHA

Odisha: Disease Burden Profile, 1990 to 2016
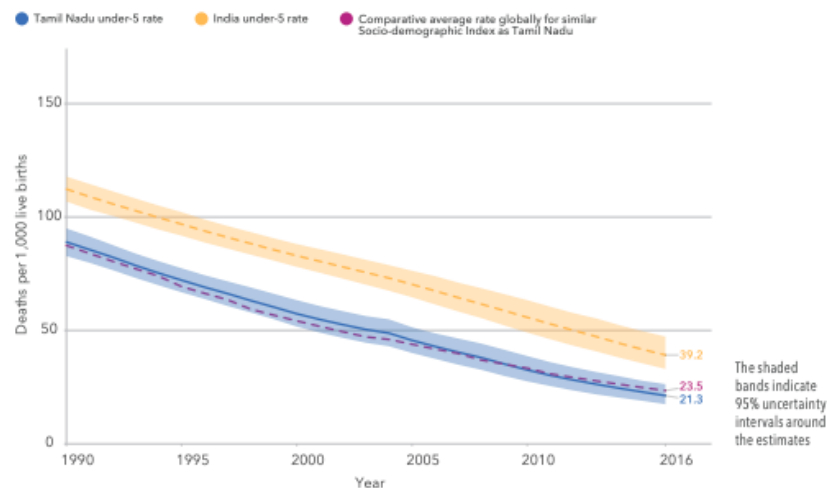
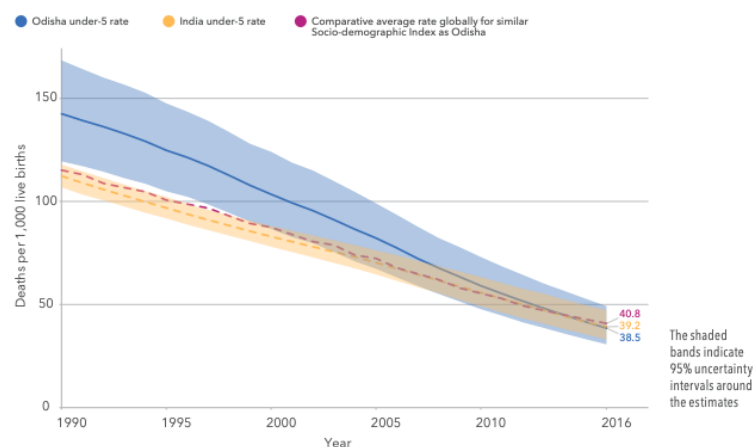**1990 life expectancy**
Females: 55.3 years   Males: 53.7 years

2016 life expectancy
Females: 68.6 years   Males: 66.1 years

How much did the under-5 mortality rate change from 1990 to 2016?
Under-5 mortality rate, both sexes combined, 1990-2016

● Odisha under-5 rate   ● India under-5 rate   ● Comparative average rate globally for similar Socio-demographic Index as Odisha

The shaded bands indicate 95% uncertainty intervals around the estimates

40.8
39.2
38.5

KEY INITIATIVES TO BRIDGE GAPS:

AMA SANKALPA (AN INITIATIVE TO REDUCE THE INFANT AND MATERNAL DEATH) – RAYAGADA, ODISHA

- Rayagada, a mineral-rich district in the southern part of Odisha has a predominant tribal population of 57.52%. Apart from Odia, several adivasi languages like Kui, Kondha, Soura are spoken in the district. All 11 blocks of the district are covered under the Tribal Sub-plan. As citizens were not availing health services due to poor connectivity, non-availability of referral systems in hard to reach areas, and low literacy, the District Administration developed a specific Action Plan to identify the real beneficiaries to uplift their standards by reducing IMR and MMR.

- The programme relies on a bottom-up demand-driven approach to improve uptake, with IEC & BCC relevant methods. Three 'Ama Sankalpa Ratha' Yatras were organised to spread a message about the precautionary measures for maternal and child health. This was accompanied by folk shows on District-specific issues played at the village level through which Health messages were disseminated. In addition to this, supply side interventions were also strengthened. 126 Integrated Special VHND/RI sessions were conducted in the hard to reach areas (apart from the regular sessions), where Antenatal, Post Natal, Newborn and Child Health screening and services, and weekly tracking of high risk pregnancies were enabled.

- For the early identification and referral of Severely Acute Malnourished (SAM) children between 6 months to 6 years; a special plan 'Project Surjyamukhi' under Ama Sankalpa was prepared. Under the special plan tracking Red & Yellow Zone children, facilities to provide therapeutic treatment and counselling were imparted, under the guidance of technical assistants to improve the nutritional status of each child in the district.

STATE FOCUS: PUNJAB
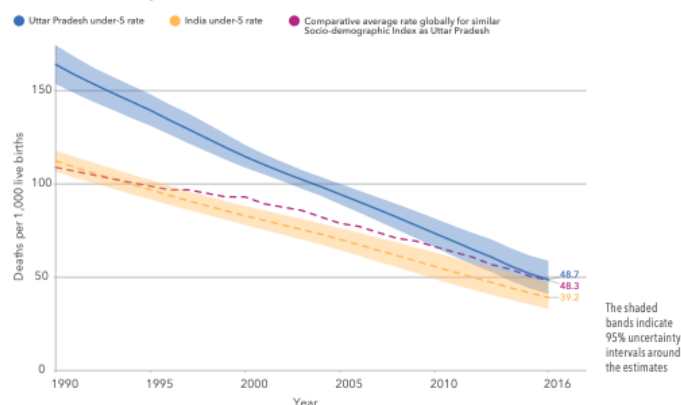
No Notified Scheduled Tribes in Punjab.

Uttar Pradesh: Disease Burden Profile, 1990 to 2016

1990 life expectancy
Females: 53.5 years   Males: 54.9 years

2016 life expectancy
Females: 66.8 years   Males: 64.6 years

How much did the under-5 mortality rate change from 1990 to 2016?
Under-5 mortality rate, both sexes combined, 1990-2016

● Uttar Pradesh under-5 rate   ● India under-5 rate   ● Comparative average rate globally for similar Socio-demographic Index as Uttar Pradesh

The shaded bands indicate 95% uncertainty intervals around the estimates

- Uttar Pradesh (UP), the most populous state in India, has an under-five (U5) child mortality rate of 78 per 1000 live births, one of the highest in the country. One factor contributing to the high U5MR is the high proportion of the population living in rural areas (77.7 %) which may limit access to child health services.
- In UP, the mortality rate among U5 children living rurally (82 per 1000 live births) is more than 30 % higher than those living in urban areas (62 per 1000 live births)
- States of Uttar Pradesh and Bihar account for around half of the country's maternal and child disease burden.
- And three out of every five children and/or adolescents are anaemic. Rural and marginalized poor face considerable barriers and are among the most vulnerable populations, lacking both access to services and basic health information.

Leading Risk Factors Associated with Disease Conditions
India and Uttar Pradesh, 2016 (Age-standardized, both sexes)

Risk Factors Rank	Uttar Pradesh	India
1	Malnutrition	Child & Maternal Malnutrition
2	Air Pollution	Air Pollution
3	Tobacco Consumption	Dietary Risks
4	WaSH	High Blood Pressure
5	Dietary Risks	High Fasting Plasma Glucose
6	High Blood Pressure	Tobacco Consumption
7	High Fasting Plasma Glucose	WaSH
8	Alcohol & Drug Use	High Cholesterol
9	Occupational risks	High BMI
10	High BMI	Alcohol & Drug Use

KEY FOCUS AREAS IN STATE'S HEALTH POLICY:

EQUITY IN SERVICE DELIVERY:

The notion of both horizontal and vertical equity must be ensured in service delivery. "Horizontal Equity' as a notion must realise that equal resources are committed for equal needs, while "Vertical Equity' must ensure that additional resources are available for special needs of vulnerable and socioeconomically weaker sections of the population. It particularly seeks to address disparities arising on account of gender, with the aim of improving the health status of girls and women in the State.

COMMUNITY PARTICIPATION:

Community participation in decision-making and ownership is likely to accelerate access and improve quality of care in public health system. While on the other hand, a wider participation of different constituencies in the overall health system, including health authorities, practitioners, social mobilizers, civil society organisations, local governments, professional bodies and private industry, is expected to inspire confidence, enhance access, promote quality and save cost to the society at large.

STATE SPECIFIC CONCERNS:

MORE THAN A CRORE POPULATION GETTING IMPOVERISHED DUE TO OOPS PAYMENT:

Nearly 1.07 crore population in the State experience impoverishment because they had to pay for OOP expenditure. Similarly, a higher OOP is also expected to result in catastrophic payments by households. During the period under consideration, it was noted that the proportion of households paying catastrophic expenditure considerably rose from 19.9% to 22.5%. As a result, it is estimated that 4.83 crores of population suffer from financial catastrophe every year in the State. However, State average hides significant variation in impoverishment and catastrophic payments across districts. **In forty-eight out of seventy-one districts, impoverishment is higher than State average.** In ten districts, it is observed that over 15% of population are pulled below poverty line because they had to pay for health care out of pocket. Households in thirty- seven districts reported catastrophic expenditure that are more than the State average.

KEY   STATE   INITIATIVES:

OPERATION MAMTA:
- Operation Mamta was launched as a pilot project to improve institutional delivery and post-delivery care for women of the Tharu tribe, which has a population of around 50,000 on Indo-Nepalese border. The administration has given priority to recruiting auxiliary nurse midwives (ANMs) from the Tharu community at the six sub-health centres in order to ensure their availability 24×7.
- The health centers are claimed to have accommodation facility for ANMs. Besides, two other staff are deployed at the sub-health centres. Roads to and from these centres have also been renovated and a solar power plant of 1 killowatt (KW) has also been installed to ensure power supply at night.
- A proposal has been prepared to launch 48 similar sub-health centres in remote countryside, including at Raninagar and Kiratpur soon.

SECTION B: COMMUNITY STRENGTHENING:

COMBATING UNDER-NUTRITION THROUGH SYSTEM STRENGTHENING AND COMMUNITY NUTRITION HUB- ANDHRA PRADESH [17]

The two major approaches of our nutrition intervention are:

1. *System Strengthening through Facilitation of Implementation*:

Working closely with block and district level officials of various line departments to improve efficiency of existing interventions such as Village Health Sanitation and Nutrition Day, model Anganwadis, and other services delivered by the frontline workers through:
a) Demonstration
b) Consolidation of learning, knowledge creation and transferring the learning to the system through systematic dissemination of knowledge products, periodic meetings, workshops, training of trainers, etc.
c) Coordination with various line departments spread across all tiers between national and block level to improve convergence, remove bottlenecks, and attain operational excellence.

2. *Deployment of A Customisable Community Nutrition Hub*:

The Community Nutrition Hub has various customisable modular components such as:

a) Nutri-garden and open nutri-kitchen to improve diet-diversity: In the nutri-garden the community representative and/or the Anganwadi Workers learn to grow micro-nutrient rich local produce (primarily iron-rich dark green leafy vegetables, Vitamin C rich citrus, Vitamin A rich vegetables and fruits) in resource-limited settings in a demonstrative as well as participatory manner. To address space constraints, vertical and horizontal methods of cultivation are developed. Often these gardens are created at the Anganwadi Centres to improve diversification of supplementary foods provided at the Centres and sustain the intervention. In the nutri-kitchen simple nutri-dense indigenous recipes, food-preservation techniques (e.g. technique using solar drier) are demonstrated for replication at Anganwadi Centres as well as at the home of the beneficiaries.

b) Community Nutrition Counsellors: The frontline workers, representatives from Self Help Groups (SHGs) and Village Organisations (VOs) are trained as nutrition-counsellor to improve overall nutrition awareness, WASH practices, dietary diversity, and other measures to prevent and combat undernourishment.

c) Nutrition audit and action plan: SHG members get capacitated to capture information on the nutrition status of mothers and children in their own community, to identify barriers to best practices and access to services, to critically review gaps in service delivery and collectively generate demand for nutrition services.

d) Specialists' consultation through telemedicine and tele nutrition: Severely and moderately malnourished (SAM, MAM) children and ANC, PNC mothers with low BMI and severe anaemia are identified through anthropometric drive in coordination with front-line workers and are provided with specialists' consultation through telemedicine and telenutrition services.

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17 *Footnote 20*

OUTLINING STATE POLICIES ON COMMUNITY PARTICIPATION

STRENGTHENING ROLE OF COMMUNITIES:

Initiative will be taken to strengthen the health cadres which will not only include healthcare workers but also grassroots mobilization of Self-Help Groups (SHGs) which can have a vital role in strengthening healthcare in the State and will act as a last mile delivery institution for participation. SHGs can be trained to give awareness programmes and can serve as an important platform where community members participate in discussions on positive health practices and to improve health seeking behaviours for accessing the services provided by public health institutions.

- The policy will outline Rights and Responsibilities of the residents, which will encourage citizens to become active partners with the state rather than just beneficiaries of the system. **The State aims to pioneer a bottom-up health system which is driven by the community and village organizations.** Emphasis will be put on strengthening village health and sanitation bodies. Issues relating to gender inequality, gender violence and health will be taken up where various forums will be constituted at the village level and public health institution level. There will be emphasis put on developing mechanisms for creating and empowering the decentralized monitoring committees at all levels, both rural and urban and seeking their feedback in a structured manner.
- The policy shall lay down rules for and establish community-based monitoring frameworks, to strengthen the direct accountability of the health system to the community and beneficiaries. The policy will strengthen Village Health and Nutrition Days (VHNDs) with proactive restructuring by enabling measures such as better infrastructure along with basic amenities such as stethoscopes, weighing machines, waiting chairs etc. This will create a better environment which will encourage citizens to avail services even more.

MEGHALAYA COMMUNITY PARTICIPATION AND PUBLIC SERVICES SOCIAL AUDIT ACT, 2017

- Under this Act, village and locality level Social Audit Committees (SAC) have been formed to bring about transparency and accountability in healthcare. The SAC will monitor and evaluate healthcare related programmes which can lead to better performance. The Social Audits shall be conducted at village and institutional levels including the PHCs/CHCs to improve the quality of services and to increase the awareness and uptake of services by the communities with special focus on helping the poor and marginalized in accessing their due health entitlements. This social audit mechanism would enable the general public and various groups and organizations to give free and independent feedback about health care services.
- The Social Audit body would record the issues and where possible immediately recommend actions regarding cases of denial of health care or violation of rights enumerated herein or suggest follow-up actions by the parties; similarly it would recognize service providers acknowledged for providing exemplary good services.

ODISHA

KALPANA PROGRAMME FOR BETTER HEALTH – DHENKANAL, ODISHA

- Kalpana Poshan Kendra helps in recovering the lost weight of children through intensive feeding of therapeutic food (rich in micronutrients) supplements. Capacity building of primary care givers in preparing home-made nutritious food from locally available ingredients and counselling of mothers on family planning are also conducted here.
- The Kalpana Programme has been instrumental in improving the sex ratio from 852 in March 2018 to 972 in August 2019. This has been possible due to mass community awareness programmes across Dhenkanal advocating the message of 'gender equality', to change the predominant societal mindset of preference for a male child.

GAON KALYAN SAMITI

- The Village Health Sanitation and Nutrition Committee which is known as Gaon Kalyan Samiti (GKS) in Odisha has demonstrated unique ability to drive the local health agenda. Functioning as a community level platform, GKS take collective action on issues related to health and its social determinants at village level. They are central to local level community action under NHM which is gradually develop to support the process of decentralized health planning.
- There are around 45000 Gaon Kalyan Samiti in the State of Odisha functioning at the Village level. Ward Member acts as the President, AWW acts as the Convener and ASHA acts as the facilitator for the functioning of GKS. It provides an institutional mechanism for the community to be informed of health programmes and government initiatives. Further they also provide a platform for convergent action on social determinants and all public services directly or indirectly related to health. Annual untied fund of Rs.10000/- provided to GKS to take up local level action to address health related issues.

TAMIL NADU

KEY INITIATIVES TO BRIDGE GAPS:

COMMUNITY BASED ASSESSMENT CHECKLIST:

In order to control Non-Communicable Diseases, the state is using a Community based assessment 37 checklist (CBAC) for universal screening of eighteen plus population to sensitize and mobilize the community for availing services for chronic illness at HWC.

HOSPITAL ON WHEELS PROGRAMME:

Mobile Medical Units were launched to provide health care services in remote villages and far flung areas in 2007. 100 Mobile Medical Units were procured for implementation of this scheme. Further 285 Mobile Medical Units were procured during 2008.

UTTAR PRADESH

SHGs:

Women's self-help groups have been shown as an effective social platform for empowering marginalized populations and improving access to micro-finance. There are currently more than 175,000 in Uttar Pradesh. Typically, such groups include spaces in which eight to twelve women can come together and learn financial literacy, save money, and support each other. Since 2012, Population Council evaluations have demonstrated these groups as a promising platform for supporting maternal and newborn health, through the sharing of pertinent health and nutritional information and providing mutual support.*18*

GATES FOUNDATION PROJECT OUTCOMES LEVERAGING COMMUNITY ENGAGEMENT:*19*

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18 *Population council research: https://www.popcouncil.org/research/evaluating-the-integration-of-health-and-nutrition-messages-into-self-help*

19 *Gates Foundation website: https://www.gatesfoundation.org/our-work/places/india/uttar-pradesh*

- Use of Village Health Nutrition Day as a platform for providing prenatal health care, family planning services, and nutrition services as well as appropriate reproductive, maternal, new-born, and child health and nutrition (RMNCHN) counselling across the state.

- Expansion of community health worker mentoring to improve reproductive, maternal, new-born, and child   health   service   delivery.

- Improved identification and tracking of high-risk pregnancies, along with referrals to facilities. For example, registration of pregnancies in the first trimester more than doubled, from 29 percent to 65 percent, between 2014 and 2019, and the number of women receiving prenatal care in the third trimester rose   from   36   percent   to   72   percent   during   the   same   period.

- Improved home-based maternal and newborn care, including identification and tracking of low-birth-weight newborns.
- Improved nutrition services, especially focusing on pregnant women, infants, and young children, through home visits and community-based Anganwadi centers. These nutrition efforts have led to substantial increases in behaviors and practices such as complementary feeding and the consumption of at least four food groups by children between 6 and 11 months in age.

SECTION C: PRESENCE OF GRM SYSTEMS

STATE	SUMMARY
Andhra Pradesh	Unified grievance redressal system
Kerala	Unified grievance redressal system
Meghalaya	Unified grievance redressal system
Odisha	Unified grievance redressal system
Punjab	Unified grievance redressal system
Uttar Pradesh	Appellate authority designation on the website, contact details on a separate webpage
Tamil Nadu	District wise list of appellate authority contact details (email, phone) on the website

ANDHRA PRADESH

IT SYSTEM FOR SCREENING AND FOLLOW-UP OF NCD PATIENTS (MAHILA MASTER HEALTH CHECKUP)

- NCDs are on the rise amongst the rural population. Women are particularly impacted because of poor health-seeking behaviour, financial and social disempowerment and lack of access to good quality health resources.

- The MMHC programme by the Government of Andhra Pradesh aims to screen and treat as needed, all 7 million rural women between the ages of 30 and 60 years for 7 non-communicable diseases which include oral, breast, cervical cancers, hypertension, diabetes, hormonal and vision disorders. Basic screening is done by the ANMs. Medical officers in the Mobile Medical Unit or PHC will screen for & manage hypertension, diabetes and vision disorders. Suspected cancer cases are referred to secondary & tertiary levels for investigation, diagnosis and treatment as needed.

- It is being implemented in more than 7000 health sub centers across the state and covers 6 Million Rural Women between 30-60years for screening of 7 health conditions namely Oral, breast and cervical cancers, hypertension, diabetes, hormonal disorders and vision disorders. MMHC uses a software based technology, consisting of the tablet application for the health workers, the web apps for the secondary level and tertiary level doctors, and dashboards for the health officials. The solution is run and managed by the Health Department on NIC cloud infrastructure.

LifeCare NCD – Android App Features

50 NCD screens	Individual Enrolment	User-friendly UI
All 7 disease screenings, Examination, Symptoms	Aadhaar ID, QR Code reader, Personal info, photo	Visual feedback, Warnings, prompts, Pictorial, touch, select
Login	Register Summary	Refer, Search Individual
2-step authentication. Password, Code	Searchable list of all registers, All individuals entered	Doctor's feedback
Social Media Links	Patient History	Offline with Sync
Awareness videos, In Telugu, for each disease	Vitals, Medical , family, history, social habits and complaints	Intelligent & fast, Works with multiple users
Tablet Dashboards	Audio-Video help	Telugu & English
Counts for all diseases, Filter by dates, village	Telugu instructions – every screen, Training Manual	Select language for screens

- To ensure good implementation, the programme is enabled by a technology innovation for stakeholders. It is a mobile, cloud, analytics solution with a unique, Aadhaar health record for every individual that can be securely viewed, modified and updated by the caregiver at primary, secondary and tertiary level. Dashboards allow health officials to monitor performance at every level, and to drill down to village-level. Health workers use android app on tablets that is in the local language with many user-friendly features. All other stakeholders use web portals.

HOSTELS FOR PREGNANT TRIBAL WOMEN - VIZIANAGARAM IN ANDHRA PRADESH

- A number of villages in Vizianagaram are very remote and lack proper road connectivity. Earlier, pregnant women of these villages were carried by dollies resulting in many casualties with very high maternal mortality rate. Thereafter, the District Administration along with the Integrated Tribal Development Agency came up with the idea of constructing Hostels for pregnant women of these villages. All the frontline workers including ASHAs and Anganwadis are creating awareness among the villagers about these Hostels.

- Pregnant women are brought to the Hostel one month prior to the Expected Delivery Date (EDD). There, they are provided with home-like care and support along with nutritional food and intensive medical care, under the close observation of gynaecologists. Separate ambulances have been allotted to these Hostels. Post-delivery, the mother and child are shifted to their homes by Talli Bidda Express. So far, around 100 women from hill-top villages have been taken care by in these Hostels. The Hostels are evoking good response from the tribes. Pregnant women admitted have expressed great satisfaction over the facilities being provided in these Hostels.

IMPROVING THE NUTRITION STATUS FOR THE TRIBAL WOMEN AND CHILDREN OF PADERU AGENCY AREA – ANDHRA PRADESH[20]

Background: Paderu agency area is a hilly, forest-covered region in the Vishakhapatnam district. It consists of 11 mandals with 91% of the population belonging to Scheduled Tribes. It is home to more than 11 different tribal communities including three Particularly Vulnerable Tribal Groups (PVTGs) of Khonds, Gadaba, and Poorja.

Problem: Most tribal habitations are in remote, hard- to reach areas, scattered across a large area, and often beyond the reach of major forms of communication and transport. This context coupled with other socio-economic factors contribute to the strenuousness of the tribal welfare work in the agency area which is the prime responsibility of the Integrated Tribal Development Agency (ITDA) of Paderu. ITDA Paderu is committed to contributing towards improving upon the health and nutrition status of the tribal communities of this area.

Solution: Through the Giri Poshana scheme, pregnant women, lactating mothers, and children (3-6 years) are provided with nutrient-rich food such as multigrain sweets, fried gram chikki, ragi-jaggery cookies, eggs, milk etc. at the anganwadi centres. Additionally, YSR Sampoorna Poshana Plus, a tailor-made programme for the pregnant women, lactating mothers, and children up to the age of 6 years was launched in September 2020 for the tribal mandals. This is designed in line with the POSHAN Abhiyan recommendations that emphasises on the nutritional needs during the critical days of first 1,000 days from pregnancy to a child's second birthday to break the inter-generational cycle of undernutrition.

Society for Elimination of Rural Poverty (SERP), Paderu implemented a nutrition-sensitive livelihood generation model of poultry farming that was targeted towards the families with pregnant women, lactating mothers, and children up to the age of two years (first 1000 days). Each beneficiary (the pregnant women/ lactating mother) was provided with a loan of INR 70,000 to acquire one unit of poultry animal (96 hens) which would serve as a recurring source of protein for the beneficiaries. Various nutri-gardens and kitchen gardens were created, community members were trained to maintain and use the garden-produce as a sustained source of micronutrients and vitamins.

KERALA

E-HEALTH

One electronic health record for every citizen is the aim of the scheme.

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20 *Piramal Case study: https://swasthya.tribal.gov.in/objects/ca2db116-df71-451a-9206-d3a9d581df6e.pdf*

- An electronic health record of every citizen accessible via an unique identifying number at any government hospital, telemedicine and online appointment booking are some of the features of the new Digital Health Mission project
- The new digital health system will ensure ease of access to doctors, regulation of patient crowds in out-patient departments (OPDs), easier referrals and also telemedicine facilities for online consultations.
- Under the new system, health workers would visit homes to gather health details of all family members and in this way we will get a blueprint regarding the infectious and lifestyle diseases prevalent amongst the general public.

DISTRICT MENTAL HEALTH PROGRAMME
- District Mental Health Programme (DMHP) was started in Kerala in Thiruvananthapuram in 1999. Since then DMHP has been rolled out in 14 districts.
- Mental Health Clinics are being conducted in all PHCs and CHCs in the district by trained doctors of the concerned institutions and psychiatric medicines are made available at PHCs. 26 day care centres, school mental health prog, 'ASWASAM'- Depression management at PHCs, 23 de-addiction Centres, 10 new de-addiction centres are being started under 'VIMUKTHI' scheme with financial support from Excise Department and mobile medical team.

FAMILY HEALTH CENTRE APPROACH FOR UNIVERSAL HEALTH COVERAGE=
- The rising number of communicable diseases and the increasing prevalence of non communicable diseases among people ailing per population and people seeking care in the state is largest in the country and most of the services are availed from private sector leading to out of pocket expenditure driving families to impoverishment and poverty.
- Effective Primary care service delivery has proven across the globe to be an effective strategy to improve the morbidity burden of communities. The programme envisions a family based health care approach.

- The components of the programme are:

  o Increase in the scope of services and ensuring the quality of care: A set of 52 common conditions that can be managed in a FHC are identified and clinical guidelines are prepared for management.
  o Community engagement: Arogyasena health care volunteerism 25 per ward a total of 500 per 30,000 population.
  o Family health plan: Mapping health needs of FHC area, mapping the services that are being currently provided, identify new services that needs to be integrated, mapping the provider at each level. e- health plat form will be integrated.
  o Specific focus projects for tribal and marginalized population in urban and rural areas

MEGHALAYA:

BIOWAT

BIOWAT, (Acronym for Biomedical Waste Water Treatment) has been developed as a low cost primary care intervention for the treatment and safe disposal of liquid waste generated at the PHC. Under the Initiative, the liquid waste, after a simple primary treatment (Sedimentation & Filtration) undergoes four stages of treatment. The BIOWAT is technically simple to operate and utilises existing manpower to run. No complicated laboratory tests are involved. The intervention does not require energy source.

Health Department Govt. of Meghalaya is in the process of replicating the BIOWAT across PHCs and CHCs of the state.

ENGAGEMENT OF BIKE AMBULANCE, AUTO AMBULANCE AND DELIVERY VAN TO PROMOTE INSTITUTIONAL DELIVERIES – KANDHAMAL, ODISHA [21]

- To avoid delivery on the way to hospitals and encourage Institutional Deliveries, the Aspirational District of Kandhamal has introduced Delivery Vans to enable Institutional Deliveries, touted as first-of-its-kind initiative, in the State. Being a tribal area, traditional healing systems are given more importance over institutional systems, leading to several deaths. Childbirths were usually conducted by untrained 'dais' in the villages and pregnant women hardly went to the hospitals for delivery, as community norms treat childbirth as part of a natural process, not requiring much external intervention. To bring the community onboard, the district doubled its efforts for increasing the demand and supply side interventions. On the supply side, all delivery points were made functional.
- 5 Bike Ambulances and 11 Janani Auto vehicles were deployed in outreach pockets. 7 Maternity Waiting Homes (MWHs) were also established that have significantly contributed to the Institutional Deliveries. Apart from the '108' and '102' Ambulance service, all existing vehicles including Government Ambulances, Arogya Plus vehicles, MHU & MHT vehicles were also engaged to transport pregnant women to the Government health facilities. On the demand side, awareness generation activities were undertaken to improve intake of the services provided. The Bike & Auto Ambulances along with the Delivery Vans in Kandhamal have improved the last mile connectivity for pregnant mothers. As a result, the rate of Institutional Deliveries in Kandhamal is now the highest in the State at 97% & maternal deaths have reduced by 65%

KALPANA PROGRAMME FOR BETTER HEALTH – DHENKANAL, ODISHA

- Pregnant women at the Aspirational District of Dhenkanal were prone to skip radiology tests due to inaccessibility. To facilitate these women, the District Administration enabled mechanism for mandatory Ultrasound Sonography (USG) testing for all pregnant women by scheduling mass USG test dates across the sub-district hospitals under the Kalpana Programme.
- Bringing all pregnant women together at these hospitals resulted in discussions regarding their lifestyle, food habits and sharing of experiences. Established in January 2019 in the District Headquarters Hospital of Dhenkanal, 'Kalpana Poshan Kendra' derives its name from Kalpana Dash (renowned mountaineer). It is based on the concept of establishing Nutritional Rehabilitation Centres under the umbrella programme of National Health Mission. Kalpana Poshan Kendra helps in recovering the lost weight of children through intensive feeding of therapeutic food (rich in micronutrients) supplements. Capacity building of primary care givers in preparing home-made nutritious food from locally available ingredients and counselling of mothers on family planning are also conducted here.

MISSION API – 10: REDUCTION OF MALARIA- KORAPUT, ODISHA

- In the Aspirational District of Koraput, the incidents of Malaria-related deaths were very high due to hilly terrain, forest cover, inadequate health facility coverage and low education levels of the population. To combat this, Mission API–10 was launched on July 15, 2017.
- The two main interventions under API–10 include use of Long Lasting Insecticidal Nets (LLINs) coupled with supply side interventions, complemented by bottom-up incentives and nudges such as 'bell ringing' as reminders to use nets and night patrolling by ASHA/AWW/Volunteers. The health team has also

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21 *Best Practices document, NITI Aayog accessed here: https://www.niti.gov.in/sites/default/files/2020-08/Best_Practices_from_Aspirational_Districts_Volume_1.pdf*

received an 'Award of Appreciation' by the State. This innovative initiative to create awareness about Malaria has brought down the Annual Parasite Incidence (API) to 2 in the affected area. Extensive sensitisation was ensured through demonstrations in local markets, posters, Nidhi Ratha and rallies.

PERFORMANCE MONITORING OF MAS THROUGH GRADING SYSTEM

- In order to assess the performance of individual members and MAS as a whole, a ranking based on set of 10 parameters is done.
- Similar set of indicators are used for assessment of individual members of MAS. The eligibility criteria for assessment of MAS and its individual members is completion of one year. The assessment is done by ASHA (U)/President of MAS. The ASHAs in urban area collect the assessment report and submit it to concerned ANM. This report is validated byANM/Public Health Manager. Based on this report, MAS prepares their quarterly plan of action

PUNJAB

IMPLEMENTATION OF OUT-PATIENT OPIOID ASSISTED TREATMENT (OOAT) FOR DRUG-DEADDICTION IN THE PUBLIC HEALTH FACILITIES

- OOAT is OPD based treatment of substance abusers by empowering Medical officers posted at CHC, drug de addiction centre and rehabilitation centre. The main features of this Programme are the Central digital recording of individual patients along with generation of unique identity number. Unauthorized access of the data is prevented by a three-layer security. Another added feature of this web portal is that it is platform and device independent with minimum bandwidth requirement of 512 kbps. The target population of this Programme are the substance users
- With the implementation of CRS, sharp decline in patient registration for treatment has been noted. The reason behind the decline in number of patients is a removal of duplicate/ghost patients and impact of this system is further visible in consumption of medicines. There is an evidence of 25% decline in expenditure on purchase of medicine too.

OUT-REACH CAMPS IN URBAN AREAS FOR VULNERABLE POPULATION=

- Over a three-year period, increasingly larger heath camps have been organized in urban areas with provisions for screening of the vulnerable and marginalized (including sanitary workers and construction labourers). Those needing further management are referred to neighbouring UPHCs where they are registered on-line to facilitate further follow-up. During year 2017-18, mega camps have been organized by clubbing weekly camps and increasing access to specialists; 3208 camps with 4,60,532 people screened (and an average OPD load of 150-200 per camp) have been organized so far.
- While the camp approach will increase awareness and access for the urban marginalized, concurrent efforts should be made to integrate service access to the health system through routine outreach and service delivery at UPHCs.

UTTAR PRADESH

KANGAROO CARE PROJECT

The UP-Kangaroo Care Project is being rolled in 8 District Women's Hospitals across the state, and 13 community health centres across 4 districts through an implementation research model in close collaboration between the Health department and Community Empowerment Lab as a technical partner.

The key strategies include:

- Expanding ownership beyond conventional stakeholders: building ownership for Kangaroo Care amongst stakeholders across the political leadership administrative system, health system, clinical care providers, public and private health facilities, and community stakeholders.
- Establishing KMC as a social norm: An innovative 'Hug of life' campaign has been launched across the state to spread awareness of KMC, enhance visibility and normalize behaviour.

- Creating KMC lounges to promote mother and baby centric humanized care: setting up beautifully designed spaces within facilities to maximize the comfort of mothers and prolonging their stay to allow for timely initiation and maintenance of lifesaving new-born care practices.
- Technology platform for learning and sharing: participating facilities and providers can learn and share strategies and innovations.
- CSR partnerships for availability of Kangaroo kits: basic supplies for prolonged KMC include cap, mittens, blanket, diapers, etc. that are being made available to all low-birth-weight babies through CSR partnerships

FRU STRENGTHENING THROUGH REGIONAL RESOURCE TRAINING CENTER

Uttar Pradesh has second highest MMR.

- To improve complication management at the tertiary level and to reduce mortality and morbidity related indicators (Case Fatality Rates due to maternal and new-born complications), UP-TSU with support from NHM engaged Medical Colleges as Regional Resource and Training Centres (RRTCs) for training and mentoring of Medical Officers & Specialists in 50 FRUs including district women hospitals located in 25 HPDs. RRTCs supported the FRUs in continued medical education, on site mentoring, and regular supportive supervision.

STRENGTHENING QUALITY OF MNCH DATA UPHMIS

- Use of govt data for Programme review and planning is a key challenge due to poor data quality of HMIS/MCTS, in Uttar Pradesh.
- In order to improve the data quality of HMIS (UPHMIS), UPTSU adopted a strategy where a TSU team (M&E and clinical) works with facility level staff to systematically audit data, identify reasons for data gap, provide on site solutions (if feasible) and prepare action plan for data quality improvement.
- A field team is constituted by TSU to qualitatively understand the reasons for high performance vis-à-vis low performing facilities. The qualitative methods such as in-depth interview and discussion with the facility staff to understand the pathways of change in facilities which improved their performance and those who did not. The initial findings suggest that facility level ownership is one of the factor for improving the data quality.

DIGITAL ASHA PAYMENT

- Uttar Pradesh has over 1.5 lakh ASHAs and despite improvement in payment process for incentives, delays in ASHA payments continue to be a challenge. In addition, the payment processes are impacted by reliance on paper-based systems for reporting and incentive calculations which affects transparency. Paper based data limits detailed analysis and provision of actionable insights. It also makes it difficult to review FMR-wise ASHA incentive disbursement and utilisation, limiting Programmes capacity to review and plan for corrective measures.
- "Block Community Process Managers (BCPM) MIS" was created for standardised mapping of Geographies (District, Blocks, and Villages), Health Facilities (DH, CHC, PHC, SC), and Health Workers (ASHA, ASHA Sangini, ANM, MoIC, BCPM, BAM etc.). The application includes a module to digitize ASHA and Sangini incentive payment process to reduce delays and build transparent payment process.

BCPM MIS – Payment Process
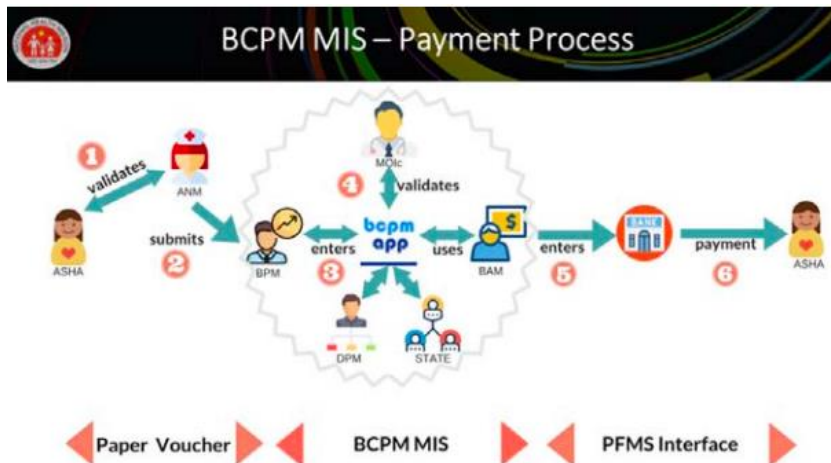
- Since the launch in Oct, 2018, **90% of functional ASHAs are paid incentives by 5th of the following month.** Granular data access has helped improve functionality of ASHAs by 67%. Overall average monthly incentive per ASHA has increased by 35%. Programme dashboard, called Analytica has enabled strategic use of data for physical and financial review and monitoring at state, division, district, and block level, greatly strengthening the programme.

HAUSALA SAJHEDARI: GIVING IMPETUS TO PRIVATE SECTOR ENGAGEMENT FOR FAMILY PLANNING SERVICES

- GoUP rolled out Hausala Sajheedari, a web-enabled e-governance digital platform' in UP that addresses the entire value chain from online application for accreditation, verifications, approvals, online MOU, maintaining digital data of FP beneficiaries by the accredited private providers, to submission of online claim and online reimbursement of claims using PFMS systems of GoI.
- The portal provides real-time information through a simple dashboard for quick stock taking and review of progress and grievances. The model has a robust verification process, which mandates physical verification of the facility to assess infrastructure and assures that mandatory norms defined by the FP sub-Committee of DQAC are met with.
- A strategic purchase model with zero CapEx and the cost of reimbursement is also fixed and decided by NHM-GOI. **This model demonstrates responsible use of public money towards providing the quality family planning services to the marginalized section**

TAMIL NADU

PUBLIC HEALTH CADRE

Public health interventions are delivered by different bottom-top level stakeholders lacking regulatory authority and powers to systematically enforce public health in the state (Parthasarathi & Sinha, 2016). In Tamil Nadu, there is a dedicated Public Health Cadre that works in administrative and management positions and manages the primary health services. A separate, systematically trained Cadre has helped handle stressful situations like tsunami etc Implementation of the practice:

• A fresh medical graduate can join as Municipal Medical Officer (MMO)in the Cadre. Within 4 years of joining, the MMOs can also complete a diploma in public health (from Madras Medical College). MMOs with completion of diploma get regularized and depending on the vacancy can also be promoted to the Deputy Director level.

• Three categories of such posts are – a) district level officer to head primary health services b) principal of training institutes c) faculty in the community medicine department in medical colleges 40 Further, with an MD degree, career progression may include working in medical colleges or field services. The promotions can reach further up to the director through joint director and additional director posts Invalid source specified.

• There are also incentives for working in rural areas, such as:
o Allowance for working in rural areas is INR 1000 per month.
o Residential accommodation is provided to the medical officers in majority of the cases.

Results of practice

1. Better health outcomes without high expenditure on health- Tamil Nadu without spending more than the national average on health has been the state with one of the best health indicators. Kerala also with better health outcomes, in contrast, has public health expenditure more than the national average and private expenditure more than twice of the national average (Kumar, Bothra, & Mairembam, 2016)

2. Disaster Management- Cadre adopts annual pre-emptive planning for responding to potential natural disasters such as floods and cyclones. This ensures that when catastrophic disasters like the tsunami of 2004 strike, the state has the internal preparedness to deal with them

"MAKKALAI THEDI MARUTHUVAM" (MTM) SCHEME

It is a flagship program of Government of Tamil Nadu offering holistic and comprehensive set of "Home Based Health Care Services" to ensure continuum of care, sustainability of the services and also meet the health needs of beneficiaries in the family as a whole.

TRANSGENDER CLINICS

To cater to the specific needs of Transgender people, Government has established Multi-Specialty Transgender Clinics at Rajiv Gandhi Government General Hospital, Chennai and Government Rajaji Hospital, Madurai. The Multi-Specialty Transgender Clinic at RGGGH, Chennai runs every Friday.

Now in order to further improve the accessibility of transgender services in other parts of the State, Hon'ble Health Minister has announced in the floor of the Assembly (2019-20) that Multi-Speciality clinic for transgender will be established in 3 Government Medical College Hospitals at a cost of Rs.60 lakhs

SCHOOL HEALTH PROGRAMME -VAZHVOLI THITTAM

The Vazhvoli Thittam (Thursday school health programme), funded by the State Government, is also used for conduct of adolescent clinics. The staff who are involved in this programme will be sensitized towards adolescent friendly health services. The following services are being provided during the school health programme visits currently :

- T.T immunisation
- IFA distribution
- Nutrition   counselling

The Scheme is currently being implemented in all the 31 Districts (42 HUD's) of the State.

CADAVER TRANSPLANT PROGRAMME AND TISSUE TRANSPLANTS[22]

The Cadaver Trasnplant programme was started in 2008. In order to further streamline the programme the Transplant Authority of Tamil Nadu was set up in 2014. It functions as the Regional Organ and Tissue Transplant Organisation (ROTTO) and State Organ and Tissue Transplant Organization since 2015.

Its functions include streamlining all procedures related to Cadaver and living organ transplantation, helping hospitals identify brain stem death, distributing organs in a transparent manner, maintaining an online waitlist registry, improving capacity related to donor maintenance, helping hospitals in medico-legal procedures, liasing with police on providing Green Corridor for transport of organs, compiling state and regional database and liasing with GoI. The registry is available publicly online ensuring transparency.

The programme provides a methodology to help cope with the shortage of donors which is an acute problem throughout the country.

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22 *NHM Book accessed here: https://nhm.gov.in/images/pdf/in-focus/MP/Day-1/Coffeetable_Book.pdf*

Categorisation of waste from HCWs
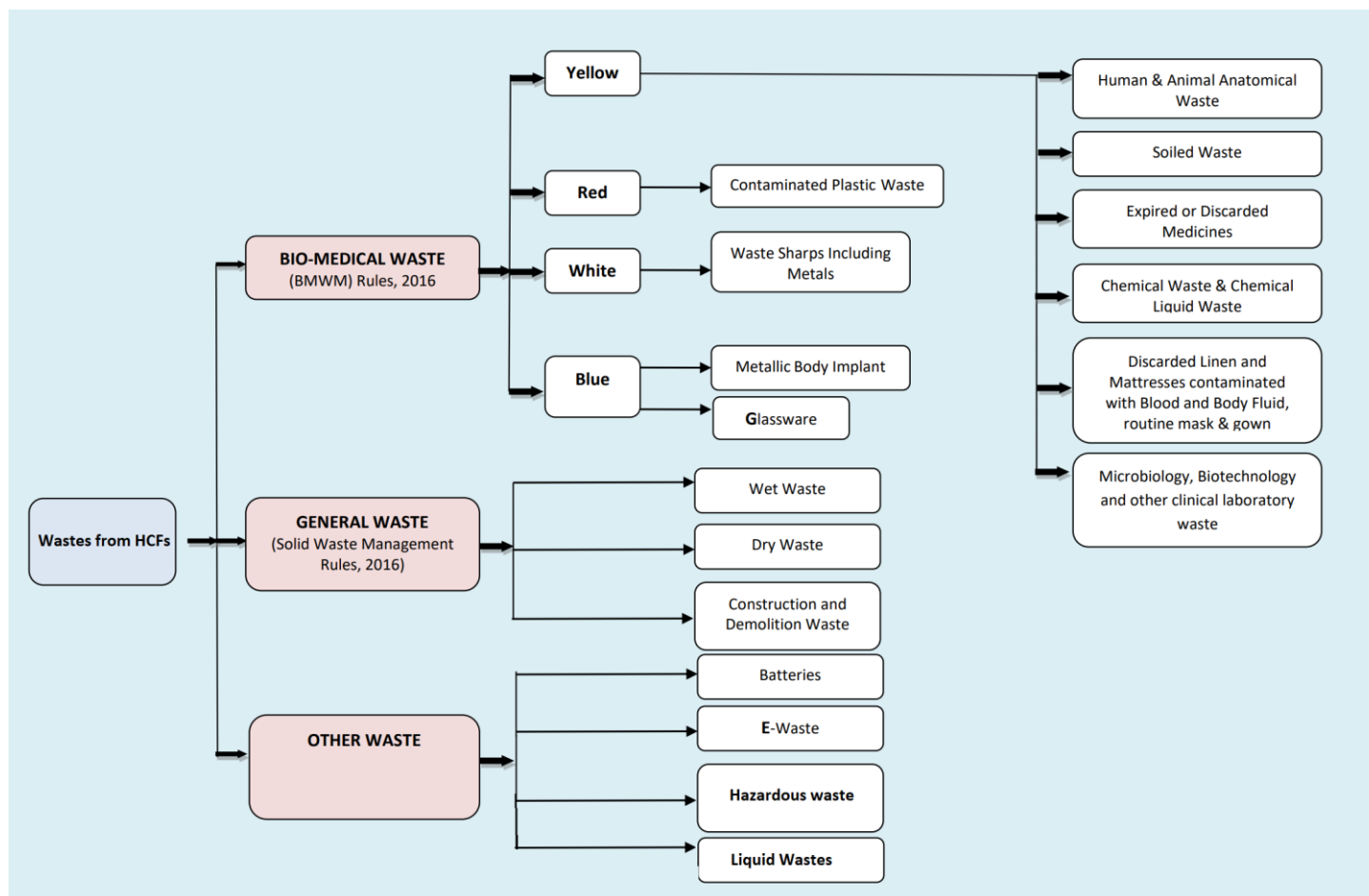
All health care facilities are required to obtain consent to establish (CTE) and/or consent to operate (CTO) under the purview of the Air Act and the Water Act; and authorization under the purview of the BMWM Rules from the respective state pollution control board (SPCB). The consents provided by the SPCB to the health care facilities incorporate the requirements of the BMWM Rules pertaining to BMW and liquid waste. This ensures that no health care facility is operational without having the requisite infrastcrture and human resource capacity to manage BMW.
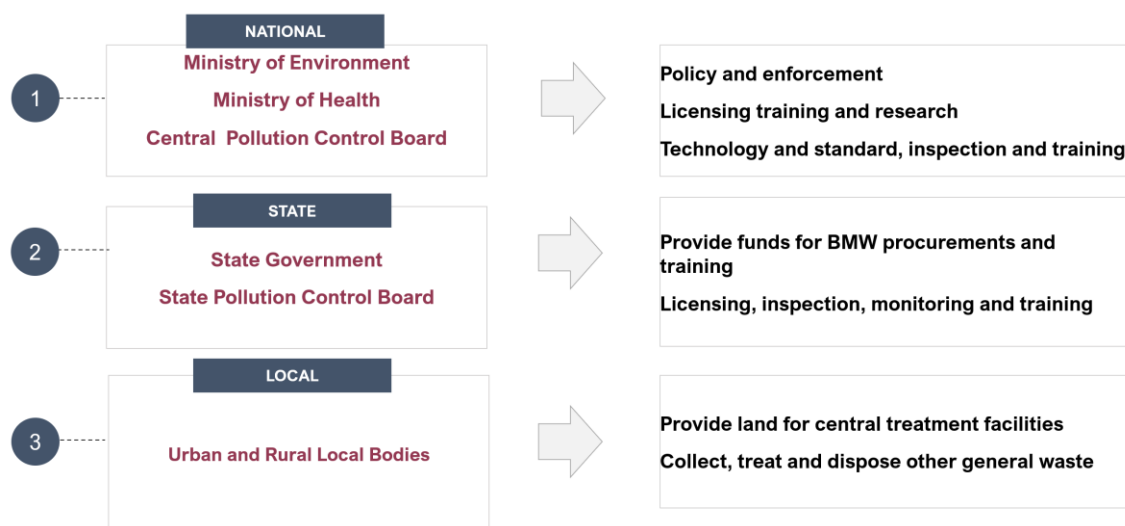
Figure 5 Roles and Responsibilities for BMW management

Responsibility and accountability under the BMWM rules is also clear, HCFs having 30 beds or more shall have **Quality Team/ Infection Control Committee/ Bio Medical Waste Management Committee** and HCFs having less than 30 beds should designate **Bio Medical Waste Supervisor.** It is the overall responsibility of the in charge of the HCF to take all necessary steps to ensure that bio-medical waste is handled without any adverse effect to human health and the environment and in accordance with the rules.

Responsibilities of Healthcare facilities under BMWM Rules

❖ The five steps (Segregation, Collection, pre-treatment, Intramural Transportation and Storage) is the exclusive responsibility of Health Care Facility. While Treatment and Disposal is primarily responsibility of CBWTF operator except for highly infectious waste, which is required to be pre-treated by the HCF.

❖ Each Healthcare facility should ensure that there is a designated central waste collection room situated within its premises for storage of bio-medical waste, under lock & key.

❖ All the bags/ containers/ bins used for collection and storage of bio-medical waste, must be labelled with the Symbol of Biohazard or Cytotoxic Hazard and provided with bar code labels in accordance with CPCB guidelines for "Guidelines for barcode System for Effective Management of Biomedical Waste".

❖ Every healthcare facility needs to maintain the records w.r.to category wise bio-medical waste generation and its treatment disposal (either by captive facility or through CBWTF) on daily basis.

❖ Records on bio-medical waste management and accidents submitted to SPC annually

❖ Records shall be maintained on training on BMW Management, and immunization of healthcare workers including both Induction and in service training records.

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. The environmental 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.

MONITORING AND REPORTING BY HEALTH DEPARTMENT ON EHS (UNDER NHM)

Systems for monitoring of HCFs are well-defined with clear institutional responsibilities outlined at every level – PHCs, CHCs, District, Divisional and State. Monitoring is through field visits, Health Management Information Systems (HMIS) and review meetings. The aspects to be monitored at every level are specified (in the form of model checklists) and include infrastructure, bio-medical waste management and infection control under National Health Mission.

Table 17 Monitoring of EHS Aspects in HCFs under NHM

	SC	*PHC/CHC* *(non First Referral Unit)*	*PHC/CHC* *(First Referral Unit)*
Infrastructure	Building in good condition Electricity with functional power backup Running 24*7 water supply Functional and clean toilet attached to labor room General cleanliness in the facility Availability of deep burial pit for waste management or any other mechanism	Building in good condition Electricity with functional power backup Running 24*7 water supply Clean toilets separate for Male & Female Functional and clean toilet attached to labor room Clean wards Availability of mechanisms for waste management	Building in good condition Electricity with power backup Running 24*7 water supply Clean toilets separate for Male & Female Functional and clean toilet attached to labor room Clean wards Availability of mechanisms for bio-medical waste management (BMW) BMW outsourced
Training	-	-	Infection Management and Environment Plan (IMEP)
Equipment	Needle and Hub cutter Color coded bins	Functional Needle Cutter	Functional Needle Cutter
Quality parameters	Adherence to IMEP protocols Segregation of waste in color coded bins	Adherence to IMEP protocols Segregation of waste in color coded bins	Adherence to IMEP protocols Segregation of waste in color coded bins Manage bio-medical waste

MONITORING AND REPORTING BY POLLUTION CONTROL AGENCIES ON EHS (UNDER NHM)

The system for monitoring management of bio-medical waste is well defined and the implementation is streamlined. The Biomedical Waste Management Rules, 2016 stipulate that every HCF and operator of Common Bio-medical Waste Treatment Facility (CBWTF) must submit the annual report to concerned State Pollution Control Board (SPCB). This format is provided in the Guidelines for Management of Healthcare Waste as per Biomedical Waste Management Rules, 2016.

Further, SPCBs compile and submit the annual report information to the Central Pollution Control Board (CPCB) for the preceding year before 31 July of every year. The CPCB compiles, reviews and analyzes the annual data submitted by SPCBs and submits the same to the MoEF&CC[23]. The reports are publicly available on the website of the CPCB. The CPCB has identified 12 Key Performance Indicators to assess states with respect to effectiveness in monitoring, ensuring compliance and implementation of Biomedical Waste Management Rules, 2016. The indicators are listed below.

1. Inventory of all HCFs and bio-medical waste generation.
2. Authorization to all HCFs including non-bedded HCFs.
3. Facilitate setting-up adequate number of CBWTFs to cover entire state or all HCFs.
4. Constitution of State Advisory Monitoring Committee and District Level Monitoring Committee.
5. Implementation status of barcode system.
6. Monitoring of HCFs other than hospitals/clinics such as Veterinary Hospitals, Animal Houses, AYUSH Hospitals, etc.
7. Monitoring infrastructure of SPCBs.
8. Training and Capacity Building of officials of SPCBs and HCFs.
9. Installation of Online Continuous Emission Monitoring Systems (OCEMS) by CBWTFs as a self-monitoring tool and transmission of data to servers of SPCBs/CPCB.
10. Preparation of Annual Compliance Status Reports.
11. Compliance by CBWTFs (emission/discharge standards, barcoding, proper operation, etc.).
12. Compliance by HCFs (segregation, pre-treatment, on-site storage, barcoding and other provisions etc.).

STAFF CAPACITY IN SC AND PHC

The HWC at the SC is staffed by a team, comprising of a Mid-Level Health Provider / Community Health Officer, 1-2 Multi-Purpose Health Workers (MPW) commonly known as Auxiliary Nurse Midwife (ANM), and 5 Accredited Social Health Activists (ASHAs) for outreach. PHCs upgraded to HWCs are staffed by the regular staff of the PHC (1 MBBS doctor, 1 staff nurse, 1 pharmacist, 1 lab technician, 1 Lady Health Visitor). In urban areas, other than U-PHC staff, the team consists of the MPW-F (for 10,000 population) and the ASHAs (one per 2500 population). PHCs have provision for a **sanitary worker**[24] who is the frontline worker engaged in maintenance of cleanliness and management of waste in the HCF. SCs do not have a designated worker but may hire local workers for maintenance of cleanliness and management of waste in the HCF. HCFs having 30 beds or more shall have **Quality Team/ Infection Control Committee/ Bio Medical Waste Management Committee** and HCFs having less than 30 beds should designate **Bio Medical Waste Supervisor.**

CURRENT FUND AVAILABILITY

Each SC is provided with an untied grant of INR 10,000 per year. Guidelines for use of these funds specify that it may be used for the following purposes:

▶ Minor modifications to SC – curtains to ensure privacy, repair of taps, installation of bulbs, other minor repairs, which can be done at the local level
▶ Ad hoc payments for cleaning up SC, especially after childbirth.
▶ Purchase of bleaching powder and disinfectants for use in common areas of the village.
▶ Labor and supplies for environmental sanitation, such as clearing or larvicidal measures for stagnant water.

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23 *Annual Report on Bio-medical Waste as per Bio-medical Waste Management Rules 2016 for the year 2019. CPCB.*

24 *Indian Public Health Standards (IPHS). Guidelines for Primary Health Centers. 2012.*

Each PHC is provided with an untied grant of INR 25,000 per year and an annual maintenance grant of INR 50,000 per year. The annual maintenance grant is to be utilized for improvement and maintenance of physical infrastructure – with priority to provision of water and maintenance of toilets. Suggested areas for use of untied grants include the following (in addition to the areas listed for the SC untied grant) provision of running water supply; provision of electricity; purchase of bleaching powder and disinfectants for use in common areas; repair/operationalizing soak pits.

TRAINING

National level initiatives: The CPCB organizes training programs on bio-medical waste management for Public Health Departments, Hospitals, CBWTFs, etc. The National Institute of Occupation Health (NIOH) through its head office and regional offices organizes training programs on occupational health and safety for medical professionals – this includes ongoing trainings on Basic Occupational Health and Safety among primary health care physicians to improve state capacity on occupational health and safety at the primary level

State level initiatives: The State Pollution Control Boards (SPCBs) organize training programs on bio-medical waste management for HCFs. The most recent available annual reports of the SPCBs in the Program states report that the following training programs were conducted: Andhra Pradesh (248 training programs in 2017), Odisha (22 training programs in 2019), Punjab (122 training programs in 2018), Tamil Nadu (87 training programs in 2019). There is, however, no information on the number of HCFs that are yet to be trained, and the action plan for the same. Training materials on bio-medical waste management have also been developed by the SPCBs. For example, in Uttar Pradesh, under the World Bank supported Uttar Pradesh Health System Strengthening Project, IEC material and training modules were developed, and division-level sensitization workshops were conducted Similarly, in Odisha, a manual on bio-medical waste management was developed under the UNIDO supported project 'Environmentally Sound Management of Medical Wastes in India' (2011-2019).

CBWTF and HCF level initiatives: CBWTFs as per the BWM Rules 2016 are supposed to provide training for all its workers involved in handling of bio medical waste at the time of induction and thereafter at least once every year, and also assist the HCFs in training conducted by them for bio-medical waste management. HCFs are required to provide training to all their health care workers and others involved in handling of bio medical waste at the time of induction and thereafter at least once every year. The HCFs are required to provide details of training programs conducted, number of personnel trained, and number of personnel not trained in their Annual Reports. The recent trainings by HCFs in the Program states are as follows: Andhra Pradesh (238 training programs in 2017), Odisha (7 training programs in 2019), Punjab (1164 training programs in 2018), Tamil Nadu (719 training programs in 2019).

IMPLEMENTATION RESOURCES

This section provides details on the institutional resources for management of bio-medical waste, infection control, worker health and safety and infrastructure.

Bio-medical Waste Management: As per the CPCB's annual report for 2019, the bio-medical waste generated by 322,425 HCFs in the country amount to 619 tons/day – of which 544 tons/day was treated by 202 CBWTFs and by 18,015 captive treatment facilities of HCFs. The remaining 74 tons/day is assumed to be disposed through deep burial pits.

As per the Rural Health Statistics 2019, 46 percent of HWC-SCs practice deep burial for bio-medical waste. While 79 percent of rural HWC-PHCs and 65 percent of urban HWC-PHCs have provision for bio-medical waste management – the details of this 'provision' are not available, and it is of concern that 21 percent of rural HWC-PHCs and 35 percent of urban HWC-PHCs have no provision for bio-medical waste management depend on in-situ treatment and disposal mechanism.

The CBWTFs in the country are operating at cumulative treatment and disposal capacity of 1200 MT/day. Considering the present bio-medical waste generation of 619 MT/day, this may look adequate – however, there are variations in CBWTF capacity utilization by states In the Program states of Kerala, Odisha and Tamil Nadu, the capacity utilization of existing CBWTFs has exceeded 75% indicating the need for augmenting capacity to meet future needs. Stakeholder consultations revealed that all states are planning ahead to expand coverage of CBMWTFs and ETPs.

Table 18 CBMWTF utilized in the project states

	State	BMW generation (Tons/day)	No of CBWTFs	BMW Treatment (Tons/day)	Authorized Capacity CBWTF	Capacity utilized
1	Andhra Pradesh	15.1	12	15.1	44.4	34%
2	Meghalaya	1.2	1	1.2	0.8	Meghalaya is largely rural hilly terrain , and needs to explore decentralised waste management options
3	Odisha	18.0	5	17.4	14.9	6 new CBMWTF are planned
4	Tamil Nadu	58.3	8	58.3	72.9	80%
5	Uttar Pradesh	52.5	18	52.5	91.3	58%
6	Kerala	42.9	2	40.3	48	84%
7	Punjab	16.05	5	16.05	29.1	55%

As per BMWM rules, every CBWTF with incinerator facility is required install online continuous emission monitoring system (OCEMS) and report the real time emission data to SPCB and CPCB servers. As per status report, 75% of CBWTFs have installed OCEMS systems. States namely Andhra Pradesh, Assam, Chandigarh, Delhi, Haryana, Himachal Pradesh, Puducherry, Punjab, and Telangana, have ensured data transfer from all CBWTFs in respective States. One or more CBWTFs in the States namely Bihar, Chhattisgarh, Gujarat, Jharkhand, Jammu & Kashmir, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, 10 Uttarakhand, Uttar Pradesh and West Bengal have yet connected with CPCB server. None of the CWBTFs in Odisha have installed OCEMS. As per information available at CPCB OCEMS server, about 153 out of 202 CBWTFs have installed OCEMS analysers and transmitting data to CPCB server.

Infection Control: Infection control practices in PHCs and SCs need strengthening. A recent study[25] on PHCs' preparedness for outpatient service provision during the COVID-19 pandemic found that infection control deficits

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[25] Garg S, Basu S, Rustagi R, Borle A. Primary Health Care Facility Preparedness for Outpatient Service Provision During the COVID-19 Pandemic in India: Cross-Sectional Study. JMIR Public Health Surveill. 2020;6(2):e19927. Published 2020 Jun 1. doi:10.2196/19927. V

stemmed from issues in infrastructure, facility provision and practice. The deficits included limited physical space and queuing capacity, lack of separate entry and exit gates (49 percent), inadequate ventilation (57 percent), inadequate facilities for hand washing (24 percent) and hand hygiene (27 percent). Airborne infection control measures were reported to be absent in 76 percent of sites, but chemical disinfection was being undertaken at most (82 percent) sites. Another study undertaken as part of the preparatory phase of the Bank supported Andhra Pradesh Health System Strengthening Project (P167581, 2019-2024) corroborates these findings – it found that District Hospitals, Areas Hospitals and CHCs perform better on infection control measures such as mechanism for decontamination, hand washing, use of protective equipment and handling of sharps – while PHCs and SCs require further strengthening on these areas.

Worker Health and Safety: The primary study undertaken as part of the preparatory phase of the Bank supported Andhra Pradesh Health System Strengthening Project (P167581, 2019-2024) found that worker health and safety measures are relatively better in District Hospitals and Area Hospitals and need to be strengthened in CHCs, PHCs and SCs.

The infrastructure improvements planned as part of the up gradation of SCs to HWCs include well-ventilated clinic room, separate toilets for males and females, assured water and electricity supply, proper system for drainage, and deep burial pit for biomedical waste management, repairs of roofs and walls as well as tiling of floors as per requirement, rainwater harvesting facility as per requirement[26].

The concerned Block Medical Officer and a representative from the Engineering wing at the district level undertake a joint site inspection and gap analysis for repair/renovation in existing SC and PHC buildings. The analysis is based on the requirements stated in the preceding paragraph[27]

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26 _MoFHW. May 2017. Viewed at https://www.google.com/search?q=Indicative+Costing+for+HWCs&ie=utf-8&oe=utf-8&client=firefox-b on 16 April 2021._

27 _MoFHW. May 2017. Viewed at https://www.google.com/search?q=Indicative+Costing+for+HWCs&ie=utf-8&oe=utf-8&client=firefox-b on 16 April 2021._

ANNEX 8: LAND MANAGEMENT SCREENING CHECK LIST

FOR PRELIMINARY ASSESSMENT OF HEALTH CARE FACILITIES: To be issued as guidance by MoHFW to states

(This screening format needs to be filled under the guidance of health care facility in-charge i.e. Medical Superintendent for District/Regional Hospitals and/or Medical College Hospitals, Medical Officer for CHCs and PHCs, and the ANM for the SCs to rule out any adverse social impacts due to program intervention.)

1	Name of the District	
2	Name of the Block	
3	Name of the Health Facility	
4	Category of health facility	
5	Requirement of Land for any construction beyond exiting land available with the health facility	Yes/ No (If Yes, give details below; In case No – Q.6 to Q.11 are not applicable)
6	Is the site identified for the proposed activities under the program	Yes/ No (If Yes, give details below)
7	Area Required (specify unit – acres/ sq.mt/ sq.ft. etc.)	
8	Type of Land and ownership details	

9	Currently in possession of	
10	Number as per land record	
11	Is there a need to acquire the land for proposed activities	Yes/ No If No, go to Q.No. 13
12	Proposed mechanism for acquiring the land	Through Land Acquisition Process/ Direct Purchase/ Lease/ Other mechanism (specify)
13	Are there any squatters living on the land proposed	Yes / No (If Yes, give details below)
14	Are there any commercial structures on the land proposed	Yes/ No (If Yes, give details below)
15	Is the land being used as common property resources - such as water supply structure; sanitation structures; power supply infrastructure etc. or approach way	Yes/ No (If Yes, please write details about the structure and its use by local residential/ commercial/ institutions)

16	Is there any encroachment or any claim on the proposed land	Yes/ No (If yes, give details of from when and what kind)
		If Yes, report to TNHSP-PMU for necessary action
17	Any other specific information related to land	Give details
18	Is the photograph of the additional construction site/ land enclosed	Yes/ No
19	Does the proposed activities require any land acquisition as per point #11 above	Yes/ No
		If Yes, Report to TNHSP-PMU for necessary action
20	Has there been any 'Yes' answer to any of the screening point # 13,14 and 15 above	Yes/ No
		If Yes, Report to TNHSP-PMU for necessary action

Officer In charge for preliminary screening   **In-charge of Health care facility**

Name…………………………….   Name: …………………………

Designation: …………………….   Designation: …………………….

Phone No. ……………………..   Phone No. ……………………..

Signature ………………………   Signature………………………..

Date: …………………………….   Date: …………………………….

ANNEX 10 ENVIRONMENT REGULATORY PLANNING CHECKLIST

This checklist is recommended for HCWs undertaking refurbishment activities in areas with sensitive environmental receptors.

Sl. No.	Key Question	Answer		Risk Category	Due diligence/ Actions
		Yes	No		
1	Is there any risk/ impact/ disturbance to forests and/ or protected areas because of subproject activities?				If yes, the selected site/ interventions should be avoided.
2	Is the health facility within 100 meters of any cultural, historic, religious site/ buildings under Archaeological Survey of India (ASI)?				If yes, the selected site/ interventions should be avoided*27*.
3	Is the health facility between 100 - 200 meters of any cultural, historic, religious site/ buildings under ASI?				If yes, due permission to be taken from ASI for any construction. Where there is no impact, chance finds procedures would be applicable and ASI norms would need to be followed.
4	Does the subproject involve additional land for upgradation/ expansion and/ or new construction through land acquisition or direct purchase and/or restrictions on land use?				If yes. This cannot be supported by the project. Alternate options to be explored.
8	Does the subproject require shifting of any common property resources (CPRs) -				Adequate provision to be made for shifting of the CPR along with proper coordination with respective

	such as water supply structure; sanitation structures; power supply infrastructure etc. or approach way				departments and consultations with local users of the CPR/ community.
9	Is there civil works/ building rehabilitation envisaged at the facility which will involve the following: ☐ Increase in dust and noise from demolition and/or construction ☐ Generation of construction waste ☐ Impacts on accessibility to the facility ☐ Excavation impacts and soil erosion ☐ Increase sediment loads/wastewater discharges in receiving water ☐ Removal and disposal of toxic and/or hazardous substances27 ☐ Increase in soil erosion or changes in local drainage pattern				If yes, an Environment and Social management and monitoring plan to be prepared and shall include among other things: • All legally required permits (to include not limited to resource use, dumping, sanitary inspection permit) have been acquired for construction and/or rehabilitation. • Address Occupational Health & Safety (OHS) and Community Health & Safety measures during construction • Measures addressing pollution and waste management during civil work. • Use screens or nets to avoid flying debris and dust and use of regular water sprays to suppress dust • Hazardous waste separated from non-hazardous waste on site and disposed off to designated sites • Measure and report noise (decibel) levels regularly • Manage oil leaks/spills from heavy machinery • The worksite site will establish appropriate erosion and sediment control measures to prevent

					sediment from moving off site and causing excessive turbidity in nearby streams and rivers. And keep all drains clear of silt and debris.
13	Will the facility be connected to a formal wastewater disposal and treatment system?				If no, then adequate provision of septic tank and soak pit will need to be made
14	Is there adequate provision of clean water and sanitation services at the facility?				If no, specify the mitigation measures to be adopted to provide adequate supply of potable drinking water.
15	Is there adequate STP-ETP/ Soak Pit if facilities are not connected to the municipal wastewater scheme?				If No, adequate wastewater treatment and disposal systems, such as package treatment plants and chlorination, where appropriate for the size, capacity, and services offered at the health facilities.
16	Is BMW being suitably segregated? (this includes clinical waste, sharps, pharmaceutical products, cytotoxic and hazardous chemical waste, radioactive waste, organic domestic waste, non-organic domestic waste)				If No, then specify the on-site measures/ equipment needed for waste segregation and follow CPCB guidelines on (i) Guidelines for Management of Healthcare Waste as per Biomedical Waste Management Rules, 2016 (and amendment 2018) (ii) Guidelines for Bar Code System for Effective

					Management of Bio-medical Waste
17	Is the HCF connected to a CBMWTF?				If No, then specify the on-site measures for waste disposal.
18	Are appropriate colour coded Bins/ bags provided for bio-medical waste disposal?				If no, specify how consumables will be provided at HCF level, and follow CPCB Guidelines for Bar Code System for Effective Management of Bio-medical Waste
19	Is there SOP to manage accidents/ spills at HCF level including mercury				Develop SOP for accident management and systems for reporting and recording: i. Occupational accidents and diseases ii. Dangerous occurrences and incidents iii. These systems should enable workers to report immediately iv. Follow CPCB guidelines on management of mercury. *27*
20	Are healthcare and sanitation workers provided with necessary and appropriate health screening, precautionary measures and immunizations?				If no, ensure the following practices are implemented: i. Yearly health screening of all HCF and Sanitation staff ii. Immunization for staff members as necessary (e.g. vaccination for hepatitis B virus, tetanus) iii. Provisions of gloves, masks, and gowns iv. Adequate facilities for hand washing are available. If hand washing is not possible, appropriate antiseptic hand cleanser and clean cloths / antiseptic

					towelettes should be provided.
					v. Adequate procedures and facilities for handling dirty linen and contaminated clothing
21	Does the facility have appropriate fire safety evacuation, and signage ?				If No, please refer to 'Occupational Health and Safety' in the WBG General EHS Guidelines Additional recommendations for fire safety include: i. Installation of smoke alarms and sprinkler systems ii. Maintenance of all fire safety systems in proper working order, including ventilation ducts, escape doors. iii. Training of staff for operation of fire extinguishers and evacuation procedures iv. Development of facility fire prevention or emergency response and evacuation plans with adequate guest information (this information should be displayed in HCF main locations and clearly written in relevant languages).

In-charge of Health care facility (MS/ CMO)

Name…………………………………………

Designation: …………………………………

Phone No. ……………………………

*To be updated during appraisal *