

ASSAM STATE SECONDARY HEALTHCARE
INITIATIVE FOR SERVICE DELIVERY
TRANSFORMATION (ASSIST) PROJECT (P179337)

Environmental and Social Management
Framework (ESMF)

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ABBREVIATIONS AND ACRONYMS

ADC	Autonomous District Council
ANM	Auxiliary nurse midwife
ASHA	Accredited social health activist
BMW	Bio-medical Waste
CBWTF	Common Biomedical Waste Treatment Facility
CERC	Contingent Emergency Response Component
CHC	Community Health Centre
CMO	Chief Medical Officer
DH	District Hospital
DOHFW	Department of Health and Family Welfare
E&S	Environmental and Social
ESF	Environmental and Social Framework of World Bank
ESMF	Environmental and Social management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Standard
FPIC	Free, Prior, and Informed Consent
GBV	Gender Based Violence
GoI	Government of India
GoA	Government of Assam
GRM	Grievance Redress Mechanism
HCF	Health Care Facility
HR	Human Resource
HWC	Health and Wellness Centre
ICT	Information and communication technology
IEC	Information, Education, and Communication
IPA	Internal performance agreement
IPF	Investment Project Financing
IPM	Internal Performance Management
IT	Information Technology
MMR	Maternal Mortality Rate
MO	Medical Officer
MOHFW	Ministry of Health and Family Welfare
NCD	Non-communicable diseases
NGO	Non-governmental Organization
NHM	National Health Mission
NQAS	National Quality Assurance Standards
OHS	Occupation and Health Safety
OOPE	Out-of-pocket expenditure
OSC	One Stop Centre
PDO	Project Development Objective
PHC	Primary Health Centre
PMU	Project Management Unit
PPE	Personal Protective equipment
PPP	Public Private Partnership
RKS	Rogi Kalyan Samiti
SBCC	Social and Behaviour Change Communication
SC	Sub-Centre
SEA/SH	Sexual exploitation and abuse/Sexual harassment
SEP	Stakeholder Engagement Plan
SOP	Standard Operating Procedure
WCD	Women and Child Development

Assam State Secondary Healthcare Initiative for Service Delivery Transformation (ASSIST) Project

Environmental and Social Management Framework Executive Summary

The World Bank is planning to provide support to the Government of Assam (GoA) for strengthening the public health system in the state. The project development objective (PDO) of Assam State Secondary Healthcare Initiative for Service Delivery Transformation (ASSIST) is “To strengthen management capacity, access, and quality of the secondary healthcare system in Assam”. The ASSIST combines results- and input-based financing approaches to improve management capacity, utilization, and quality of the public health sector. The project is supported by an IBRD loan in the amount of US\$ 251.03 million using an investment project financing (IPF) instrument structured in three components: (i) Component 1: Strengthened management capacity of health systems at state, district, and facility level. This component will strengthen management capacity of the secondary healthcare system in the state through (a) a results-based financing approach aligning incentives to augment management, planning, and technical capacity of all directorates servicing the health sector together with (b) input-based technical support on: (a) HRH strategy and management framework and reforms in pre-service education to improve numerical adequacy, fair distribution, skill mix, capacity, competence, and motivation of secondary level healthcare providers and (b) monitoring and supervision of civil works being planned in the project. (ii) Component 2: Improved access to and quality of essential services in existing secondary facilities. This component will improve access to and quality of essential health services in existing district hospitals inclusive of community engagement, HRH placements and infrastructure renovations, and introduce innovations in these DHs. (iii) Component 3: Enhanced access to and structural quality of secondary care. This component will invest in upgradation of up to 10 facilities to district hospitals to further enhance access and structural quality of secondary care in the state, and together with renovations of existing facilities proposed in component 2, will improve availability of functional secondary care infrastructure in the state.

The Assam Health Infrastructure Development and Management Society (AHIDMS) will be responsible for the implementation of the project and hence designated as the State Project Management Unit (SPMU). The project governance structure will include: (i) Project Steering Committee chaired by the Chief Secretary to oversee overall project implementation, and (ii) Executive Committee, headed by Principal Secretary (Health and Family Welfare). A cadre of Hospital Managers will be hired for each district hospital for overall management and implementation of project activities at the district level. There are multiple implementing agencies under the Project: (a) DHS and NHM are responsible for managing secondary-level health facilities, human resource allocation and ensuring quality of care across facilities [Component 1 and 2]; (b) DHS-FW and DME are responsible for planning, monitoring, and management of nursing cadre and pre-service education for nursing [Component 2 and 3]; and PWD, NHM and DHS will coordinate overall infrastructure development for secondary health care [Component 3]. Finally, AAAs and ASMCL which are responsible for health financing and medical supplies will lead the efforts to create enabling environment for improved access to an expanded scope of health services.

The project will finance infrastructure investments pertaining to upgradation of up to 10 community health centres (CHCs) and sub-district hospitals (SDHs) to district hospitals (DH) [Component 3] including repairs and renovations of 25 existing secondary facilities and minor infrastructure investments in nursing colleges attached to district hospitals [Component 2].

The Environmental and Social Management Framework (ESMF) prepared offers guidance for identification of E&S risks and mitigation measures, including preparation of site-specific ESMPs for

sub-projects at the time of detailed design/DPR preparation, prior to the bidding process. This ESMF has been prepared in accordance with all relevant World Bank Environmental and Social Standards (ESSs), Policies, Guidance Notes, WBG EHS (Environmental, Health, and Safety) guidelines, and the Government of India, Assam State and Local Government relevant regulations, Acts, laws, standards and guidelines. A participatory and consultative approach has been adopted to prepare the ESMF. The methodology involved desk review of secondary information, along with discussion and consultation with various stakeholders as well as through visit to a sample of HCFs by WB E&S team, and collection of baseline information from sample health facilities through a screening checklist. The consultations with stakeholders mainly covered aspects of health service delivery, related biomedical waste management (BMWM) practices, and role of community in improving health services.

An Environment and Social Commitment Plan (ESCP), Labor Management Procedures (LMP) and a Stakeholder Engagement Plan (SEP) have also been prepared and will be agreed and disclosed at the AHIDMS website locally in Assam and on the World Bank's external website. The ESMF, LMP, SEP and ESCP may be updated as required during the implementation of the project when the wider stakeholder consultations are conducted.

Based on the identified potential environmental and social risks and impacts, the project's overall E&S risk is "Substantial" wherein "Substantial" for environmental risks and 'Moderate' for social risks.

The environmental risk for the project is rated as Substantial. The key environmental health and safety risks in the construction phase are attributed to rehabilitation and upgradation works supported by the project under Component 3 (upgradation of 10 CHCs and SDHs to DH) associated with repairs and renovations of 25 existing secondary facilities and minor infrastructure investments in nursing colleges attached to district hospitals [Component 2]. Construction activity gives rise to temporary and localized impacts such as generation of debris, dust, noise, water pollution, and potential accidents which all need to effectively be prevented or minimized, through good mitigation measures and design. During the operational phase, bio medical waste and wastewater disposal, infection control, worker health safety, and life and fire safety are key risk areas relating to the functioning of the healthcare facilities supported under the project. The improved uptake of health services will result in increased volumes of bio-medical waste and liquid wastewater for safe management and disposal issues and worker health safety. This will entail augmenting the existing low capacity of institutions tasked with management of the environmental and social activities under the project as well as supervision for compliance with E&S management requirements of WB financed projects.

The social risks are rated as Moderate and are pertaining to (i) upgradation, repairs and renovations works as specified above; and (ii) activities related to systems improvement (performance management standards, demand-side interventions and increasing of human resources). The anticipated risks are (a) temporary disruption/delay of health services due to change in location of existing medical facilities (to nearby areas) during upgradation of CHC/SDH to DH and repair and renovation of existing DHs, (b) temporary relocation of staff accommodation in the vicinity (if any), (c) impact on workers' and communities' health and safety during construction related activities, (d) insufficient systems to address OHS related issues such as SEA/SH and discrimination at the workplace in the health sector, (e) inadequate systems to include vulnerable populations (women/SC/ST/BPL) from receiving project benefits, and (f) weak grievance redressal mechanisms. No new land acquisition is expected under the project.

The project's negative list eliminates activities resulting in acquisition of private lands or physical relocation and posing significant risks to indigenous communities or requiring free prior informed consent (FPIC). To manage E & S risks, the client capacities will be bolstered during implementation through recruitment of qualified staff and capacity building to fulfil ESF requirements and manage

mitigate environmental and social risks of the project. Social and environment risk will be mitigated by clearly defining monitoring compliances provided in the ESMF, IPPF, SEP, LMP and ESCP.

Seven out of ten World Bank Environment and Social Standards (ESSs) are considered ‘relevant’ to the project. The relevant E&S standards are: ESS1 - Assessment and Management of Environmental and Social Risks and Impacts, ESS2 - Labor and Working Conditions, ESS3 - Resource Efficiency and Pollution Prevention and Management, ESS4 - Community Health and Safety, ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, ESS8: Cultural Heritage and ESS10 - Stakeholder Engagement and Information Disclosure.

This ESMF is exhaustive and covers all the critical aspects for managing the potential environmental and social risks of the project. The ESMF includes an analysis of the national/subnational legal and regulatory framework, an environmental and social baseline, screening checklists for risk categorization of subprojects, negative list of investments, due diligence procedures and processes, mitigation actions with responsible agencies against each action and provides procedures relevant to the development of the subprojects, a generic Environmental and Social Management Plans (ESMP), and further guidance for developing the Bio-Medical Waste Management Plan (BMWMP) (Annex-II), and the Labor Management Procedure (LMP) in accordance with the World Bank’s Environmental and Social Framework (ESF). It includes a summarized SEP and details out the institutional arrangements required for E&S risk management, including the requirements for qualified experts and a capacity building plan. The generic ESMP includes mitigation measures related to OHS and community health and safety measures including for civil works. The EMSF includes a Grievance Redress Mechanism and refers to a range of COVID-19 related guidelines.

The project’s SEA/SH risk has been rated as “Low” based on the use of World Bank screening tools for civil works and health. The HR policies of the implementing partners will be strengthened through a Code of Conduct (CoC) applicable to (a) staff at health facilities, (b) construction workers, and (c) other project employees. Further, the project’s GRM will include a channel to allow SEA/SH-related grievances to be received and addressed. Given prioritization by the state on addressing SEA/SH, a guidance on addressing SEA/ SH has been prepared (Annex-III) as part of the ESMF.

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF) FOR ASSAM STATE SECONDARY HEALTHCARE INITIATIVE FOR SERVICE DELIVERY TRANSFORMATION (ASSIST) PROJECT (P179337)

1 INTRODUCTION

1.1 Background

State of Assam interwoven by mountains, valleys and two major river systems (Brahmaputra and Barak) is in the eastern most part of India between 24°.07' N to 28°00' N Latitude and 89°.42' E to 96°. 02' E Longitude. It is the largest north-eastern state in terms of population while second in terms of area. Assam covers an area of 78,438 km² (30,285 sq miles). The state is bordered by Bhutan and the state of Arunachal Pradesh to the north; Nagaland, Arunachal Pradesh and Manipur to the east; Meghalaya, Tripura, Mizoram, and Bangladesh to the south; and West Bengal to the west.

At present, Assam has 35 administrative districts. The districts are further placed under five regional divisions namely Barak Valley, Central Assam, Lower Assam, North Assam and Upper Assam. The state has three autonomous councils under Sixth Schedule of the Indian Constitution, which are *Bodoland Territorial Council*, *Dima Hasao Autonomous District Council* and *Karbi Anglong Autonomous District Council*. Six other statutory autonomous councils have been constituted under the State Act for social, economic, educational, ethnic and cultural advancement of the Scheduled Tribe (ST) communities living in core areas as well as in satellite areas covering many districts of Assam. These are: *Rabha Hasong Autonomous Council*, *Mising Autonomous Council*, *Tiwa Autonomous Council*, *Deori Autonomous Council*, *Thengal Kachari Autonomous Council* and *Sonowal Kachari Autonomous Council*.

As per the Census 2011, the total population of Assam is 31,205,576 of which 15,939,443 are males while females are 15,266,133. Thus, the population of Assam forms 2.58 percent of India in 2011. The total area of Assam is 78,438 square km. The population density of Assam is 398 per square km which is higher than the national average of 382 per square km. The total population of the state has increased from 26,638,407 to 31,169,272 since 2001 to 2011, with a growth rate of 16.93%. The districts with higher population concentration are Kamrup, Nagaon, Sonitpur, Barpeta, Dhubri, Darrang, and Cachar. Out of the total population, 86 % population live in rural areas & 14 % population live in urban areas of the State.

Assam is lagging as compared to most Indian states in terms of size of its economy and poverty reduction. In 2019-20, Assam's real per-capita income was INR 60,660 (~ US\$800), 35 percent below the per-capita national income. Although Assam had rapidly reduced poverty between 1994 and 2005, the rate of decline has since slowed down and stagnated at high levels. Thirty two percent of the population are poor in Assam compared to 22 percent nationally.¹ Thirty three percent of its population are also multidimensionally poor,² and there are geographic inequities—51 percent of the population in Hailakandi district are multidimensionally poor as compared to 11 percent in Kamrup metro.³ As per the Assam Economic Survey 2021-22, Assam's labour force participation rate (47) in rural areas is low, as compared to the national average (55.5), with female workers

¹ Reserve Bank of India (2020). Handbook of Statistics on Indian Economy, Table 154. <https://www.rbi.org.in/scripts/PublicationsView.aspx?id=19887>

² Multidimensional poverty complements income poverty measurements because it measures deprivations directly. India's multidimensional poverty metric includes indicators in health (child and adolescent mortality, antenatal care, nutrition), education (years of schooling, school attendance), and standard of living (cooking fuel, sanitation, drinking water, electricity, housing, assets, bank account).

³ https://www.niti.gov.in/sites/default/files/2021-11/National_MPI_India-11242021.pdf

comprising only 16.1 percent of the total labour force in rural areas. Agriculture makes the highest contribution to its domestic sectors, accounting for more than a third of Assam's income and employs about 69% of the workforce. Although, Assam is severely affected by floods during rainy seasons causing enormous damage to crop, livestock, land and property impacting the rural economy of the State.

1.2 Environmental Profile of Assam

The state of Assam is divided into three principal physical regions: the Brahmaputra River valley in the north, the Barak River (upper Surma River) valley in the south, and the hilly region between Meghalaya (to the west) and Nagaland and Manipur (to the east) in the south-central part of the state. The land has uneven topography, full of hills, plains and rivers.

About 23% of the state's area is Forest, having five national parks and 18 wildlife sanctuaries. The most prominent of which are two UNESCO World Heritage sites-the Kaziranga National Park, and the Manas Wildlife Sanctuary. The state is home to two-thirds of the population of the unique one horn rhinos.

The urban centres include Guwahati with Dispur, a suburb of Guwahati as the state capital. Guwahati is one of the 100 fastest growing cities in the world. Silchar is the second most populous city and an important centre of business due to its being an economic gateway to the states of Manipur and Mizoram. Other large cities include Dibrugarh, an oil and natural gas industry centre. The state also experiences some of the highest precipitation in the country. There is a distinct monsoon season during which majority of rainfall is received. Flooding and earthquakes are common. Poor road connectivity impacts referral transport system especially in border areas. Healthcare access and services in the state are impacted due to these issues apart from other socio-demographic and ⁴ aspects⁵.

1.3 Socio-Cultural and Demographic Profile of Assam

1.3.1 Demographic Profile

As per Census 2011, the state has a population of 31.2 million comprising 51.05 percent male and 48.92 percent female populations. The sex ratio stands at 958 females per thousand male populations. The decadal growth of population was 17.07 percent during 2001-2011. The population in the age group of 0-6 years constitutes 14.86 percent of the total population. Scheduled Caste population comprises 7.15 percent, whereas tribal population constitutes 12.45 percent of the total population. The overall literacy rate (72.19 percent) of Assam is slightly lower than the All-India figure of 74 percent. Out of total literacy rate, male literacy rate in Assam is 77.85% and the female literacy rate is 66.27%.

Elderly population (aged 60 years and above) constitute 8% of the State's total population. The life expectancy at 60 years of age is 16.5 and 17.6 for males and females, respectively (2014-2018). The illness (any deviation from the state of physical and mental well-being) perception among the elderly is reported as 38 percent for men and 41 percent for women, which are above the national average of 31 percent for both.⁶

1.3.2 Tribal Population of Assam

The tribal population is 38,84,371, which is 12.4% of the total population of the state. The tribal in Assam constitute 3.72% of total tribal population of the country. The State has registered 17.4%

⁵ <https://environmentandforest.assam.gov.in/information-services/detail/geophysical-features-0>

⁶ https://nhsrcindia.org/sites/default/files/practice_image/HealthDossier2021/Assam.pdf

decadal growth of tribal population in 2001-2011 which is slightly higher than the overall decadal growth for the state. The overall sex ratio among tribal people is 984, which is marginally less than the national average of 990. The tribal population in Assam is predominantly rural with 94.4% residing in rural areas particularly in the districts of Dima Hasao, Karbi Anglong, Dhemaji, Baksa, Chirang, Udalguri, Kokrajhar, Lakhimpur & Goalpara.

Major tribes of Assam are: Bodo (35.1%), Mishing (17.52%), Karbi (11.1%), Rabha (7.6%), Sonowal Kachari (6.5%), Lalung (5.2%), Garo (4.2%), and Dimas tribes (3.2%). They constitute 90 % of the ST population of the state. The other tribal people in Assam are Deori, Hajong, Thengal Kachari, Khasi, Jaintia, Mech, Chakma, Mizo, Hmar, Kuki tribes, Naga tribes, Barmans (in Cachar), Man (Tai speaking), Khampti and Singhpho tribes.

1.3.3 Religion

Assam has heterogeneous population with socio-cultural & ethnic diversity. According to 2011 census, Hindu is the major religion comprising 61% of population, followed by Muslim with 34%. Christianity accounts for 3.7%, and other religions like Buddhism, Jainism are less than 1%. Assamese is one of the major languages spoken in Assam with 48.3%, followed by Bengali with 28.9% and Hindi with 6.7%. Assamese, Sylheti and Bodo are the official languages in the state.

1.4 Health Status in Assam

Assam is one of the highest maternal mortality rate (MMR) states, with around 205 deaths per 100 000 live births in 2017-19 (Office of the Registrar General, India). Although NHFS indicates an improvement in other health outcomes, with 87 percent of women giving birth in a facility now as compared to 24 percent in 2005. Antenatal care has also improved from 66 to 85 percent.⁷ As per NFHS 5 data, Jorhat, Kamrup Metropolitan, Dibrugarh, Majuli, and Sivasagar districts reported high ANC coverage, ranging between 67% - 80.9%. Whereas Cachar, Bongaigaon, South Salmara Mancachar, Kokrajhar, and Darrang districts reported low ANC coverage, ranging between 32.7% - 37.5%, indicating a distinct geographical variation in services across the state. Prevalence of anaemia in women aged 15-49 years has increased from 46 percent (NFHS-4) to 65.9 percent (NFHS-5).

Neonatal mortality rate and Still Birth (per 1,000 live births) rates have significantly decreased from 33.4 and 8.6 (2005) to 21 and 2 (2018) respectively. Improvement in the indicators can be attributed to several interventions at the State level, including infrastructure strengthening under NHM, such as establishment of SNCUs, NBSUs and NBCCs.⁸ The life expectancy at birth has also improved from 61.9 (2006-10) to 66.9 (2014-18), though it is below the national average of 69.4 years. As per NFHS 5, Majuli, Darrang⁹Bongaigaon districts reported low SRBo ranging between 701 – 881, while Baksa, West Karbi Anglong, Golaghat, Udalgiri, and Sonitpur districts reported high sex ratio at birth, ranging between 1097 - 1325.¹⁰

The proportion of communicable, maternal, neonatal, and nutritional diseases (CMNND) contribute to 34.06% of total disease burden. Diarrheal diseases, lower respiratory tract infections, neonatal pre-term birth and tuberculosis are the leading causes of deaths due to CMNND in the State. Further, the burden of non-communicable diseases (NCDs) is growing in Assam. It is reported that 71.3% of the total disease burden in the State is due to premature deaths and 28.7% due to disability or morbidity.¹¹ NCD burden in the state is slightly lower than the national average, with 12% women and 15% men in the state hypertensive, and 9% women and 15% men diabetic.¹²

⁷ NFHS 2019-2021, and 2005-2006, <http://rchiips.org/nfhs/>

⁸ QPR NHM MIS Report (Status as on 1.03.2020)

¹⁰ https://nhsrcindia.org/sites/default/files/practice_image/HealthDossier2021/Assam.pdf

¹¹ https://nhsrcindia.org/sites/default/files/practice_image/HealthDossier2021/Assam.pdf

¹² National family health survey 2019-21, <http://rchiips.org/nfhs/>

1.5 Health Care Facilities in Assam

As per the statistics from Directorate Health Services, the number of Sub Centres (SCs), Primary Health Centres (PHCs) and Community Health Centres (CHCs) have been the number increasing since 2005. The state has 4727 sub-centres, 1010 PHCs, 205 CHCs, 16 Sub-district/ Sub-divisional hospitals and 24 District Hospitals, as given in the Table 1 below :(for more details refer to **Annex V**).

Table No.1-Distribution of healthcare facilities

SL.	DISTRICT	No. of Sub Centres	No. of PHCs	No. of CHCs	No. of Sub District / Sub Divisional Hospitals	No. of District Hospitals
1	BAKSA TAMULPUR	157	35`	8	0	1
2	BARPETA BAJALI	262	50	11	1	1
3	BISWANATH CHARIALI	129	26	3	2	0
4	BONGAIGAON	108	29	4	0	1
5	CACHAR	270	35	7	0	1
6	CHARAIDEO	70	19	2	1	0
7	CHIRANG	87	23	4	0	1
8	DARRANG	159	34	7	0	1
9	DHEMAJI	98	23	5	0	1
10	DHUBRI	192	33	9	1	0
11	DIBRUGARH	234	31	10	0	0
12	DIMA HASAO	76	12	3	0	1
13	GOALPARA	155	37	7	0	1
14	GOLAGHAT	144	39	9	1	1
15	HAILAKANDI	107	14	4	0	1
16	HOJAI	94	8	6	0	1
17	JORHAT	110	36	6	1	0
18	KAMRUP METRO	50	48	3	0	1
19	KAMRUP RURAL	283	65	13	1	1
20	KARBI ANGLONG	115	24	6	0	0
21	KARIMGANJ	232	29	8	0	1
22	KOKRAJHAR	161	46	3	1	1
23	LAKHIMPUR	154	29	9	1	0
24	MAJULI	34	8	2	0	1
25	MORIGAON	141	34	6	0	1
26	NAGAON	258	72	12	1	1
27	NALBARI	124	45	10	1	1
28	SIVASAGAR	150	27	2	1	1
29	SONITPUR	146	29	6	0	1

30	SOUTH SALMARA-MANKACHAR	51	7	2	1	0
31	TINSUKIA	166	22	8	1	1
32	UDALGURI	150	23	8	0	1
33	WEST KARBI ANGLONG	50	18	2	1	0
Assam		4727	1010	205	16	24

Source: Directorate of Health Services, Government of Assam¹³

The district hospital (DH) level bed availability is lower in the state compared to national average: at present, DHs in Assam have 18 beds/100,000 population compared to the national average of 24 beds.¹⁴ Additionally, human resources for health (HRH) at the existing DHs is severely constrained, with only 12 percent of the DHs meeting the requirement for doctors, zero percent for nurses and 52 percent for paramedical staff as per the Indian Public Health Standards (IPHS). Whereas the number of ANMs at Sub Centres and PHCs in Assam has increased from 5719 in 2005 to 8614 in 2020 which amounts to an increase of about 33.6 %.¹⁵

1.6 Protected Areas and Historic Sites

Assam is a state of high biodiversity importance due to diverse types of habitats with flora and fauna. Among the four key biodiversity hotspots, two i.e., Himalaya and Indo-Burma biodiversity hotspots cover large areas of Assam, mainly parts of Kokrajhar, Bongaigaon, Barpeta, Nalbari, Kamrup and Darang districts of Assam constitute Manas Biosphere. The state has one Ramsar wetland site i.e. Deepor Beel.

Out of the 53 tiger reserves in India, four i.e., Manas, Nameri, Orang and Valmiki Tiger Reserves are there in Assam. Out of 33 notified elephant reserves in India, five i.e. Sonitpur, Dihing-Parkai, Kaziranga-Karbi Anglong, Dhansing-Lungding and Chirang-Ripu Elephant Reserves are there in Assam.

Kaziranga National Park and Manas Wildlife Sanctuary are two UNESCO natural world heritage sites in Assam. Out of total 733 protected areas in India, 23 exist in Assam. There are 553 existing wildlife sanctuaries in India, of which 18 are there in Assam. ¹⁶Dibru-Saikhowa, Kaziranga, Manas, Nameri and Orang exist in Assam. ¹⁷

The state is rich in cultural and historical heritage too. Charaideo Moidams in Charaideo¹⁸ district, consists of a unique mound burial system of Ahom dynasty, has high historical importance. Majuli, the largest river island in the world on river Brahmaputra, has a historical cultural value that is integral in the norms of the Assamese society. The state government has notified "Majuli" as the first Biodiversity Heritage Site of Assam.¹⁹Based on the initial screening of the sites none of them are near the protected/historic areas.

¹³ <https://dhs.assam.gov.in/portlets/health-institutes>

¹⁴ Niti Aayog (2021). Best practices in the performance of District Hospitals in India. Note that bed occupancy rate could also improve, indicating poor quality and demand side issues: Average bed occupancy rate in Assam is 61, which is slightly higher than India average of 67 and lower than the ideal bed occupancy rate of 90.

¹⁵ <https://hmis.nhp.gov.in/downloadfile?filepath=publications/Rural-Health-Statistics/RHS%202019-20.pdf>

¹⁷ http://www.wiienviis.nic.in/Database/crri_8228.aspx ENVIS Centre on Wildlife and Protected Areas

¹⁹ <https://environmentandforest.assam.gov.in/information-services/biodiversity-heritage-sites-bhs-0>

2 PROJECT DESCRIPTION

2.1 Purpose of the ESMF

The main purpose of this ESMF is to ensure that the implementation of the project is carried out in an environmentally and socially sustainable manner. The ESMF seeks to:

- Establish clear procedures and methodologies for environmental and social safeguard planning, review, approval and implementation of subprojects to be financed under the Project.
- Provide practical guidance for planning, designing and implementing the environmental and social management measures.
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and related social concerns of the sub-projects.
- Determine the institutional arrangements, including those related to training, capacity building and technical assistance (if required) needed to successfully implement the provisions of the ESMF.

The ESMF also supports the compliance with applicable government laws and regulations as well as the requirements of relevant Bank standards on environment and social aspects.

2.2 Approach and Methodology

This ESMF has been prepared in accordance with all relevant World Bank Environmental and Social Standards (ESSs), Policies, Guidance Notes, WBG EHS Guidelines (Environmental, Health, and Safety Guidelines) sector guidelines, and the Government of India, Assam State Government relevant regulations, acts, laws, standards and guidelines. A participatory and consultative approach has been adopted to prepare the ESMF. The methodology involved desk review of secondary information, site observations along with discussion and consultation with various stakeholders including collection of preliminary baseline information from a sample of health care facilities (HCFs), of which 10 will be shortlisted for upgradation to DHs.

2.3 Project Components

There are three components under ASSIST which will address management capacity, quality and access to secondary health services. Details of the three components are provided below:

Component 1: Strengthened management capacity of health systems at state, district, and facility level

Subcomponent 1A will finance provision of performance-based grants (Internal Performance Agreement (IPA) grants) to select entities at state, district, and facility level to strengthen management capacity.

- a) At the state level, the IPA with (i) DHS, DH-FW and DME²⁰ aims to improve rational HRH allocation in secondary care, institute secondary care quality monitoring and improvement activities, and develop HRH management framework and pre-service education roadmap; (ii) Assam medical supply corporation limited (AMSCL) aims to improve their procurement efficiency, and contracts and supply chain management capacity; (iii) Atal Amrit Abhiyan Society (AAAS)²¹ aims to improve convergence and efficiency of the state and central health insurance schemes; and (iv) PWD (health wing)²² aims to introduce process reforms and strengthen its

²⁰ Directorate of health services (DHS), directorate of health and family welfare (DH-FW) and directorate of medical education (DME)

²¹ the entity with the mandate to administer state health insurance schemes and implement AB PM-JAY

²² Assam has a unique structure of PWD with a separate directorate within PWD that focuses on design, development, and maintenance of buildings under Health and Education department.

operational efficiency to maintain health infrastructure in the state.

- b) At the district level, the IPA with (i) district health administration will aim to improve HRH allocation and infrastructure development,²³ augment secondary care quality monitoring and improvement activities inclusive of network and referral linkages, and enhance autonomy, financial sustainability and accountability at the district level, and (ii) DHs will aim to improve processes and practices to attain NQAS certification, patient engagement and satisfaction (particularly for women), human resource management and deployment, timely reporting to state, utilization of health insurance programs, and service efficiency and uptake.

Subcomponent 1B will provide complementary technical support in areas of HRH, pre-service education, health infrastructure and IPA operationalization for improved secondary care access and quality.²⁴ This component will also finance technical support to improve monitoring and management of health infrastructure, IPA operationalization, and project operating costs.

Component 2: Improved access to and quality of essential services in existing secondary facilities

This component will improve access to and quality of essential services in existing secondary facilities through: (a) provision of technical assistance, training, and design and implementation of quality tracking tools, (b) contracting-in of services to fill clinical positions and other clinical services, (c) contracting out of non-clinical services, (d) strengthened nursing colleges attached to DHs, and (e) repairs and renovations of existing secondary facilities (25) and nursing colleges attached to DHs. Additionally, this component will support innovations to improve health systems efficiency focusing on equitable access and quality.

Component 3: Enhanced access to and structural quality of secondary care

This component will invest in: (a) upgradation of up to 10 community health centers (CHCs) and sub-district hospitals (SDHs) to DH²⁵ following national guidelines²⁶ and provision of medical equipment and goods²⁷ to enhance equitable access to secondary care, and (b) incremental operating costs

²³ Note that while the IPA will focus on process and outcome measures of quality for secondary healthcare, complementary investments in repairs and upgradation of infrastructure will be made through components 2 and 3.

²⁴ along with financing of the state project management unit (SPMU) operating costs for project implementation

²⁵ These investments will be made in identified existing SDH and CHCs to upgrade them to DHs.

²⁶ IPHS 2022 guidelines on the standards for new infrastructure for DH construction that includes layout and capacity with specification of services, and PWD norms on the civil works specifications that are accepted nationally.

²⁷ The project will only finance any additional medical equipment and goods for DH according to IPHS standards, needed after the medical equipment and goods financed by the PM ABHIM and XV FC.

3 LEGAL AND REGULATORY FRAMEWORK

This Chapter outlines and provides a review of existing policies, legislations and regulations. It identifies the requirements that guide the implementation of the ESMF. There are several relevant Indian Acts and Regulations that are relevant to this project. Also, as this Project is being financed by the World Bank, its guidelines are paramount and are discussed. There must be harmony between both sets of frameworks, but should there be any discrepancies between these, the guidelines of the World Bank shall supersede those of the country.

3.1 Indian National Regulations and Standards

Table 2 presents the various regulations, Acts and policies of the Government of India (GOI) and GoA, their purpose and the applicability.

Table 2: Environmental, Health, Safety and Social Regulations applicable to the Project

Table (2): Environmental, Health, Safety and Social Regulations applicable to the Project				
S. No	Act/Law	Agency Responsible	Key provisions and purpose	Relevance to the project
1	The Constitution of India (especially, Articles 15, 16 and 46)	Govt. of Assam	The Indian Constitution (Article 15) prohibits any discrimination based on religion, race, caste, sex, and place of birth. Article 16 refers to the equality of opportunity in matters of public employment. Article 46 directs the state to promote with special care the educational and economic interests of the weaker sections of the people, particularly of the Scheduled Castes and the Scheduled Tribes and also directs the state to protect them from social injustice and all forms of exploitation.	Relevant to the overall Programs of Government of India, and hence, to the project too.
2a	Biomedical Waste (Management and Handling) Rules 2016, as amended up to 2019	Assam State Pollution Control Board/ DoHFW	The Act mandates for the collection, segregation, processing, treatment and disposal of these bio-medical wastes in an environmentally sound management thereby, reducing the bio- medical waste generation and its impact on the environment, health workforce and community.	BMW is generated in hospitals, laboratories and other health facilities as a result of patient care activities on routine basis and requires management activities for safe handling, storage, transportation and treatment of BMW. As per the BMW rules and Accreditation requirements,

Table (2): Environmental, Health, Safety and Social Regulations applicable to the Project

S. No	Act/Law	Agency Responsible	Key provisions and purpose	Relevance to the project
				healthcare facilities are required to develop Standard Operating Procedures (SOPs) in the handling of biomedical wastes for protection of occupational health and safety of health workers, ensuring quality of care and protection of community and environment.
2b	Biomedical Waste Management (Amendment) Rules, 2018	Assam State Pollution Control Board/ DoHFW	<p>The amendment specifies that every occupier is required to:</p> <p>Pre-treat the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilisation on-site in the manner as prescribed by the World Health Organisation (WHO) guidelines on Safe management of wastes from health care activities and WHO Blue Book, 2014 and then sent to the Common bio-medical waste treatment facility for final disposal.</p> <p>Phase out use of chlorinated plastic bags (excluding blood bags) and gloves.</p> <p>Establish a Bar- Code System for bags or containers containing bio-medical waste to be sent out of the premises or for the further treatment and disposal in accordance with the guidelines issued by the Central Pollution Control Board</p>	Relevant, as part of the BMW rules, to reduce infectious risks from highly infectious wastes generated in laboratories and blood banks, to protect workers, community and environment. Phase out of chlorinated plastics is intended to reduce exposure of the community to the risks due to inadvertent generation of carcinogens e.g., dioxins and Furans due to improper treatment of BMWs.
3	E-Waste (Management and Handling) Rules 2011 as Amendment up to 2018	Assam State Pollution Control Board/ DoHFW	There are policies governing the responsible disposal of e-waste generated by bulk consumers 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 crore or more than 20 employees).	In view of the electronic equipment usage at the HCFs and their consumables and e-wastes generated during usage, it is required to adhere to the said rules to protect environment through responsible handling and disposal of e-wastes from health facilities. Training regarding the disposal of e-waste is critical and procedures for

Table (2): Environmental, Health, Safety and Social Regulations applicable to the Project

S. No	Act/Law	Agency Responsible	Key provisions and purpose	Relevance to the project
				collection and reporting are required to be implemented.
4	<p>Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules 2008</p> <p>Hazardous and Other Wastes (Management and Trans boundary Movement) Amendment Rules, 2016.</p>	Assam State Pollution Control Board/ DoHFW	<p>These Rules outline the responsibilities of the generator, transporter and recycler/re-processor of the hazardous wastes for handling and management in a manner that is safe and environmentally sound.</p> <p>To address the appropriate management of all x-ray wastes developer so that they are safely handled and disposed. Safe storage on a paved surface in a designated area with adequate secondary containment, with adequate labelling and disposal to an SPCB approved vendor are required.</p>	<p>The operation phase of the project will result in generation of some quantities of hazardous waste, mostly in the form of waste/used oil from Water Treatment Plant operation. All the hazardous waste generated due to the project should be stored and disposed as per the requirements of rules.</p> <p>Demolition of existing old buildings may contain Asbestos that would require to be handled and disposed as hazardous waste.</p>
5	Plastic Waste Management Rules 2016	Assam State Pollution Control Board/ DoHFW	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 centres, either on its own or through the authorized waste collection agency.	HCFs are generators of large quantity of plastics, including non-reusable types.
6	<p>The Epidemic Diseases Act 1897</p> <p>The Epidemic Diseases (Amendment) Ordinance, 2020</p>	DoHFW	<p>The Epidemic Diseases Act 1897 provides for better prevention of the spread of dangerous diseases.</p> <p>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</p>	To ensure occupational health and safety of communities, workers and project staff especially during epidemics e.g., COVID pandemic.

Table (2): Environmental, Health, Safety and Social Regulations applicable to the Project

S. No	Act/Law	Agency Responsible	Key provisions and purpose	Relevance to the project
			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.	
7	The Water (Prevention & Control of Pollution) Act 1974. The Air (Prevention & Control of Pollution) Act 1981. Environment Protection Act (and Rules), 1986 and 1996 Environment (Protection) Second Amendment Rules 2002	Assam State Pollution Control Board/ DoHFW	Provisions are largely to prevent air and water pollution by preventing release of untreated effluents and harmful emissions from Generator sets and incinerators. Most provisions are already covered under the Bio-Medical Waste Rules. The Act mandates to control and abate water pollution. The Diesel Generator sets installed during construction should comply with maximum permissible noise levels and noise control measures for diesel generators up to 1000 KVA capacity as specified in the Act.	Applicable Relevant to all HCFs and Central Biomedical Waste Treatment Facilities. Relevant, based on the project scale of civil works construction and BMWM activities.
8	The Water (Prevention and Control of Pollution) Cess Act, 1977 Rules framed under the water (Prevention & Control of Pollution) Act, 1974 (Assam Rules 1977	Assam State Pollution Control Board/ DoHFW	The act includes provisions for the levy and collection of a cess on water consumed by persons carrying on certain industries and by local authorities, with a view to augment the resources of the State Boards for the prevention and control of water pollution constituted under the Water (Prevention and Control of Pollution) Act, 1974.	Relevant for hospitals and Common Biomedical Waste Treatment Facilities, handling and treating the BMW that consume water for their activities.
9	Environmental Impact Assessment (EIA) Notification 2006 & and subsequent amendments, including Draft Notification March 2020	Department of Environment and Forests, Assam	The 'bio-medical waste treatment facility' is categorized under the Item 7 (da) in the schedule, requiring 'environmental clearance' from the State Environment Impact Assessment Authority (SEIAA). Therefore, the CBWTF operator is also required to obtain 'Environmental Clearance (EC)' from the respective SEIAA or Ministry of Environment, Forest & Climate Change (MoEF & CC), as the case may be, before any construction work, or preparation of land by the projects management and need prior Environmental Clearance.	Relevant as the project plans major civil construction projects e.g., expansion of existing HCFs and upgradation of HCFs. For this, an Environmental Health Impact Assessment as required by the regulation is required to be carried out to assess and manage environmental impacts during construction and operation of the

Table (2): Environmental, Health, Safety and Social Regulations applicable to the Project

S. No	Act/Law	Agency Responsible	Key provisions and purpose	Relevance to the project
				facilities.
10	<p>Central Pollution Control Board Guidelines: CPCB Guidelines for CBWTFs (2003).</p> <p>CPCB Guidelines for BMW Incinerators (2003). Draft Guidelines for Biomedical Waste Incinerator, 2017</p> <p>Revised guidelines for Common Biomedical Waste Treatment Facilities (2016).</p> <p>Guidelines for Bar Code System for Effective Management of Biomedical Waste</p> <p>Standards for treatment and disposal of Bio medical waste by Incineration</p> <p>Environmentally Sound Management of Mercury Waste Generated from Health Care Facilities.</p>	Assam State Pollution Control Board/ DoHFW	<p>Any activities from BMW temporary storage, transportation, disposal/treatment requires valid license.</p> <p>CPCB has also notified Revised Guidelines for Common Biomedical Waste Treatment and Disposal Facilities which covers the location setting of the incinerator, operational and maintenance performance standards and monitoring.</p> <p>The State Pollution Control Board plays an important role in granting consent to establish and operate license to the CTF operators, which are largely private sector players.</p>	<p>Relevant and applicable BMW is listed as hazardous waste due to its infectious characteristics. Also, the state is covered through one existing CBMWTF that is providing services to HCFs. As these guidelines regulate the functioning of CBMWTFs, hence the regulation is applicable.</p> <p>The guidelines may be needed to be implemented during construction and operation of the CBWTF, if needed. The contractual requirements for their services need to include E & S requirements.</p>
11	The Assam Air (Prevention and Control of Pollution) (Amendment) Rules, 2010	Assam State Pollution Control Board/ DoHFW	The Rules state for the need to seek consent from the board on any activity on air pollution control area.	<p>Relevant.</p> <p>MoU, TORs of vendors to include this aspect, especially for Common Biomedical Waste Treatment Facility existing in the state. .</p>
12	Noise (Regulation and Control) Rules 2000 amended in 2010	Assam State Pollution Control Board/ DoHFW	The Rules stipulate ambient noise limits during daytime and night time for industrial, commercial, residential and ecologically sensitive areas. The rules apply both during the	Relevant, since minor to moderate noise emission is expected from the construction and retrofitting

Table (2): Environmental, Health, Safety and Social Regulations applicable to the Project

S. No	Act/Law	Agency Responsible	Key provisions and purpose	Relevance to the project
			construction and operation of the project. Violation of the standards for assessing the noise quality due to the project will lead to penalty as under the EP Act 1986.	activities that are planned under the project.
13	National Disaster Management Act 2005	National Disaster Management Authority/ State Disaster Management Agency	Provides for the timely and effective response to disaster. It lays down guidelines to be followed by the State Authorities in drawing up the State Plans.	Applicable for preparedness, response and recovery during all stages of the project implementation/
14	Solid waste management rules, 2016	Assam State Pollution Control Board/ DoHFW	These rules have provisions for safe collection, storage, transport and disposal of solid wastes e.g. papers, packings, food wastes etc. generated during patients stay and food consumed in the health facilities	Relevant, for all hospitals and other facilities as general, non-hazardous wastes are generated by all hospitals and health facilities during routine operations that constitutes 75-85% of total wastes, as compared to 15-25% hazardous biomedical wastes. It is crucial to separate general waste from the biomedical wastes generated at all stages of patient care.
15	Construction and demolition wastes management rules, 2016	Assam State Pollution Control Board/ DoHFW	The rules apply to every waste resulting from construction, re-modelling, repair and demolition of any civil structure of individual or organisation or authority who generates construction and demolition waste such as building materials, debris, rubble. The rules cover duties of the waste generators, services providers or contractors and local authorities and pollution control boards on safe collection, storage, transportation, treatment and disposal	Relevant, as construction and demolition waste such as building materials, debris and rubble resulting from construction, re-modelling, repair and demolition of any civil structure is likely to be generated during construction and repair activities under the project. ²⁸
16	Guidance note on Liquid Medical	National Disaster	GoI MHA, NDMA has issued guidelines on safe storage,	Relevant as Medical Oxygen is

Table (2): Environmental, Health, Safety and Social Regulations applicable to the Project

S. No	Act/Law	Agency Responsible	Key provisions and purpose	Relevance to the project
	Oxygen (LMO) Storage Tanks, April 2021	Management Authority (NDMA)	transportation, and handling of liquid medical oxygen (LMO) for medical use vide DO.5-95/2020/Mitigation dated 23rd April 2021 which needs to be followed to minimize the inherent safety risks involved in its usage for treatment of diverse medical conditions	increasingly being used in healthcare facilities and requires safety provisions in storage, handling and usage.
17	Maternity Benefit Act, 1961 and Assam Rules, 1965	DoHFW, GoA	Act regulates the employment of women in certain establishment for certain period before and after child-birth and provides for maternity benefit and certain other benefits.	Safeguards the interest of all female employees and workers engaged under the project.
18	Child Labour (Prohibition and Regulation) Act 1986 and Assam (Amendment) Rules, 2017	DoHFW, GoA	Act prohibits the engagement of children below 14 and 15 years in certain types of occupations and regulates the condition of work of children in other occupations. No child shall be employed or permitted to work in any of the occupations set forth in Part A of the schedule, processes set forth in Part B of the schedule which includes building and construction industry.	Engagement of children is prohibited under the project
19	Contract Labour (Regulation and Abolition) Act, 1970 and Assam Rules 1971	DoHFW, GoA	The Act prevents exploitation of contract labour and also introduces better conditions of work. A workman is deemed to be employed as contract labour when he is hired in connection with the work of an establishment by or through a contractor.	Employment agreements of contractual workers must be in compliance with the applicable labour legislation.
20	Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and Assam Rules, 2007	Commissionerate of Labour, GoA	All the establishments who carry on any building or other construction work and employs 10 or more workers are covered under this Act; the employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as canteens, first-aid facilities, ambulance, housing accommodation for Workers near the workplace, etc	Applicable in cases of construction related activities and for hiring construction workers.
21	Inter-State Migrant Workmen's (Regulation of Employment and Conditions of Service) Act, 1979 and Assam Rules 1981	Commissionerate of Labour, GoA	The inter-state migrant workers, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as housing, medical aid, travelling expenses from home to the establishment and back, etc	Applicable for hiring construction workers.
22	Equal Remuneration Act, 1976	DoHFW, GoA	The Act provides for payment of equal wages for work of equal nature to Male and Female workers and not for making discrimination against Female employees	Applicable for employees and construction workers.

Table (2): Environmental, Health, Safety and Social Regulations applicable to the Project

S. No	Act/Law	Agency Responsible	Key provisions and purpose	Relevance to the project
23	Minimum Wages Act, 1948 and Assam Rules, 1952	DoHFW, GoA	The Act is responsible for statutory fixation of minimum rates of wages. It states that no employer shall pay to workers in certain categories of employments, wages at a rate less than the minimum wage prescribed by notification under the Act,	Ensures that the interest of all workers pertaining to wages are safeguarded.
24	Payment of Wages Act, 1936 and Assam Rules, 1937	DoHFW, GoA	It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers	Applicable for employees and construction workers.
25	Employees' Compensation Act, 1923	DoHFW, GoA	The Act provides for compensation in case of injury by accident arising out of and during the course of employment	Applicable for employees and construction workers.
26	Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013 and Assam Rules, 2015	Department of Revenue and Disaster Management, GoA	Aims to ensure, a humane, participative, informed and transparent process for land acquisition with least disturbance to the owners of the land and other affected families and provide just and fair compensation to the affected families whose land has been acquired or proposed to be acquired or those that are affected by such acquisition and make adequate provisions for their rehabilitation and resettlement and for ensuring that the cumulative outcome of compulsory acquisition should be that affected persons become partners in development leading to an improvement in their post-acquisition social and economic status.	Not Applicable.
27	National Policy on Tribal Development, 1999	Department for Welfare of Plain Tribes and Backward Classes, GoA	The policy seeks to bring scheduled tribes into the mainstream of society through a multi-pronged approach for their all-round development without disturbing their distinct culture development. It lists out measures to be taken in respect of formal education, traditional wisdom, displacement and resettlement, forest villages, shifting cultivation, land alienation, intellectual property rights, tribal languages, primitive tribal groups, scheduled tribes and schedule areas, administration, research, participatory approach and assimilation.	Applicable in cases of development in tribal belts.
28	Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989 and Rules,	Department for Welfare of Plain Tribes and Backward	Safeguards Scheduled Castes and Scheduled Tribes against wrongful occupation or cultivation of any land or premises or residence or enjoyment of rights and services	Relevant to the Project to ensure that SC and ST are not harmed or negatively impacted.

Table (2): Environmental, Health, Safety and Social Regulations applicable to the Project				
S. No	Act/Law	Agency Responsible	Key provisions and purpose	Relevance to the project
	1995	Classes, GoA	accessed/owned/allotted/notified for them.	
29	Rights of Persons with Disabilities (PwD) Act, 2016		The Act requires all establishments to frame and publish an Equal Opportunities Policy. Further, every Government establishment shall reserve, not less than four % of the total number of vacancies in the cadre strengthening each group of posts for persons with benchmark disabilities.	Relevant to the Project to ensure inclusion and participation of PwD
30	Sexual Harassment of Women at Workplace Prevention, Prohibition, and Redressal Act 2013	DoHFW, GoA	An Act to provide protection against sexual harassment of women at workplace and for the prevention and redressal of complaints of sexual harassment and for matters connected therewith or incidental thereto.	Relevant to the Project to ensure safety and security of women at the workplace.
31	Right to Information Act, 2005	DoHFW, GoA	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 request, etc. (d) provides for institutions such as Central Information Commission/State Information Commission	Relevant to the project to ensure transparency and accountability

* The central government recently enacted the four Labour Codes, namely, the Code on Wages, 2019; the Industrial Relations Code, 2020 (IR Code); the Code on Social Security, 2020 (SS Code) and the Occupational Safety, Health and Working Conditions Code, 2020 (OSH Code). Since “labour” is a subject in the Concurrent List of the Constitution of India, the power to make rules has been entrusted to the Central as well as the State Governments. As a step towards implementation of the four Labour Codes, the Government of Assam has pre-published the draft Rules, inviting comments of all stakeholders.²⁹ Once comments are sought and the Rules finalized, it will be placed before the Cabinet for approval and then laid before the legislature for enactment.

3.2 State Specific Laws and Regulations

In addition to national laws and regulations, there are state specific laws and regulations applicable to the project and presented in Table (3) below.

Table 3: State-specific regulations/ Acts/ Laws

S. No	Act/Law	Agency Responsible	Key provisions and purpose	Relevance to the project
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²⁹ <https://labour.gov.in/sites/default/files/PIB1842615.pdf>

S. No	Act/Law	Agency Responsible	Key provisions and purpose	Relevance to the project
1	Assam Scheduled Castes and Scheduled Tribes (Reservation of Posts in Services) Act, 1978	Department for Welfare of Plain Tribes and Backward Classes, GoA	Provides for reservation of vacancies in government services and posts for ST and SC persons. As per the Act, seven percent of the posts in each cadre shall be reserved for the candidates belonging to SC, ten percent for ST (Plains) and five percent for ST (Hills).	Applicable in cases of augmentation of staff through direct recruitment.
2	Direct Purchase Policy for Land Acquisition for EAPs	Department of Revenue and Disaster Management, GoA	The notification recognizes the need to strike a balance between public purpose and need to adequately compensate and rehabilitate the impacted. It recommends LA through negotiation (and mutual consent) as the best approach by paying the landowners an incentive of 25%, inclusive of R&R benefits on the compensation calculated as per the provisions of Section 26 to 30 and First Schedule of the RFCTLARR Act. No separate R&R is paid as per Second Schedule of the Act.	Not Applicable.
3	Settlement Rules under Assam Land and Revenue Regulation, 1886	Department of Revenue and Disaster Management, GoA	Regulation provides that ejection of encroachers shall be preceded by publication of a notice in the manner as prescribed in the rule requiring the occupant to vacate the land specified in the notice within 15 days of publication of the notice on the land concerned or in a prominent place in the vicinity thereof.	Relevant to address issues of encroachments under the project.

3.3 Guidance Related to COVID 19-(Updated as on 13th February, 2023)

Ministry of Health and Family Welfare (MOHFW), Government of India has been issuing several national policies and guidelines specific to COVID-19 pandemic and applicable to all States and UTs including Assam. Since the outbreak of COVID19, India has proactively taken several measures for containing the disease which are in line with guidance from WHO, CDC and other international best practices guidance and learning. As a result of concentrated efforts by the Government with support by The World Bank, WHO and other international agencies, the community spread of infection has been controlled to a great degree. However, few cases are still being reported for treatment in healthcare facilities. Currently, following guidelines from the MoH&FW , Assam Government and WHO that are relevant to E & S aspects are in place:

- I. **MoHFW-** Guidelines for International arrivals: Updated on 10th February , 2023³⁰
- II. List of Countries/Regions in respect of which primary vaccination schedule completion certificate is allowed to be considered: Updated on 16th November, 2022
- III. **Current Covid-19 guidelines by Assam Government, Department of Health and Family Welfare** New directives for containment of COVID 19 cases across the state and shall come into force w.e.f 6 AM of 15th February, 2022 until further order.
- IV. **WHO-** <https://www.who.int/news/item/13-01-2023-who-updates-covid-19-guidelines-on-masks--treatments-and-patient-care>

³⁰<https://www.mohfw.gov.in/pdf/GuidelinesforInternationalArrivals10thFebruary2023.pdf>

3.4 The World Bank’s Environmental and Social Standards (ESS)

The World Bank’s Environmental and Social Standards (ESS) are a cornerstone to its support to sustainable development. The Environmental and Social Standards set out the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts associated with projects supported by the Bank through Investment Project Financing. The objective of these policies is to prevent and mitigate undue harm to people and their environment in the development process. Any project that is likely to pose any form of adverse environmental impact will trigger the relevant ESSs. The ESSs relevant to this project are given below in Table 4.

ESS	ESS Objectives	Relevance to the Project
ESS 1 Assessment and Management of Environmental and Social Risks and Impacts	<ul style="list-style-type: none"> • To identify, evaluate and manage the environment and social risks and impacts of the project in a manner consistent with the ESSs. • To adopt a mitigation hierarchy approach to: <ul style="list-style-type: none"> (a) Anticipate and avoid risks and impacts; (b) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; (c) Once risks and impacts have been minimized or reduced, mitigate; and (d) Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible. • To adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and they are not disadvantaged in sharing development benefits and opportunities resulting from the project. • To utilize national environmental and social institutions, systems, laws, regulations and procedures in the assessment, development and implementation of projects, whenever appropriate. • To promote improved environmental and social performance, in ways which recognize and enhance Borrower capacity. 	<p>Relevant.</p> <p>The project involves major and minor civil works such as upgradation of CHCs/SDHs to district hospitals and repairs/renovation of existing facilities (DH, Nursing schools). In view of these, the potential E&S risks under the project are environmental, occupational health and safety, community health and safety risks as well as temporary inconveniences for service users and providers. In addition, there are risks of systemic deficiencies e.g., low capacities, inadequate parameters for mapping and tracking E&S outcomes as well as coordination amongst several departments and agencies.</p> <p>The project adopts a combination of a framework approach and site-specific Environmental and Social Impact Assessments and Plans. The ESMF prepared offers guidance for identification of E&S risks and mitigation measures. It also provides a negative list, including exclusion of activities involving land acquisition and/or involuntary resettlement, significant adverse impacts on customary tribal resources, those requiring FPIC (Free, Prior & Informed Consent) and impacts on eco-sensitive zones. The ESMF has a checklist to screen activities and sites for potentially adverse E&S impacts. In addition to the ESMF, detailed ESIA and site-specific ESMPs for subprojects will be prepared and disclosed at the time of detailed design/DPR preparation, prior to the bidding process.</p> <p>The project also supports health systems and service augmentation interventions that are likely to result in greater footfall at the facility level and hence, an incremental increase in bio-medical and other hazardous, liquid wastes as well as general wastes, and risks arising from handling and disposal of healthcare wastes and other products (clinical and infectious</p>

Table 4: Applicability of World Bank’s Environmental and Social Standards

ESS	ESS Objectives	Relevance to the Project
		waste materials, needles and sharps, and wastewater). This could lead to workplace hazards and adverse impacts on health workers, patients and visitors, local community and environment, needing preventive and mitigative actions under planned interventions through preventive and mitigation plans.
ESS 2: Labour and Working Conditions	<ul style="list-style-type: none"> • To promote safety and health at work • To promote the fair treatment, non-discrimination and equal opportunity of project workers. • To protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate. • To prevent the use of all forms of forced labor and child labor. • To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law. • To provide project workers with accessible means to raise workplace concerns. 	<p>Relevant</p> <p>The project is expected to engage (i) direct workers (PMU staff and consultants) (ii) contract workers (workers engaged in civil works, consultancy services, service providers, drivers and sanitation staff); and perhaps, primary supply workers. However, the engagement of primary supply workers will be known once the scope of the DPRs for the district hospitals is defined.</p> <p>The project aims to strengthen human resources at the targeted secondary level project facilities. Health sector is increasingly being considered among the key hazardous sectors, others being manufacturing, mining, agriculture. Hence, the workforce requires occupational health and safety procedures and systems in place.</p> <p>As the project plans major infrastructure construction in the form of new district hospitals and refurbishment of the existing ones, this calls for comprehensive OHS provisions to protect health and safety of the labour workforce that shall work on construction site. These provisions shall need to be incorporated in Construction Contracts and monitored by health facilities officials in a systematic manner.</p> <p>A Labor Management Procedure (LMP) will be prepared setting out the requirements under ESS 2 and national/state laws. Additionally, ESMF includes a generic facility OHS management plan that also includes infection prevention and control provisions.</p>
ESS 3: Resource Efficiency & Pollution Prevention and Management	<ul style="list-style-type: none"> • To promote the sustainable use of resources, including energy, water and raw materials. • To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities. • To avoid or minimize project-related emissions of short and long-lived climate pollutants. 	<p>Relevant</p> <p>Patient care activities in hospitals are likely to involve consumption of large amount and types of resources as well as generation of different types of wastes. The key resources to be used include electricity and water. In addition, packaging materials e.g., paper, plastic, glass and metals etc are also likely to be consumed in large amount, providing opportunity for resource efficiency as well as energy and water conservation measures to be</p>

Table 4: Applicability of World Bank’s Environmental and Social Standards

ESS	ESS Objectives	Relevance to the Project
	<ul style="list-style-type: none"> • To avoid or minimize generation of hazardous and non-hazardous waste. • To minimize and manage the risks and impacts associated with pesticide use. 	<p>implemented as part of the project activities.</p> <p>Healthcare facilities shall generate different types of wastes e.g., biomedical waste including expired medicines, radiation wastes, e-waste, plastic wastes, solid waste and wastewater etc. Biomedical waste being the key risk and hence bio-medical waste management plan shall be in place to address the above risks and suggest appropriate mitigation measures.</p> <p>Disposal of wastewater generated in the facilities may act as hazard for transmission of disease and chemical toxicities due to dissolved chemicals such as laboratory reagents, disinfectants, corrosives etc. These hazards shall be managed through disinfection and neutralization of wastewater as required by regulations as well as wastewater treatment plants in selected facilities.</p> <p>Usage of Mercury in the hospitals is likely to pose serious risks to human health and environment due to its long-term persistence in the environment and bioaccumulation in aquatic life, animals and subsequently in human beings. Programmatic phasing out of mercury through Mercury Phaseout plan / procedures shall be designed and implemented.</p>
ESS 4 Community Health and Safety	<ul style="list-style-type: none"> • To anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life cycle from both routine and nonroutine circumstances. • To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams. • To avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials. • To have in place effective measures to address emergency events. • To ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities. 	<p>Relevant</p> <p>As the project plans major construction work, this may pose hazards and risks to the community living near the site e.g. traffic accidents, noise and dust exposure, hazardous wastes and exhausts exposure etc. In addition, influx of construction workers may pose risks for conflicts with local communities, introduction of diseases (e.g., STDs, Respiratory diseases), SEA/SH risks etc. These shall require community communication, consultation and education on hazards and risks and their role, through community health and safety plans. In addition, concerns and grievances of the community would need to be addressed through Grievance Redressal and feedback procedures set out in the Stakeholder Engagement Plan.</p>
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary	<ul style="list-style-type: none"> • To avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives. • To avoid forced eviction. • To mitigate unavoidable adverse social and economic impacts 	<p>Not relevant.</p> <p>Since the proposed investments i.e. upgradation of 10 existing CHCs and SDHs to DHs, repair and renovation of 25 existing DHs and nursing institutions attached to DHs will be on government/municipal land and</p>

Table 4: Applicability of World Bank’s Environmental and Social Standards

ESS	ESS Objectives	Relevance to the Project
Resettlement	<p>from land acquisition or restrictions on land use by:</p> <ol style="list-style-type: none"> 1. providing timely compensation for loss of assets at replacement cost 2. assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher. <ul style="list-style-type: none"> • To improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure. • To conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable displaced persons to benefit directly from the project, as the nature of the project may warrant. • To ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected. 	<p>within the boundaries of existing facilities. The preliminary screening of the potential sites for upgradation reveals that the project does not anticipate any land acquisition. Further, activities resulting in land acquisition, physical and economic displacement will be excluded from the project, which will be screened during the preparation of site-specific ESIA and ESMPs for all physical investments.</p>
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	<ul style="list-style-type: none"> • To protect and conserve biodiversity and habitats. • To apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity. • To promote the sustainable management of living natural resources. • To support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities. 	<p>Not relevant.</p> <p>The project proposes to construct District hospitals on the existing government land only, no new land will be needed. The refurbishment of the existing DHs and CHCs is also planned on the existing land. Preliminary observations have revealed absence of any critical natural habitats or sites crucial for biodiversity conservation within or near these proposed facilities.</p>
ESS7: Indigenous peoples	<ul style="list-style-type: none"> • To ensure that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of Indigenous Peoples. • To avoid adverse impacts of projects on Indigenous Peoples, or 	<p>Relevant.</p> <p>While the geographical coverage of the project is the entire state, preliminary screening reveal that specific investments related to upgradation of 10 lower level HCFs to DHs will not be carried out in the sixth scheduled</p>

Table 4: Applicability of World Bank’s Environmental and Social Standards

ESS	ESS Objectives	Relevance to the Project
	<p>when avoidance is not possible, to minimize, mitigate and/or compensate for such impacts.</p> <ul style="list-style-type: none"> • To promote sustainable development benefits and opportunities for Indigenous Peoples in a manner that is accessible, culturally appropriate and inclusive. • To improve project design and promote local support by establishing and maintaining an ongoing relationship based on meaningful consultation with the Indigenous Peoples affected by a project throughout the project’s life cycle. • To obtain the Free, Prior, and Informed Consent (FPIC) of affected Indigenous Peoples in the three circumstances described in this ESS. • To recognize, respect and preserve the culture, knowledge, and practices of Indigenous Peoples and to provide them with an opportunity to adapt to changing conditions in a manner and in a timeframe acceptable to them. 	<p>areas of Assam. Nonetheless, where relevant, site-specific Indigenous Peoples Plan (IPP) will be prepared for investments relying on the procedures for screening, identifying and inclusion of indigenous peoples, vulnerable and marginalized communities as embedded in the Indigenous Peoples Policy Framework (IPPF). Moreover, activities involving Free Prior Informed Consent (FPIC)/significant risks related to Indigenous Peoples (IPs) will be excluded from the project, as specified in the exclusion list.</p>
ESS 8 Cultural Heritage	<ul style="list-style-type: none"> • To protect cultural heritage from the adverse impacts of project activities and support its preservation. • To address cultural heritage as an integral aspect of sustainable development. • To promote meaningful consultation with stakeholders regarding cultural heritage. • To promote the equitable sharing of benefits from the use of cultural heritage. 	<p>Relevant</p> <p>The state contains a large number of sites and natural heritage with significant religious, cultural, archaeological and historical importance. Although sites for upgradation of district hospitals are already known, the project will also be investing renewable energy systems and water supply systems to make these facilities fully operational. The operations of these hospitals will involve increase in the generation of waste and wastewater streams which need to be treated and disposed in order not to have any indirect or downstream impacts on built or natural heritage.</p> <p>The construction works in the project will generate demolition and construction wastes as well as exhausts and emissions that may pose risks to the nearby heritage structures. These will be managed by incorporating appropriate provisions in the construction contracts for prevention of such emissions and discharges and wastes management as well as awareness of contract workers.</p> <p>Significant investment to improve the existing biomedical waste management infrastructure and systems will be made through the project,</p>

Table 4: Applicability of World Bank’s Environmental and Social Standards

ESS	ESS Objectives	Relevance to the Project
		to prevent illegal dumping or burning of the biomedical wastes impacting any sensitive cultural or heritage assets. Further screening of subproject will be conducted to ensure when interventions are selected and their potential risk/impacts on environment and cultural heritage are identified and avoided. Any direct and indirect impacts to cultural heritage will become clearer once the DPRs and ESIA of the sub-project have been developed. If required, specialized methods and tools for assessment such as Cultural Heritage Management Plan will be prepared for specific investments.
ESS 9 Financial Intermediaries	<ul style="list-style-type: none"> • To set out how the FI will assess and manage environmental and social risks and impacts associated with the subprojects it finances. • To promote good environmental and social management practices in the subprojects the FI finances. • To promote good environmental and sound human resources management within the FI 	<p>Not relevant. No financial intermediaries are included in the project.</p>

Table 4: Applicability of World Bank’s Environmental and Social Standards

ESS	ESS Objectives	Relevance to the Project
ESS 10 Stakeholder engagement and information disclosure	<ul style="list-style-type: none"> • To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, in particular project-affected parties. • To assess the level of stakeholder interest and support for the project and to enable stakeholders’ views to be taken into account in project design and environmental and social performance. • To promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle on issues that could potentially affect them. • To ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format. • To provide project-affected parties with accessible and inclusive means to raise issues and grievances, and allow Borrowers to respond to and manage such grievances. 	<p>Relevant</p> <p>The project involves a wide range of stakeholders including patients who will be direct recipients of healthcare services, BSc students, key departments/agencies (NHM, AAA, ASMCL, PWD, etc.), health workforce (doctors, nurses, attendants, etc.), and those who would form part of the human resources that will be augmented under the project. Among these would be vulnerable groups, living in remote or difficult to access areas, persons with disabilities, scheduled tribes or BPL families. Such groups would require special outreach initiatives. Other stakeholders/interested parties would include: (a) medical associations, private health institution, pharmacist associations, diagnostic centres, etc. (b) NGOs, Youth Groups and Self-Help Groups involved in awareness building and behavioral change campaigns, (c) local governance bodies e.g., autonomous districts councils, zilla parishad, gaon panchayat, etc. and (d) other relevant government departments/agencies such as the Social Welfare and Tribal Affairs Department, Women and Child Development Department, etc. Stakeholder engagement, consultation and communication, including grievance redress management and disclosure of information will be required throughout the project life. A Stakeholder Engagement Plan (SEP) has been prepared to address this.</p>

4 ENVIRONMENTAL AND SOCIAL BASELINE

4.1 Key Health Sector Challenges in Assam

The public sector hospitals overall have low management capacity for effective functioning and implementation of infection control measures. The state has 27 districts and 24 district hospitals (RHS 2019-20) - three districts of Jorhat, Karbi-Anglong and Dibrugarh do not have district hospitals. The district hospital performance report by NITI Aayog, 2021, indicates that the state has lower bed strength (18 beds) at the district level compared to the National average (24 beds) per 100,000 population. There is only one central biomedical waste treatment facility in the state, and the waste is being poorly segregated and disposed in deep burial pits at the hospital sites.

4.2 Waste Management in Assam

4.2.1 Solid Waste Management

As required by the Solid Waste Management Rules, 2016, all the ULBs are responsible for the Solid Waste Management activities within their respective jurisdiction. There is one Municipal Corporation i.e., in Guwahati, 33 Municipal Boards and 17 Town Committees in Assam.³¹

In the Guwahati Municipal Area, Guwahati Municipal Corporation (GMC) looks after the Solid Waste Management activities within its jurisdiction. Primary collection of waste from households and commercial areas is carried out by NGOs. The Guwahati City generates 550 TPD (approx.) solid wastes. The compost plant in Guwahati has capacity of 50 TPD and produces 5 TPD of compost using Wind Row Composting Technology.³²

Another project namely 100TPD Municipal Solid Waste (MSW) facility for Dibrugarh town to be located at³³ under Dibrugarh district is being planned for construction.³⁴

4.2.2 Bio-Medical Waste Management

Deficiencies in the important aspects of quality of care e.g. IPC and HCW Management at organizational, operational and infrastructural levels of functioning have been observed during the performance audit of select District Hospitals under Government of Assam by Controller and Accountant General. These deficiencies have direct adverse impacts not only on the overall quality of services but also on the patient safety, occupational health and safety and community health and safety.

The status of BMW and related environmental aspects of concern to the health sector was ascertained through a field visit by the WB safeguards consultants to the SPMU, sample of HCFs and consultations with the stakeholders, on December 22 and 23rd, 2022. Based on the information in the field survey report the status of BMW management in Assam is as follows³⁵:

Table 5 BMW generation and treatment status

Infrastructure status	
Total number of HCFs	1439 (732) bedded and 709 (non-bedded)
Number of HCFs using captive BMW treatment facilities e.g., Deep Burial Pits etc.	457 (31.8%)
Total number of CBWTF operational in the state	One
Total number of incinerators in healthcare facilities	31
Number of HCFs using CBWTF services	192 (13.34%)

³¹ <https://dma.assam.gov.in/portlets/urban-local-bodies-ulbs>

³² <https://gdd.assam.gov.in/portlets/solid-waste-management-sewerage>

³⁴ <https://pcb.assam.gov.in/portlets/waste-management>

³⁵ https://cpcb.nic.in/uploads/Projects/Bio-Medical-Waste/AR_BMWM_2020.pdf

Number of HCFs with authorization under BMW Rules 2016	391 (27.2%)
BMW generation and treatment	
Total amount of BMW generated per day	8421.2 Kg / day
Amount of BMW treated per day	5539.31 Kg/day (65.77%)
Gap in treatment of BMW	2881.89 Kg/day (34.22 %.)
Amount of BMW Treated at CBWTF per day	1845.97 Kg/day (33.3%)
Amount of BMW treated at captive facilities in HCFs	3693.34 Kg/day (66.7%)

(Source: Information from the field visit by WB Safeguard consultants)

457 HCFs i.e. (31.8%) have captive treatment facilities consisting of Deep Burial Pits. There are total 31 incinerators, the functional status of majority of which is largely unknown to the authorities and SPCB. There is one operational CBWTF in the entire state. The services of CBWTF are being utilized by 192 HCFs (13.3%)

Out of the total 1439 HCFs, only 391 i.e., 27.2 % possess valid authorizations required under BMW Rules, 2016 for generation, handling, transport and treatment of BMW. Among the Govt, HCFs, only the medical colleges and some large HCFs have applied to SPCB for authorization. There is lack of information available on the captive treatment facilities and no verification of the Deep burial pits has been conducted.

Only 65.78% of the total BMW generated daily is being treated, leaving a gap of 34.22 % in the treatment capacity, The high quantity of untreated BMW poses high risks to the health workers, community and the environment.

Only 33.3% of the total BMW subjected to treatment is treated by CBWTF. Major proportion of the BMW i.e., 3658.8 kg/day (66.7%) is being treated onsite, by the HCFs using captive treatment facilities only.

Preliminary assessment of the information from 16 HCFs selected for upgradation, repair and renovation under the project revealed that only two HCFs reported to have a valid authorization and another two reported to have applied for authorization from SPCB and five HCFs reported to be connected with CBWTF for treatment and disposal of BMW.

Thus, the key issues regarding BMW management in the state include:

- Lack of authorization status of HCFs as required by BMW Rules, 2016,
- Gaps in the availability of CBWTF and low utilization of the services of the CBWTF by HCFs
- Utilization of captive BMW treatment facilities by large number of HCFs.
- Ineffective BMW management practices e.g., segregation, handling, treatment and disposal of BMW.

These issues raise the requirements for capacity enhancement for BMW management through additional CBWTFs, closer collaboration with State Pollution Control Board and ensuring BMW compliance by HCFs including authorization process etc., closer monitoring of Onsite BMW treatment and improving awareness of facility managers on BMW Rules 2016 requirements etc.

4.3 Land related and Infrastructure details

The preliminary assessment revealed that out of 13 HCFs screened, 8 possess documentation confirming ownership by facility/health department. All sites are free from any encumbrances. Most HCFs, barring two have adequate provision of drinking water and sanitation services for the patients. Twelve HCFs also have soak pits for sanitary disposal of wastewater.

Table: 6 Land related information of sampled HCFs

S No	HCH	District	Type of HCF	Ownership	Ownership paper/ documentation	Land ownership demarcated by boundary wall	Any squatters (including residential, commercial units)	Encroachment	Cultural/historical/religious building within 200 meters	Land used as CPR/Approach way
1.	Abhyapuri	Bongaigaon	CHC	HCF	Yes	Yes	No	No	Yes	No
2.	Ambagan	Nagaon	CHC	HCF	No	Yes	No	No	No	No
3.	Azara	Kamrup	CHC	HCF	No	Yes	No	No	No	Yes
4.	Boginadi	Lakhimpur	DH	HCF	Yes	Yes	No	No	No	No
5.	Dhing	Nagaon	CHC	HCF	Yes	Yes	No	No	No	No
6.	Dudhnoi	Goalpara	CHC	HCF	Yes	Yes	No	No	No	No
7.	Goalpara	Goalpara	DH	HCF	Yes	Yes	No	No	No	No
8.	Kaliabor	Nagaon	SDH	HCF	Yes	Yes	No	No	No	No
9.	Naharani	Dibrugarh	CHC	HCF	Yes	No	No	No	No	No
10.	Pathsala	Bajali	SDH	HCF	No	No	No	No	No	No
11.	Sonapur	Kamrup (Metro)	DH	HCF	Yes	Yes	No	No	No	No
12.	Sonatali	Kamrup	SDH	HCF	No	Yes	No	No	No	No
13.	Tinsukia	Tinsukia	DH	HCF	No	Yes	No	No	No	No

4.4 Status of Women in Assam

There are many intersectional manifestations of social exclusion for women in the state. Violence against women and trafficking continue to happen with maybe even greater intensity in recent years. Assam has one of the highest rates of child trafficking in the country as per the National Crime Record Bureau (NCRB). In 2021, over 203 cases of human trafficking were registered as compared to 124 cases in 2020. The 2017 Assam Economic Survey (AES) had discussed the 59 core indicators the state has adopted to assess progress on the 17 Sustainable Development Goals, of which Goal 5 on gender equality has been assessed based on mainly four indicators, namely (1) early marriage, (2) early pregnancy (based on NFHS), (3) ratio of female to male literacy; and (4) ratio of women to men labour participation rates (from Census 2011). While Assam has fared well in terms of female literacy (66.27- above the all-India average rate of 64.64), rates of early marriage (31.8%) and teenage pregnancy (11.7%) in the state were noted to be higher than the national average (23.3% and 6.8%, respectively).³⁶ Additionally, ratio of female to male work participation rate in Assam is 0.40 as compared to the national average of 0.45.³⁷ Based on these composite indicators on gender equality, it can be concluded that Assam is faring poorly compared to the All-India average.

4.4.1 Women work participation rate

Among the north-eastern states, Assam has the lowest female workforce participation rate during 2020-2021. As per the Periodic Labour Force Survey (PLFS) 2020-21 data, the labour force participation rate (LFPR) of women of all age groups is 18.6 % in Assam. Women in the age groups of 25-54 years, that is, the people in their prime working lives constitute majority of the workforce in Assam in both rural and urban areas (24.7 %). As far as composition of the female workforce by education level is concerned, a majority of female urban workforce are post-graduates and above (49.5%), while non-literate women form a minority workforce (13.8 %). Whereas, in rural areas of Assam, women who are not literate (29.3 %) and those that have only a diploma certificate form a majority of the workforce (80.3 %). This indicates that rural women are more likely to be engaged in low paying jobs, given the fact that a small proportion of female graduates are employed. The PLFS data also indicates that women are mostly engaged in the agriculture, forestry and fishing industry

³⁶ NFHS 4

³⁷ Census 2011

(63.63 %) with only 0.15% engaged in professional, scientific and technical activities, and 1.8 % in human health and social work activities.

4.5 Current Information Education and Communication (IEC) Mechanism

The following healthcare institutions in the State have carried out IEC activities on several aspects, some of which have been highlighted below:

Assam National Health Mission has carried out awareness building on schemes such as Pradhan Mantri Surakshit Matritva Abhiyaan, Janani Shishu Suraksha Karyakram, Pradhan Mantri Matru Vandana and Jananu Suraksha Yojana (JSY) through community interactions; provided templates of Mother and Child Protection (MCP) Card and Child Feeding Practices on their website; developed HR training materials and modules; issued and published notifications for implementation of laws and regulations such as the *Infant Milk Substitute, Feeding Bottles and Infant Foods Act, 2003*, *Sexual Harassment at the Workplace Act, 2013*; and the Assam Employees Service Benefits Scheme.

- I. **Directorate of Medical Education** has issued educational notices for recruitment of students in MBBS, BDS and BSc nursing courses in government institutions, along with Supreme Court direction and government notifications on procedures for applications.
- II. **Directorate of Health Services** has a Citizen Charter which is displayed on its website, outlining the services delivered by the department to the citizens. The Directorate has also carried out IEC and BCC activities on oral health, iodine deficiency disease control, leprosy eradication, disabilities such as blindness and deafness, tobacco control, among others (details available on the website).
- III. **Directorate of Health Services- Family Planning** has undertaken IEC activities to promote awareness about PC & PNDT Act and Universal Immunization Program through various medians such as social media, newspaper adverts, and through health workers and community mobilizers.
- IV. The State also implements Sanjeevani³⁸ wherein Mobile Health Units with medical equipment, paramedic staff, lab technician, pharmacists and ANM have been mobilized to cover areas with chronic and minor ailments which are not presently covered by robust national health programs (hypertension, diabetes, epilepsy etc.). The team also carries out social mobilization, counselling and behaviour change communication.

³⁸ with VHOP application software, biometric scanner, basic diagnostic equipment (HB meters, Gluco-meters, Manometers, Digital BP), consumable to spot test random blood sugar, Urine albumin, HB etc. and medicines.

5 ASSESSMENT OF ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS

The proposed project will bring significant health benefits to the local population by improving the quality and utilization of the health services in the state.

Table (7): Environment and Social Risks and Impacts

Sub-Components/ Areas	Main Activities	Risks/ Impacts	Potential Mitigation Approach
Component 1: Improved governance and management capacity of health systems at state, district, and facility level			
<p>Signing of Internal Performance Agreements (IPA) to improve management capacity, access to health services with provision of 14 essential health services and delivery of quality health services</p>	<p>Development of IPAs for State entities e.g. Assam medical supply corporation limited (AMSCCL), Atal Amrit Abhiyan Society (AAAS)</p> <p>Joint IPA with Directorate of health services (DHS), DHS – Family Welfare and Directorate of medical education</p> <p>IPAs with Public Works Department (PWD) covering following activities:</p> <ul style="list-style-type: none"> • developing the Standard operating procedures for preventive maintenance of the health infrastructure, • create provision of resource for such building maintenance with finance, • develop standard design for human centric health infrastructure to improve functionality and branding of health infrastructure, and • improve monitoring of new construction. <p>Second level of IPAs will support the district health societies (DiHS) and DHs with a focus on strengthening planning capacity for HRH allocation, infrastructure development, improving quality and enhancing autonomy and accountability.</p>	<ul style="list-style-type: none"> • No adverse environmental and social risks / impacts are likely with AMSCCL and AAAS. • Reduction in financial barriers in accessing hospital services, particularly for economically weaker sections through prevention of out-of-pocket expenditure. • Improved identification of sector wide gaps in management, service delivery, health work force and quality of health services, as well as in planning and operation of pre-service education improvement • Improved coverage and equitable access to healthcare services, as system of geographic equity adjustments such as travel time to state capital, human resources density, poverty scores, and resource constraints will be put in place to ensure that low performing district hospitals are prioritized to receive largest performance budget. • Improved construction design, 	<p>Enhancement of organizational capacities on environmental and social management in health sector facilities as part of action plans defined for accomplishing the IPA results. These include:</p> <ul style="list-style-type: none"> • Biomedical waste management (BMW) Management • Hazardous wastes, wastewater and solid wastes management • Waste minimization strategies e.g., reduce, reuse, recycling and recovery • Energy and water efficiency measures • Occupational health and safety provisions for work environment in health facilities • Management of environmental, OHS and social risks during construction works in health sector facilities • Citizen engagement and grievance redressal management for patients, staff and workers on sites. • Gender-informed and inclusive design in the built environment and services.

Sub-Components/ Areas	Main Activities	Risks/ Impacts	Potential Mitigation Approach
		construction process and maintenance of constructed structures	
Component 2: Improved process quality and access to secondary healthcare system			
Bottom-up approach to quality improvement	<ul style="list-style-type: none"> Development of annual quality improvement plans focused on patient safety and experience, including respectful care. Creation of a peer-to-peer network across departments within a hospital as well as across hospitals. 	<ul style="list-style-type: none"> Risks of inadequate engagement with relevant stakeholders during the preparation and execution of the plans. Inadequate systems to gauge transference of knowledge and adoption of best practices. 	Strategy for stakeholder engagement such as surveys, leadership walkarounds to be well defined by the contracted specialised agency. Feedback of patients, frontline staff and other stakeholders to be considered during development of the annual plans.
Cadre of hospital managers	<ul style="list-style-type: none"> Cadre of hospital managers will be created and placed in each hospital to offload the administrative workload of medical superintendent. 	<ul style="list-style-type: none"> Efficiency in functioning of the hospitals and improved coordination among all relevant agencies. Potential risks related to workplace discrimination, working conditions, and sexual harassment of female employees. 	Trainings on HR policies, GBV/SEA/SH and gender sensitization and relevant laws applicable to the workplace to be undertaken with staff on regular intervals.
Pilot innovations to improve quality and access to health services	<ul style="list-style-type: none"> Using telemedicine to connect PHCs for referral to secondary and tertiary care Service delivery redesign (SDR) to improve people-centered care. Use of Filter clinics (or primary consultation clinics) to reduce patients overload with specialists 	<ul style="list-style-type: none"> Use of telemedicine may help in reduction in the quantum of BMW and other wastes generation in the health facilities. Linking beneficiaries with appropriate levels of care with a functional referral and follow-up mechanism, will reduce time taken in accessing health services- thus reducing time-poverty among women who are disproportionately burdened with the tasks of caregiving. 	<p>Strategy to develop telemedicine and piloting applications in selected health facilities to be developed.</p> <p>Improved structural design of consultation chamber, patient flow management techniques, Occupational health and safety provisions with infection prevention and control measures to be implemented</p>

Sub-Components/ Areas	Main Activities	Risks/ Impacts	Potential Mitigation Approach
		<ul style="list-style-type: none"> Potential risks of infections spread to primary care physician and associated staff in case of overcrowding in consultation room. 	
Design investments to improve HRH	<ul style="list-style-type: none"> HRH reforms to improve quality and availability of health workforce through a robust HRH strategy and management framework 	<ul style="list-style-type: none"> Potential risks related to workplace discrimination, inequitable working conditions, and sexual harassment of female health workforce. 	Design and implement gender-informed HRH strategy and management framework to address issues related to equitable working conditions, non-discrimination and zero tolerance against sexual harassment.
Strengthening pre-service education for nurses	<ul style="list-style-type: none"> Specialized trainings to improve clinical and managerial skills of nursing staff 	<ul style="list-style-type: none"> Improvement in the quality of human resources trained through nursing institutions. Limited awareness among the BSc students/potential students regarding the revised curriculum and selection process. 	<ul style="list-style-type: none"> Performance standards need to be updated based on the revised BSc (N) curriculum and the recent advancements that will include coverage of topics in environment and social safeguards management e.g., biomedical waste management, occupational health and safety, patient safety, infection prevention and control and energy efficiency, environment management in healthcare, respectful maternity care. Establish a feedback mechanism to improve design and quality of trainings imparted. Awareness building campaigns and advertisements to disseminate information on revised curriculum and selection process.
Strengthening of biomedical waste management	<ul style="list-style-type: none"> Improving the biomedical waste management system and facility-based plan covering: <ul style="list-style-type: none"> Developing evidence-based strategies and plans Investing in infrastructure and equipment 	<ul style="list-style-type: none"> Quality certification process involves improving the BMW and other wastes management and energy conservation and resource efficiency measures that are beneficial to 	<ul style="list-style-type: none"> Set up mechanism for building and sustaining BMW management, sanitation and hygiene standards. Building capacity of HCF staffs on bio-medical waste management.

Sub-Components/ Areas	Main Activities	Risks/ Impacts	Potential Mitigation Approach
	<p>(including maintenance)</p> <ul style="list-style-type: none"> ○ Capacity building at all levels of services, ○ Planning and implementing Infection prevention and control measures, and ○ Occupational Health and safety provisions e.g., Immunizations, health screening, post-exposure prophylaxis and use of personal protective devices etc. for health care providers ○ Monitoring and evaluation of activities through monitoring tools on regular basis. 	<p>health and environment.</p> <ul style="list-style-type: none"> • These will help strengthen the overall management of BMW, preventing occupational health and safety, community health, patient safety and adverse environmental impacts on air, water and land environment. 	<ul style="list-style-type: none"> • Managing BMW as per requirements of the BMW Management Rules, 2016 and associated guidelines. • Procedures for infection control measures to be developed using guidance from WHO guidelines and NHM Infection Management and Environment Plan (IMEP). • Health and safety requirements to be incorporated in the service contract of various service providers e.g. sanitation services, bio-medical services, and laboratory services etc. • Wastewater from all wastewater generating areas in HCFs to be disinfected and neutralized near the source and discharged externally in safe manner, as specified in BMW Management Rules, 2016
Strengthen health infrastructure	<ul style="list-style-type: none"> • Up to 25 existing DHs will be renovated to meet NQAS standards for improved functionality and patient and staff experience • Minor infrastructure investments in nursing colleges attached to district hospitals to strengthen quality of nursing in secondary care 	<ul style="list-style-type: none"> • Land acquisition is not envisaged, as construction related activities will be carried out in existing government/ municipal land and within the boundaries of existing facilities. • Potential occupational, health and safety risks of workers and communities/residents living near the sites during construction related activities. • Temporary disruption/delay of health services due to change in location of existing medical facilities (to nearby areas) during renovation of DH and infrastructure 	<ul style="list-style-type: none"> • Selection of existing DHs for rehabilitation will be based on following criteria: not co-located with a medical college, not listed for supported under other funding, current usability, residual life and do not pose social or environment risk. • Identify location for temporary relocation of services and prior information dissemination to avoid disruption to services and inconvenience to patients. • Monitoring compliance of labor standards related to occupational health, safety and labor welfare during construction period.

Sub-Components/ Areas	Main Activities	Risks/ Impacts	Potential Mitigation Approach
		<p>improvements of nursing institutions.</p> <ul style="list-style-type: none"> Risks related to temporary influx of migrant workers including SEA/SH risks during the construction period. Deficiencies in the structure and service quality, leading to potential risks e.g., structural instability, fire and electrical risks, occupational risks of infections, hospital acquired infections and poor waste handling and disposal etc. Improvement in infrastructural quality is likely to lead to improved service utilization rates, patient satisfaction and improved patient safety. Increased service utilization shall increase quantity of biomedical and other hazardous wastes as well as general waste generation in the facilities. 	<ul style="list-style-type: none"> Adoption of workers' code of conduct and grievance mechanism with stipulations for sensitive grievances, including those related to SEA/SH. Use of IPHS 2022 guidelines and NQAS guidelines, The repair and renovation of the existing health facility to have human-centric design (disabled and elderly friendly), climate resilient and environment-friendly, using principles in line of green building best practices. Strengthening of BMW Management as required by BMW Management Rules, 2016 in the facilities Compliance to the rules governing wastes other than BMW generated in HCFs e.g., plastics, e-waste, battery waste, construction wastes and hazardous chemical wastes etc. as per respective regulations governing their management.
Component 3: Improved structural quality and access to secondary care			
Strengthen health infrastructure	<ul style="list-style-type: none"> Upgradation of up to 10 CHCs and SDH to DH in newly formed districts that lack secondary health care, Upgradation of the corresponding hardware to increase access to secondary health care, Deployment of additional staff to the existing staff of the health facility to meet the requirement 	<ul style="list-style-type: none"> Land acquisition is not envisaged, as construction related activities will be carried out in existing government/ municipal land and within the boundaries of existing facilities. Potential occupational, health and safety risks of workers and communities/residents living near 	<ul style="list-style-type: none"> Screening to be done for infrastructure upgradation of HCFs/ other project facilities e.g. Nursing school to avoid any land acquisition or involuntary resettlement. Screening will also be conducted to rule-out any adverse impacts related to resettlement of squatters and non-title holders.

Sub-Components/ Areas	Main Activities	Risks/ Impacts	Potential Mitigation Approach
		<p>the sites during construction related activities.</p> <ul style="list-style-type: none"> • Temporary disruption/delay of health services due to change in location of existing medical facilities (to nearby areas) during upgradation of CHC/SDH. • Risks related to temporary influx of migrant workers including SEA/SH risks during the construction period. • Deficiencies in the structure and service quality, leading to potential risks e.g., structural instability, fire and electrical risks, occupational risks of infections, hospital acquired infections and poor waste handling and disposal etc. • Improvement in infrastructural quality is likely to lead to improved service utilization rates, patient satisfaction and improved patient safety. • Increased service utilization shall increase quantity of biomedical and other hazardous wastes as well as general waste generation in the facilities. 	<ul style="list-style-type: none"> • Identify location for temporary relocation of services and prior information dissemination to avoid disruption to services and inconvenience to patients. • Temporary relocation of staff accommodation in the vicinity. • Monitoring compliance of labor standards related to occupational health, safety and labor welfare during construction period. • Adoption of workers' code of conduct and grievance mechanism with stipulations for sensitive grievances, including those related to GBV/SEA/SH. • Use of IPHS 2022 guidelines and NQAS guidelines, • The upgraded DHs to have human-centric design (disabled and elderly friendly), climate resilient and environment-friendly, using principles in line of green building best practices. • Strengthening of BMW Management as required by BMW Management Rules, 2016 in the facilities • Compliance to the rules governing wastes other than BMW generated in HCFs e.g., plastics, e-waste, battery waste, construction wastes and hazardous chemical wastes etc. as per respective regulations governing their management.
<p><i>Green Hospitals.</i> (Environmentally friendly and energy efficient hospitals)</p>	<ul style="list-style-type: none"> • Interventions focused on making hospitals environmentally friendly and energy efficient including designing the use of solar power, conserving water resources through rainwater 	<p>Improvements in the energy and resources e.g., water conservation and resource efficiencies, leading to improvement in environment, health and</p>	<ul style="list-style-type: none"> • Incorporation of rainwater harvesting system and landscaping aspects in the construction and renovation designs and plans of the health facilities.

Sub-Components/ Areas	Main Activities	Risks/ Impacts	Potential Mitigation Approach
	harvesting and landscaping etc.	financial sustainability in medium and long terms.	<ul style="list-style-type: none"> Strategies for wastes minimization covering reduce, reuse, recycle and recover mechanisms to be developed and implemented. Awareness creation through regular training as well as IEC among all levels of employees on wastes minimization and energy conservation

The project's SEA/SH risk has been rated as Low based on the Civil Works and Health Screening Tool. Risks of SEA/SH may arise under three circumstances: (a) risks of SEA/SH to community members, particularly women and children by contractors' workers during construction period; (b) risks of workplace sexual harassment at all establishments (SPMU, implementing agencies, consultants and contractors) under the project; and (c) risks of SEA/SH to patients by healthcare workers at the district hospitals and health facilities. There may also be instances where healthcare workers may need to play the dual role of responding to the survivors of sexual assault, by providing required medical treatment and psychological support, and at the same time assist survivors in their medico-legal proceedings by collecting evidence and ensuring a good quality documentation. Guidance to prevent and respond to SEA/SH risks during these situations has been provided in Annex III.

6 ENVIRONMENT AND SOCIAL MANAGEMENT PLAN (ESMP)

The project involves various stages of planning and design for improvement of secondary health care services. The ESMP (Table- 8_) discusses the risks and impacts and required mitigation measures as well as outlines the responsibilities and timelines for applying the suggested mitigation measures.

Key Area/ Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
Improvement of management capacity, access to health services with provision of 14 essential health services and delivery of quality health services	<ul style="list-style-type: none"> Poor capacity for planning, implementing and monitoring of environmental and social impacts of project activities The Health Directorates and Health facilities staffs, community and other stakeholders may not be fully aware of the project and its 	Designing and enhancing organizational capacities for comprehensive environment and social management in secondary health sector facilities throughout the project duration: <ul style="list-style-type: none"> Biomedical waste management (BMW) Management Plan Hazardous and solid wastes management and Waste minimization procedures covering reduce, reuse, recycling and recovery measures 	SPMU- AHIDMS, with technical support from Project Management Consultancies.	Year-1 and continue throughout the project life

Table 8: Environment and Social Management Plan (ESMP)

Key Area/ Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
	<p>associated environmental and social aspects and impacts. Hence, there will be need for managerial support for better outcome including enhanced trust in the system.</p>	<ul style="list-style-type: none"> • Energy and water efficiency improvement procedures • Occupational health and safety and Infection Prevention and Control plan for health-workers • Prevention and response to sexual exploitation and abuse/ sexual harassment. • Inclusive planning, designing and equitable access to health services, including patient satisfaction using surveys and participatory tools. • Management of environmental, OHS and social risks during construction works in health sector facilities 		
<p>Strengthening planning, management, and monitoring functions related to environment and social safeguards</p>	<ul style="list-style-type: none"> • The risk emerges due to absence of dedicated environmental and social competencies and mechanisms in AHIDMS to support the program on environmental and social safeguards management. • Poor compliance and hence potential legal actions, to the rules covering BMW and other wastes generated from HCFs 	<ul style="list-style-type: none"> • Monitoring of BMWM system in the facilities to be an integral part of Quality Assurance and shall be a continuous activity at different levels of the health system functioning. 	<p>SPMU- AHIDMS, DHS, NHM</p>	<p>Within Six months of project being effective</p>
<p>Development of Human Resources for health on management of environmental and social aspects and impacts</p>	<ul style="list-style-type: none"> • Through adequate human resources and capacity building across the implementation chain will have positive E&S impact, provided they are sensitized with E&S issues and have capacity to apply mitigation measures as per ESMF. 	<p>Based on E&S Capacity Assessment and training need assessment (TNA), following types of training will be provided to the relevant target groups, such as SPMU staff, healthcare providers and staff members, stakeholder community, project workers, consultants, contractors and sub-contractors:</p> <ul style="list-style-type: none"> • Orientation training to staff of AHIDMS on the World Bank ESF and its implementation modality (screening, scoping etc) and various provision of the ESMF, SEP and ESCP. • Training to DHS, NHM and HCF staff on <ul style="list-style-type: none"> ▪ BMWM across all HCF facilities in the state including 	<p>SPMU- AHIDMS, DHS, NHM</p>	<p>TNA in year-1 followed by annual training calendar over the project life</p> <p>Screening of sub-projects before construction</p>

Table 8: Environment and Social Management Plan (ESMP)

Key Area/ Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		<p>those transporting BMW.</p> <ul style="list-style-type: none"> ▪ Occupational health and safety, infection prevention and control, and community health and safety. including contractors and the labours/workers engaged with civil works ▪ Gender sensitization, GBV/SEA/SH prevention and response including CoCs ▪ Additional training will be identified during project implementation 		
Strengthening procurement and supply chain management system	<ul style="list-style-type: none"> • Lack of procedures / guidance / standard protocol for selection and purchase of safe chemicals, safe and energy efficient equipment, Mercury free chemicals and equipment, asbestos free materials and disposal of expired medicines etc. 	<ul style="list-style-type: none"> • Awareness and training of procurement professionals on safe and green procurement practices • SOP to be prepared for notification and disposal of expired medicine. • SOP / guidelines to be prepared for purchase of environmentally safe chemicals and equipment • SOP for purchase of Mercury and asbestos free materials 	SPMU-AHIDMS, AAAs and ASMCL	Year-1 for strengthening measures. Continue throughout the project life
Strengthening of Biomedical waste management system	<ul style="list-style-type: none"> • Inadequate biomedical waste management capacity across the HCFs in the state • Given if waste streams (chemical reagents, wastewater effluents) are not adequately treated or disposed, there could be impacts/ contamination to surrounding soil, water and air environments and on nearby communities. • With increased footfall, there will be an incremental increase solid, biomedical and liquid 	<p><u>On Improving BMWM</u></p> <ol style="list-style-type: none"> i. Waste characterization exercise covering identification of types and quantities of different wastes generated during healthcare activities in the health facilities to be conducted at the initiation of implementation ii. Building capacity of HCF staffs on bio-medical waste management. iii. All waste streams (solid and liquid waste will be managed in accordance with the principles of the biomedical waste management rules, 2016 (amended 2018), and associated implementation guidelines. iv. SOPs for management of e-waste, plastics, pharmaceuticals, and hazardous waste (x-ray developer) in accordance to the relevant rules to be developed and implemented. 	SPMU- AHIDMS / DHS/ NHM/ HCF	Year-1 for strengthening measures. Continue throughout the project life

Table 8: Environment and Social Management Plan (ESMP)

Key Area/ Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
	<p>waste streams (chemical reagents, wastewater effluents). And, if waste streams are not adequately treated or disposed, there could be impacts/contamination to surrounding soil, water and air environments and on nearby communities.</p> <ul style="list-style-type: none"> • Poor compliance to the rules covering BMW rules 2016. • Poor maintenance of onsite waste disposal facilities e.g., deep burial pits and sharps pits etc. 	<ul style="list-style-type: none"> v. SoP for notification and disposal of expired medicines and other hazardous chemicals so that it is not disposed in regular solid and liquid waste streams. vi. Standard Operating Procedure (SOP) for infection prevention and control measures to be developed. vii. Health and safety requirements to be included in the service contract of various service providers e.g. sanitation services, bio-medical services, and laboratory services etc. viii. Effluent Treatment Plants (ETP) should be provided to treat the washing and other wastewater generated from larger health facilities. ix. For smaller health facilities, wastewater from key generating areas shall be neutralized and / disinfected near the source and discharged externally in safe manner. x. Provisions e.g. septic tank for safe treatment and disposal of sewage from health facilities to be developed in areas where sewerage system is lacking. xi. No-run-off from site should allow to get into rivers/ water streams or accumulate at site or nearby areas without confirming to safe standards of discharges, as per BMW Rules, 2016. xii. To ensure compliance and facilitate the implementation of the regulation on Bio- Medical Waste Management Rules, the following mitigation actions should be in place: <ul style="list-style-type: none"> a. Segregation of wastes near to their source of generation, transportation to designated storage area within the facility. b. Labeling of waste containers as per specifications. c. The safe storage requirements for transfer and reporting of medical wastes within the HCF and between the disposal center. d. Emergency mitigation measures for accidents/ leakages/ spills and release of medical waste 		

Table 8: Environment and Social Management Plan (ESMP)

Key Area/ Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		<ul style="list-style-type: none"> e. Protection/OHS for workers during the sorting, collection, transportation and temporary storage. f. Where facilities are too remote and not viable to be connected to CBMWTF, decentralized systems such as deep burial pit and sharp pits will be constructed on site after SPCB authorization. g. In all health facilities, segregation of liquid chemical wastes at the source, pretreatment and neutralization before mixing with other effluents from the facilities will be carried out, as per BMW Rules. h. For the facilities with no sewerage connection, suitable arrangements such as liquid disinfection, septic tank and soak pit will be introduced. i. Construction of Deep Brial Pits after due receipt of authorization from SPCB and construction, operation and maintenance based upon the CPCB Guidelines on BMW Management Rules 2016. xiii. The project will provide capacity building activities covering biomedical waste management, occupational health and safety and infection prevention and control to ensure that safe work practices are followed by healthcare staff in facilities as well as contractor workers during construction works. 		
Bio-medical waste management, during COVID-19 situation	<ul style="list-style-type: none"> • Risks of poor segregation and mixing of Covid-19 biomedical waste with other medical and general waste and spread of infections among health workers and community 	<ul style="list-style-type: none"> • Follow WHO and MOHFW guidance in management of Covid-19 waste. • Follow Infection Prevention and Control (IPC) and Occupational Health and Safety procedures 	SPMU-DOHFW/ HCF	With immediate effect during Covid-19 pandemic time
Management of other wastes from health facilities	<ul style="list-style-type: none"> • Health facilities in the process of healthcare delivery generate large number of plastics, electronic wastes, used batteries 	<ul style="list-style-type: none"> • The requirements under specific applicable regulations for the wastes as identified in ESMF and procedures for their handling, treatment and disposal shall be implemented, to comply with the rules. 	SPMU-AHIDMS/ DHS/ NHM / HCF	Year-1 for waste characterization study and strengthening

Table 8: Environment and Social Management Plan (ESMP)

Key Area/ Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
	<p>and general waste e.g., paper, food leftovers etc.</p> <ul style="list-style-type: none"> • Plastic is able to persist for long in the environment and poses risks to the environment, as well as uses up nature's petroleum resources during its production. • Electronic wastes generated from use of computers, mobiles, monitors etc in the facilities also consume natural resources e.g., petroleum-based plastic, metals etc. and pose occupational health and safety risks during dismantling activities and environmental pollution. • Used lead-acid batteries pose serious occupational health and safety risks during their dismantling and environmental risks due to contamination of soil and water etc. • General waste e.g., paper and plant items e.g., leaves, leftover food waste etc. poses risk of multiplying the infectious risks in case such wastes are mixed with biomedical wastes in the health facilities and in their surroundings. 			measures. Continue throughout the project life
Environmental pollution management	<ul style="list-style-type: none"> • Risk of pollution from civil works including construction solid waste, dust, wastewater, noise, 	<ul style="list-style-type: none"> • Use of screens or nets to avoid flying debris and dust and use of regular water sprays to suppress dust • Hazardous waste to be separated from nonhazardous 	EPC Contractor, HCF	During civil works construction

Table 8: Environment and Social Management Plan (ESMP)

Key Area/ Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
during repair, renovation and retrofitting activities	lubricants and oils, air emissions from diesel generators <ul style="list-style-type: none"> • Risk of exposure to Asbestos during demolition activities on old hospital building structures, especially old plumbing fittings and concrete. 	wastes on site and disposed to designated sites <ul style="list-style-type: none"> • Safe work procedures for handling and disposal of Asbestos, based on World Bank General EHS Guidelines and OSHA Standard on Asbestos in Construction³⁹ • Measure and report noise (decibel) levels regularly • Manage oil leaks/spills from diesel generators and machineries 		
Occupational Health & Safety (OHS) and Community Health & Safety during civil works	<ul style="list-style-type: none"> • Health and safety risks to construction workers and community living near the facilities 	<ul style="list-style-type: none"> • The contractor (in cases of civil works) to prepare a site-specific Action Plan for managing construction related workplace occupational health and safety, community health and safety risks and those associated with Covid-19 infections. • Provide relevant PPE to all workers along with provision of onsite toilet and washing facilities, potable drinking, waste and rest areas • Cordon off areas under construction and provide hazards communication signage to warn of ongoing construction works and prevent nuisance of dust etc. to the health workers and community. • Plan and implement awareness sessions for workers and community on health and safety hazards and risks and their role in their management including their responsibilities • The guidance provided in the World Bank Guidance Note for borrowers on ESS4: Community health and safety, to be utilized. • Refer to Annex III- SEA/SH Prevention and Response Guidance 	EPC Contractor, HCF	During civil works construction
Enhanced	<ul style="list-style-type: none"> • Lack of trust and inhibition 	<ul style="list-style-type: none"> • Communication strategies to be developed to: 	SPMU- AHIDMS,	Within six months

³⁹ <https://www.osha.gov/laws-regs/regulations/standardnumber/1926/1926.1101>

Table 8: Environment and Social Management Plan (ESMP)

Key Area/ Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
communication to improve access to secondary healthcare services	<p>among communities to access public health services and systems.</p> <ul style="list-style-type: none"> Limited coverage and lack of awareness may lead to poor utilization of the health insurance schemes. 	<ul style="list-style-type: none"> Build awareness on mechanisms to access and take benefit of health insurance schemes; referral systems; reinforce health-promoting norms and enhance health seeking behaviour. Leverage existing community platforms, social networks, and community-based institutions such as Rogi Kalyan Samiti (RKS), self-help groups (SHG), village health sanitation and nutrition committees (VHSNCs) 	DHS, NHM along with consulting firms	of project effectiveness
Addressing access to services for the poor, vulnerable and marginalized social groups	<ul style="list-style-type: none"> Lack of accessibility for persons with special needs in existing healthcare facilities Risk of inadequate access to healthcare services for people below poverty and in remote locations 	<ul style="list-style-type: none"> All existing healthcare facilities (DHS/SDHs/CHCs) to be upgraded or renovated and nursing schools to be improved must be compliant with human-centric design and universal access provisions through retrofitting. Health care providers sensitized towards services to poor and vulnerable including providing psycho-social support where needed. Targeted interventions (e.g., awareness creation in remote areas, user experience surveys, health insurance schemes) for those who face disparity based on financial or social characteristics such as age, race, gender, ethnicity, sexual orientation, spirituality, disability, or socio-economic or insurance status. Also, wherever possible linkages with other government departments and schemes to be done to address the differential needs of the vulnerable groups. 	SPMU-AHIDMS, DHS, NHM, DHS along with EPC contractors	Throughout project implementation
Improvements in the delivery and quality of health services at District hospitals and other facilities including Quality certification (NQAS).	<ul style="list-style-type: none"> Overall, the activities will have positive environmental and social impact due to improvements in the quality of basic infrastructure facilities in HCFs. Quality certification process involves improving the BMWWM 	<ul style="list-style-type: none"> Set up mechanism for building and sustaining BMW management, sanitation and hygiene standards. SOP to be prepared for upkeep and O&M of equipment installed. Inclusion of indicators in health quality monitoring dashboard to measure user satisfaction and experience particularly targeting women patients (personal safety, accessibility, quality of care, etc.) 	SPMU- AHIDMS, DHS, NHM/ HCF	As per quality improvement plan

Table 8: Environment and Social Management Plan (ESMP)

Key Area/ Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
	and other environmental hygiene, hence, it will be beneficial			
Land related impacts during repair, renovation and upgradation of District hospitals and other facilities.	<ul style="list-style-type: none"> The project will use government/municipal land and within the existing footprint of the facilities, and hence no land acquisition or need for any additional land is anticipated. 	<ul style="list-style-type: none"> Screening to be done for infrastructure upgradation of HCFs/ other project facilities e.g. SDH/CHCs to DHs, DHs, nursing schools etc. to avoid any land acquisition or involuntary resettlement. Screening will also be conducted to rule-out any adverse impacts related to resettlement of squatters and non-title holders. 	SPMU- AHIDMS, EPC contractors	
Temporary disruption of services	<ul style="list-style-type: none"> Temporary disruption/ delay of health services due to change in location of existing medical facilities (to nearby areas) during upgradation of CHC/SDH and renovation of DH 	<ul style="list-style-type: none"> Temporary relocation of services in nearby area and prior information dissemination to avoid disruption of services and inconvenience to patients. Temporary relocation of staff accommodation, if needed till the construction works is completed. 	DHS, NHM, HCF	
Labor management for repair, renovation and upgradation of District hospitals and other facilities especially during Covid-19 situation	<p>Labor influx is anticipated from other districts of Assam and that too in dispersed locations. Key labor related concerns will include:</p> <ul style="list-style-type: none"> Workers coming from Covid-19 infected areas, co-workers becoming infected and workers introducing infection into community/general public Arrangements for employment and accommodation of workers to be engaged in project activities, and issues relating to working conditions (including in relation to periods of sickness 	<ul style="list-style-type: none"> Adequate hand washing and sanitization facilities provided during construction. Consider ways to minimize/control movement in and out of construction areas/site. If workers are accommodated on site, require them to minimize contact with people outside the construction area/site or prohibit them from leaving the area/site for the duration of their contract Implement procedures to confirm workers are fit for work before they start work, paying special to workers with underlying health issues or who may be otherwise at risk Check and record temperatures of workers and other people entering the construction area/site or require self-reporting prior to or on entering 	EPC contractor, HCF	During construction

Table 8: Environment and Social Management Plan (ESMP)

Key Area/ Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
	<p>and quarantine)</p> <ul style="list-style-type: none"> • Involvement of child labor and/or forced labor • Risks of SEA/SH especially women, girls and children living around project sites. • Fatality or physical injuries from accidents during construction. 	<ul style="list-style-type: none"> • Provide daily briefings to workers prior to commencing work, focusing on Covid-19 specific considerations including cough etiquette, hand hygiene and distancing measures. • Require workers to self-monitor for possible symptoms (fever, cough) and to report to their supervisor if they have symptoms or are feeling unwell • Prevent a worker from an affected area or who has been in contact with an infected person from entering the construction area/site for 14 days • Sensitization of construction workers and health care staffs involved on Covid-19 infection protection measures at workplaces. • No child labor or forced labor is allowed to work as per the Gol norms and legislation. • Require mandatory use of safety measures and PPE such as masks, helmets, hand gloves, and rubber boots with proper training to workers in respect to working at heights. • Setting up gender-sensitive infrastructure such as segregated toilets and well-lit living areas/ camps (if any). • Ensuring safety of women from any sexual exploitation and abuse (SEA) and sexual harassment (SH), sensitizing workers on SEA/ SH and mechanism to access redressal services. • Orientation of workers on the workers' code of conduct (CoC) and ensure its compliance by the workers. • Maintenance of first aid box and use of PPE at site as per existing laws and regulations • Coordinate with the nearest hospital/ medical facility in case of emergency 		

Table 8: Environment and Social Management Plan (ESMP)				
Key Area/ Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities	Timeline
		<ul style="list-style-type: none"> • Maintenance of record of infections, incidents, and accidents. Appropriate authorities to be informed of injuries or fatalities within 48 hours. • Cordon off the construction site with fencing, access control and hazard signages to prevent unauthorized access to the worksite. • Adopt Labor Management Procedures 		

6.1 Negative List of Activities under the Project

Project will not support activities that involve high or substantial E&S risks and involve:

1. Any land acquisition and/or involuntary resettlement including resettlement or eviction of squatters/ non-titleholders
2. Use of child labor and/or forced labor
3. Any adverse impact to any physical and/or cultural resources
4. Any risk/ impact/ disturbance to forests and/ or protected areas e.g. sanctuaries, notified wetland, or any eco-sensitive area because of subproject activities
5. Activities requiring diversion of forest land to non-forestry purposes (or infringement in eco-sensitive areas)
6. Any construction within 200 meters of cultural, historic, religious site/ buildings designated as Archaeological sites
7. Any territorial dispute between two countries in the subproject area and its ancillary aspects and related activities
8. If subproject and related activities involve the use or potential pollution of, or be located in international waterways
9. Any activity that will have adverse impacts on IPs and require obtaining Free Prior and Informed Consent (FPIC).

7 FRAMEWORK PROCEDURES FOR ENVIRONMENTAL AND SOCIAL MANAGEMENT

This chapter contains a summary of the screening procedure, capacity building activities, ESMP and implementation budget. It also provides necessary procedures and tools for screening and assessing environmental and social impacts. The environmental and social assessments need to be carried out based on the provisions of the National/ State laws and the relevant World Bank's Environmental and Social Standards and to be followed by the project through SPMU and any hired contractors including those for civil works. The bid documents for any supply of goods or services, as well as for civil work shall also include the relevant documentation on this aspect as required by the nature of work to be procured. The Bio-medical waste management plan as mentioned in ESMP and Annex II, labor management procedures and the stakeholder engagement plan specify the key action that the SPMU and the contractors need to follow during implementation. Any high-risk activities as mentioned under the prohibited list of activities (as per section 6.1) is not supported by the project. The Environment and Social Management Framework Procedure specifies measures for addressing the adverse risks and impacts and for enhancing the positive impacts. In addition, organisational capacity and training requirements, required to check and ensure effectiveness of the plan throughout the lifecycle of the project, have also been discussed.

7.1 Environmental and Social Management procedures

The overall environmental and social management procedure is shown in the Figure-1. below. Once a sub-project has been developed with outline design and location/alignment options, screening of environmental and social risks will be conducted by the SPMU and the architectural firm based on the preliminary technical design and site details. The recommendations from the E&S screening need to be incorporated into the tender (bidding) documents of the EPC contractors. This shall need to be done to help in the preparation of E&S instruments such as ESIA and ESMP by the EPC contractors. After selection of the contractor(s), detailed design preparation will commence and at the same time ESIA/ESMP preparation will begin. During the civil work, implementation of the proposed mitigation measures, monitoring and reporting activities for the sub-project will be initiated.

Figure 1
Environmental and Social Management procedure

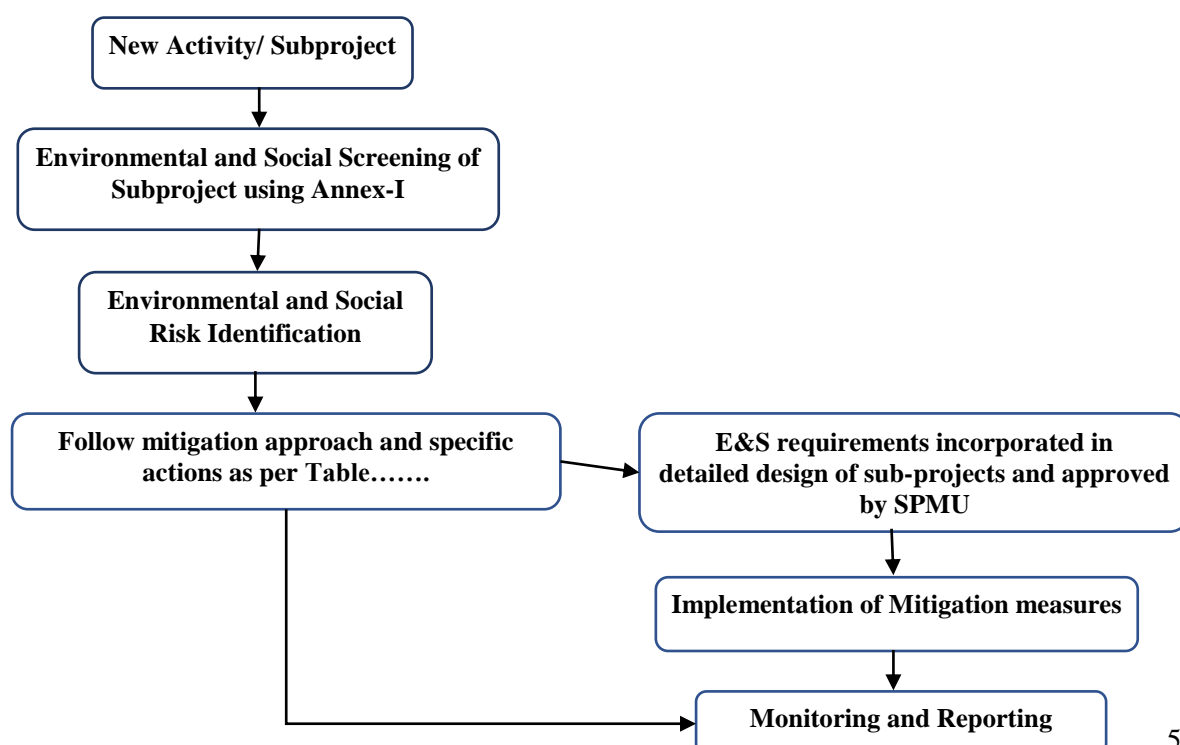


Table (9): Procedures to Address Environmental and Social Issues

Identified Activity	Procedure	Responsibility
Any new activity for infrastructure improvement/ sub-project	Screen for potential E&S risks and impacts and classifying each subproject according to risk (Annex 1, Screening Form) Any activity categorized as High or Substantial is ineligible for the project.	Architectural firm under the guidance of SPMU
E&S assessment and preparation of E&S Plan	Based on the screening, site specific ESIA and E&S plans [Environmental and Social Management Plan, Indigenous Peoples Plan (if required), Bio Medical Waste Management Plan (BMWMP), and Infection Control and Medical Waste Management Plan (ICMWMP)] will be prepared at the time of detailed design/DPR preparation.	EPC Contractors
Consultation and Disclosure	All E&S plans and instruments will be consulted with relevant stakeholders including the HCF – Rogi Kalyan Samiti (RKS) periodically and disclosed whenever a new update is available. All consultation will follow the Stakeholder Engagement Plan (SEP) for the project.	HCF In-charge MO/ Chief Medical Officer at the District level
Management of staff and workers	All E&S plans involving management of health care facility staffs and/ or construction workers will follow the Labour Management Plan (LMP) for the project.	HCF In-charge MO/ Chief Medical Officer at the District level Contractors
Review and approval of E&S plans and instruments	All E&S plans and instruments will be approved by the SPMU prior to disclosure	Project Director, Environmental and Social Specialists at SPMU
Implementation and monitoring of mitigation measures in ESMF	All mitigation actions will be monitored, documented and reported to the SPMU on a monthly basis. World Bank to monitor during regular Implementation Support Missions	HCF In-charge/Chief Medical Officer at the District level/ PMC/ Environmental and Social Specialists at SPMU Contractors

Given the incremental increase in BMW is dependent on increase patient footfall, which is further dependent of many factors including infrastructure upgradation of HCFs, capacity enhancement of HCF staffs, and awareness to mobilise community, and hence not expected to happen during the initial implementation period of the project. This is expected once the HCFs get upgraded

infrastructure as per quality enhancement plan which will be prepared for each of the target HCF during first 6-12 months of the implementation at the earliest, and following which the procurement process will start for civil work and lead to actual infrastructure upgradation. Along with the infrastructure upgradation, the patient footfall will also be impacted with other service quality improvement activities such as enhanced capacity of HCF staffs.

Along with HCF infrastructure upgradation, infrastructure for BMWW will also be assessed and upgraded as part of the overall quality enhancement plan for upgradation. The BMWW related capacity building will be a part of the overall capacity building plan. In the meantime, the existing BMWW practices with recommended onsite disposal methods using deep burial pits for infectious wastes, sharp pits for sharp wastes, and disinfection and neutralization of the liquid waste before being released in the drain/ soak-pits will be followed, in line with national regulations and guidelines.

7.2 Sub-project Screening and Categorization

The proposed project will have subprojects mainly related to HCF upgradation or upgradation of Nursing schools by repair, renovation and/or retrofitting to improve basic infrastructure of the facility for quality services. All sub-projects will require screening, which will be conducted by the Architectural Firm under the guidance of SPMU. The environmental and social assessment will commence with the environmental and social screening of proposed interventions. Screening formats are given in Annex-I. The given scale of subproject activities, the risk is expected to be moderate as these subprojects potentially have adverse social or environmental risks or/and impacts that are generally site-specific, largely reversible and can be managed locally using environmental and social mitigation plan.

The outcome of the screening process is to also categorize the sub-project in terms of its environmental and social risks. Below is the key consideration for risk rating.

- **High Risk:** Projects with potential significant adverse social or environmental risks or/and impacts that are diverse, irreversible or unprecedented. (Based on initial screening such activities are not part of project design and are ineligible for financing under the project.)
- **Substantial Risk:** Projects with potential moderate adverse social or environmental risks and/or impacts that are moderate in number, mostly reversible and possible addressed through mitigation measures.
- **Moderate Risk:** Projects with potential limited adverse social or environmental risks and/or impacts that are few in number, generally site-specific, largely reversible and readily addressed through mitigation measures.
- **Low Risk:** Projects with minimal or no adverse social or environmental risks and/or impacts.

Proportionate to the sub-project's risks and impacts (substantial, moderate or low), the level of detail and complexity of the ESMP and other E&S instruments (IPP, where required; BMWWP; and ICWMP) to be prepared for all sub-projects would be considered, consistent with the mitigation hierarchy and the World Bank ESSs. The exclusion criteria/negative list of activities for the project is given in Section 6.1 will also apply.

7.3 Sub-project Implementation, Monitoring and Reporting

Following the ESMP template provided in Tables 5 and 6 and outcome of the sub-project E&S screening, EPC contractor will prepare a site specific ESMP in consultation with HCF management and share with SPMU for approval. All E&S plans and instruments [ESMP, IPP (if required), BMWWP, and ICWMP] will be consulted with relevant stakeholders periodically and disclosed whenever a new update is available. Once the site specific ESMP and other E&S plans are approved, it will be followed for implementation. All E&S plans involving management of health care facility staffs and/ or construction workers will follow the Labor Management Plan (LMP) for the project. The site-specific

E&S plans will be prepared as part of the detailed design/ DPR under the guidance of E&S specialist(s) at the SPMU. The HCF In-charge and PMC will monitor the site specific ESMP implementation and report on monthly basis to SPMU. The SPMU E&S specialists will also conduct periodic site visits for monitoring. In addition, the sub-project will follow the norms and reporting as applied under the national/ state laws and guidance.

8 STAKEHOLDER ENGAGEMENT AND GRIEVANCE REDRESS MECHANISM

8.1 Key Stakeholders

Three types of key stakeholders have been identified under the project and includes (1) Affected parties – such as the patients, health care workforce, BSc students, staff of nursing colleges, state level departments and agencies (DoHFW, PWD, AAAS, AMSCL, NHM, State Nursing Council, etc.), and communities near the construction sites; (2) Interested parties – are those who have some interest in the project such as primary and tertiary health care services, NGOs/CBOs, non-clinical and clinical support services, other line departments and agencies, elected representatives including PRI/ADCs, media groups, academia and public at large, and (3) Vulnerable groups – who may get disproportionately impacted and who often do not have a voice to express their concerns or understand the impacts of the project. These are further detailed out in the Stakeholder Engagement Plan (SEP) prepared for the project.

8.2 Stakeholder Consultation During Preparation

As a part of the project preparation, preliminary stakeholder activities were carried out with key institutional and non-government stakeholders through group discussions and key informant interviews. These included: key officials of DoHFW and its Directorates, NHM, AMSCL, PWD, SIHFW, State Nursing Council, Atal Amrit Abhiyan, representatives from government hospitals, first referral units, community health centres, Sarathi- 104 Helpline representatives and community representatives such as Rogi Kalyan Samiti.

During these consultations, the AHIDMS personnel disclosed the project information and ensured that the views, interests, and concerns of all relevant stakeholders were taken into account in the project planning and design. These preliminary stakeholder consultations were carried out from July to December 2022. Table 1 of the Draft Stakeholders Engagement Plan summarizes prior stakeholder engagement activities.

8.3 Stakeholder Engagement Plan (SEP)

The Stakeholder Engagement Plan (SEP) prepared for the project is to ensure consultations under the project is carried out with stakeholders throughout the project lifecycle to inform them about the project, consider their views in the project design and to provide them with accessible and inclusive means to raise issues and grievances and allow SPMU- AHIDMS to respond to and manage such grievances effectively.

The Social specialist in the SPMU- AHIDMS will be the nodal person to anchor the SEP implementation. This will involve engaging with health care providers, existing health and community-based networks, media, local NGOs, community groups, local government institutions using a consistent mechanism of communication. For stakeholder engagement relating to the specifics of the project and project activities, different modes of communication will be utilized. For instance, in remote areas community platform such as SHGs and VHSNCs will be leveraged to improve trust in public health system and health seeking behaviour. Government officials will be reached through formal official communication, meetings/ workshops. For patients, modes of communication through hospital helpdesks, staff and health committees, social media, signages and videos at hospitals, pamphlets/brochures, etc will be considered. Whereas health care providers will be approached through formal communication and meetings/ workshops including social media. These are further detailed out in the SEP prepared for the project.

8.4 Grievance Redress Mechanism

Current Status: Assam has an integrated 24x7, multi-lingual⁴⁰ *Sarathi* Health Information Helpline Service operational since November 2010, using free and dedicated telephone number 104. *Sarathi* receives grievances related to emergency ambulance services, behavior of staff, corruption, epidemic, government schemes related to health, service delivery, availability of drugs/facilities, availability of staff/doctors, hygienic condition of health facility, etc. At present, 5 service improvement officers (SIO) have been engaged at the Helpline to: (a) Register grievances, (b) Report to NHM twice a day, (c) Inform the beneficiary and update about action taken, and (d) Capture beneficiary satisfaction.

From July- December 2022, SIOs have received 487 complaints, out of which 246 complaints have been resolved within an average duration of 49 days. Thus, the rate of resolution is only 50 percent.

Process: Once the complaint is registered in 104 Helpline, the SIO will log the complaint in the online grievance register and acknowledge the receipt of the complaint through a phone call or text message to the complainant. The acknowledgment will include the unique identification number so the complainant can use this as a reference to track the status of the complaint. The registered complaint will then be sent to the nodal officers designated at NHM and district health facilities for redressal. In case of SEA/SH allegations the SIO will only record (i) the allegation in the survivor's own words; (ii) if the alleged perpetrator is, to the best of the survivor's knowledge, related to the project; and, if possible, (iii) the age and sex of the survivor.

The resolution is communicated to the complainant. The SIO will close the grievance if he/she is satisfied with the resolution. The Helpline will aim to complete investigation within 45 working days of the grievance first being logged.

If beneficiary is not satisfied with the response, the SIO re-opens the case and sends the complaint again to the NHM nodal officer with beneficiary feedback remarks.

Improvements proposed: In order to strengthen the existing GRM system, the following additional steps will be undertaken:

- Assess the nature and type of complaints and how they are linked to systemic gaps
 - Assess the challenges causing longer duration in redressal of complaints (average time is 49 days)
 - Map the reasons challenges and assess the challenges causing only 50 percent resolution of complaints
 - Increase the scope of the Helpline by allowing following project related complaints to be received:
 - o Grievances related to planning and preparation of the project. E.g., land related, permits and clearances, non-disclosure, etc.
 - o Grievances caused by construction/renovation of targeted health facilities. E.g., pollution, etc.
 - o Concerns raised by project personnel including SEA/SH complaints related to the project.
 - Improve escalation process, wherein complaints are referred to the appellate authority- Project Director, AHIDMS for resolution.
 - Maintain confidentiality and anonymity of complainant, when requested.
 - Create awareness and disseminate information about *Sarathi*- radio jingles, advertisements and posters circulated in hospitals and public spaces.
 - Differentiate complaints that are related to the project vs. other complaints.
 - Build capacity of the operator and SIOs on SEA/SH and GBV response mechanism.
- Referral to the following nodal officers for redressal of grievances pertaining to other implementing departments and agencies:

⁴⁰ Assamese, Bengali, Hindi and English

Level	Department/Agency	Nodal Officer- Grievance Redressal
State	Directorate of Health Services (DHS)	Joint Director, DHS (HQ)
State	Directorate of Medical Education (DME)	Deputy DME
State	Atal Amrit Abhiyan Society & Pradhan Mantri Jan Arogya Yojana	Grievance Coordinators
State	Director of AYUSH	Deputy Director, AYUSH
State	National Health Mission (NHM)	Executive Director, NHM
District	Health Facilities	Hospital Manager- District Hospitals
District	DHS office at district level	Joint Directors, DHS (district)
State/ District	Organisations offering survivor-centric services e.g., 181 Helpline, One-Stop Centres	Staff of the organisation

Complaints related to Workplace SEA/SH

Each department is mandated by the *Sexual Harassment at the Workplace (Prevention, Prohibition and Redressal) Act, 2013* (POSH Act) to form an Internal Complaints Committee (ICC) to address workplace related SEA/SH complaints. The implementing departments will ensure that the contact information of ICC is displayed in the office and that regular trainings/orientation programs are organised for staff and ICC members.

8.5 Process of Disclosure

All relevant documents of the project, such as the ESMF, SEP, and ESCP including the site-specific plans will be disclosed and made accessible to all stakeholders. The information will be disclosed through all possible means, ranging from face-to-face consultations with the project stakeholders, distribution of hard copies, posters, leaflets, and brochures, and AHIDMS website and local media so that the documents are accessible to all project beneficiaries of the project, including those in residing in the remote areas.

9 INSTITUTIONAL ARRANGEMENTS, RESPONSIBILITIES AND CAPACITY BUILDING

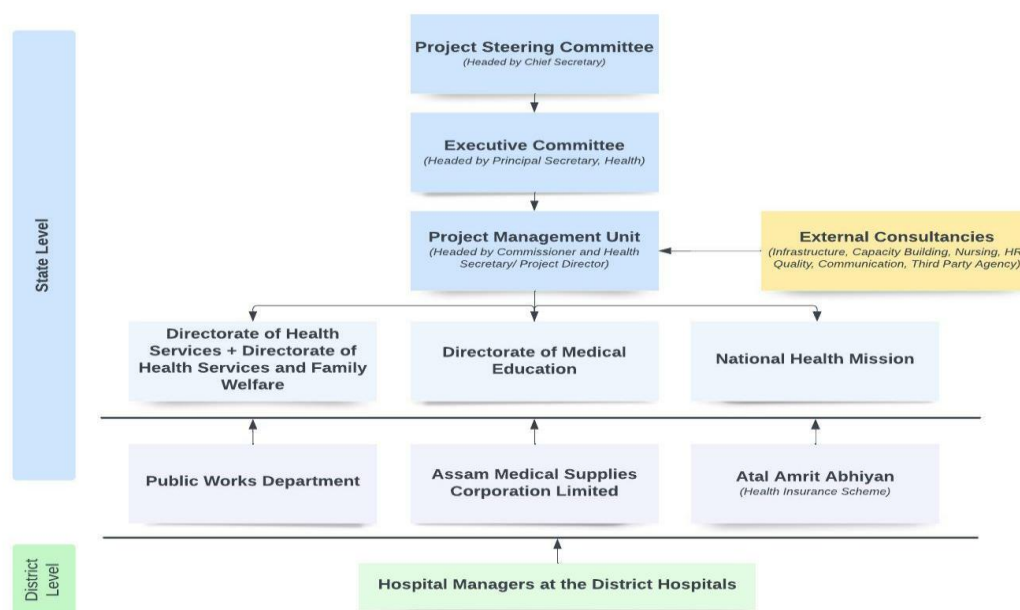
9.1 Institutional Arrangement

The Assam Health Infrastructure Development and Management Society (AHIDMS) will be responsible for the implementation of the project and hence designated as the State Project Management Unit (SPMU). The project governance structure will include: (i) Project Steering Committee chaired by the Chief Secretary to oversee overall project implementation, and (ii) Executive Committee, headed by Principal Secretary (Health and Family Welfare). The SPMU will be headed by the Commissioner & Health Secretary, HFWD who will be designated as the Project Director. SPMU will be supported with staff including environmental and social development specialists to support implementation and coordination of the project at the State level. State is committed to create the cadre of Hospital Managers who will be hired for each district hospital for overall management and implementation of project activities at the district level. Given the project design, which requires coordinated action by the three directorates within the HFWD, the designation of the Commissioner & Health Secretary, HFWD, the senior-most official within the department, as the Project Director is critical to effective implementation. The DHS and NHM are responsible for managing secondary-level health facilities, manages administration of districts, human resource allocation and deployment and ensuring quality of care across facilities, will lead implementation of activities contributing to improved quality of care (Component 1 and 2). The DHS-FW and DME is responsible for planning, monitoring, and management of nursing cadre and pre-

service education (nursing) will lead and contribute to part of activities related to HRH and pre-service education under Component 2 and 3. In addition, PWD, NHM and DHS will coordinate overall infrastructure development for secondary health care and hence lead the activities under Component 3. Finally, AAAs and ASMCL which are responsible for health financing and medical supplies will lead the efforts to create enabling environment for improved access to an expanded scope of health services. The point person from each of these entities (administrative and technical staff) at the state are identified for coordinating implementation of project activities. The project will have a provision to support and strengthen the different entities capacity and skills through additional consultants and advisors.

Further, as the State is implementing a World Bank health operation for the first time, the SPMU will be supported by technical consultants to support planning and management of various project activities, and capacity building on fiduciary and environmental and social aspects.

Figure 2: Institutional arrangements under the project



9.2 Monitoring and Evaluation

Monitoring and Evaluation

Under Component 1, the IPA will include objectives, key results, and indicators reflecting those results, as well as financing tied to the composite performance score of the IPA, including Action plans defined for accomplishing the results. Indicator definitions and reporting procedures will be specified, with reporting aligned to the existing health management information system (HMIS) and other reporting or documentation systems, while the IPA results will be assessed each quarter by certified assessors. The district level IPAs will be focused on key structural quality elements such as planning, budgeting, and coordination; user experience targeting women patients; and core metrics for content-of-care quality. The State level IPAs will focus on institutional reform, create enabling environment for districts to perform and address supply side intervention at State level in terms of resource allocation and autonomy. Internal and external verification procedures will be specified in the IPA. Regular results assessments will be institutionalized, and data availability will be enhanced through the creation of a dashboard to track NQAS scores of each facility. The achievement of performance indicators reported by the administrative units and health facilities which are parties to the IPAs will be verified in two ways:

- Internal verification by an existing pool of HR who are currently tasked with various quality assurance (QA) activities.

- (b) External verification by an independent external agency for the counter-verification of results confirmed by the internal verification system. This external agency will independently assess a sample of the reported results as well as the use of financial incentives by different levels.

Component 2 will invest in select DHs to improve process quality towards NQAS certification to support state, district and facility specific quality improvement plans, and on-site mentoring to DHs to implement the standard operating procedures, essential drugs and equipment list, practice of standard treatment guidelines, and improvements in referral linkages with primary and tertiary care. The monitoring activities and organization shall be aligned to the Quality Assurance activities and hence, monitored for their availability and level of implementation, including BMW Management, citizen engagement, patient safety and experience, gender inclusion, including respectful maternity care.

Monitoring of BMW Management shall include but not be limited to following key aspects:

- Organizational set up at state, district and facilities levels covering human, financial and technical resources including formation of advisory committees at the state and district levels and their regular operationalization
- Compliance status of HCFs for BMW management rules 2016 and reasons for gaps.
- Formation and operationalization of facility level BMW Management committees.
- BMW material and equipment resources at facilities level. This includes additional supplies e.g., PPE, Bins, bags etc for surge in BMW due to disease outbreaks such as Covid-19.
- BMW Management practices e.g., segregation levels, sharps management systems, duration of storage of BMW in facilities, etc.
- Occupational health and safety provisions at facilities and their implementation e.g., Post Exposure Prophylaxis (PEP) availability, immunization status of health functionaries etc.
- Incidents and accidents monitoring including sharps injuries, hospital acquired infections, mercury spills and their management etc.
- Training and capacity building activities conducted at various levels of the healthcare delivery system on BMW Management.
- Availability of WASH services and usage of clean water and proper sanitation in health facilities.

In addition, the monitoring and supervision shall also include management of wastes other than BMW, electricity, water conservation and waste minimization measures as part of green hospital actions under Component 3. These measures shall be monitored in terms of their availability and status of implementation in the selected healthcare facilities under the project.

Infrastructure improvement activities under Component 3 shall include revamping of infrastructure (minor civil works) in selected health facilities (about 25 facilities), major civil works for upgradation of lower-level health facility to DH (up to 10 locations). Project management consultancies (PMC) shall be hired for monitoring and supervision of civil works, and architectural design and innovation support. Their monitoring shall be governed by their specified terms of reference by the SPMU, which will include monitoring and reporting on parameters such as E&S screening and assessment, land and livelihood related impacts, grievance redressal, social inclusion, labour standard compliance, community and occupational health and safety, among others. In addition, the Civil Works Contracts shall include requirement of site specific ESMP to be developed and implemented by the Contractors taking into consideration the EHSS requirements as specified in the Civil Works Contract. Suggestive list of EHSS elements is attached in the Annexe-IV.

The SPMU-AHIDMS will provide overall monitoring, reporting, and benchmarking of the performance under the project. The AHIDMS will develop monitoring template to be used for monitoring the progress on implementation of E&S measures (ESMF, SEP, ESCP and site-specific plans). The routine data will be collected from PMC and other agencies as per this Performa. The AHIDMS will also monitor the E&S indicators related to gender and citizen engagement specified in the results framework (refer to the PAD).⁴¹ The project will provide quarterly updates on the progress of the project to the World Bank and will publish an annual report every year (coinciding with the financial year of the state), capturing the civil works progress made under Component 3 and progress against the Action Plan for IPA and Annual Quality Improvement Plans under Components 1 and 2.

9.3 Training and Capacity Building

As the State is implementing a World Bank health operation for the first time, it is crucial that the implementation of activities is carried out by trained and capable manpower in environmental and social aspects, at all functional levels of the health facilities. Hence, the project will provide a range of training and capacity building support on managing environmental and social risks associated with the project to different functionaries employed at all the functional levels- including those involved in transporting the biomedical wastes. The training on E&S aspects shall be as far as possible integrated with overall quality training leading to NQAS certification. A training calendar will be developed for the project. An indicative list of training foreseen to be implemented includes:

- Orientation training to staff of AHIDMS, DoHFW and its directorates (DHS, DHS-FW and DHME), and NRM on World Bank ESF and its implementation modality (screening, scoping etc.) and various provisions of the ESMF, SEP and ESCP.
- Training to DHS, NRM and healthcare facilities staff on:
 - BMW management to all healthcare workers across all HCF facilities in the state including those transporting BMW.
 - Occupational health and safety, infection prevention and control, community health and safety.
 - Grievance redressal and feedback mechanism.
 - Gender sensitization, including prevention and response to GBV/SEA/SH.
 - Patient safety and experience, including respectful maternity care.
 - Supply chain management (SCM) and use of indenting and stock management application to improve program management and reporting and covering green procurement procedures.
 - Trainings on energy and water conservation, resource efficiency, suitable building materials, waste minimization strategies covering recovery, reuse, reduce and recycle measures.
 - The training provided under NHM on biomedical waste management covering infection prevention and control will continue and will be further strengthened.
- Training to EPC contractors and the labours/workers engaged for civil works on:
 - ESMF requirements including exclusion criteria and screening process for E&S assessment.
 - Occupational health and safety, infection prevention and control, community health and safety.
 - National and International labour standards which govern the conditions of employment of workers.

⁴¹ Intermediate Results Indicators related to CE- (i) Number of District hospitals with functional RKS (with segregated information on % of female representation from the community); (ii) Annual satisfaction and patient experience surveys in targeted hospitals (report disseminated on project portal); (iii) track GRM redressal rate annually (from year 3, increase to 75%).

- Grievance redressal and feedback mechanism.
- Gender sensitization, including prevention and response to GBV/SEA/SH and CoC.

Additional training will be identified during project implementation

9.4 Indicative Budget

An indicative budget is prepared for implementing the ESMF. Mitigation actions to be deployed during civil work etc. will be part of the detailed project reports and their specific ESMPs.

Table 10_ : Indicative Budget for ESMF Implementation		
S.No	Item	Estimate (USD)
1.	E&S Mitigation activities	800,000 USD
2.	Human Resource and management	300,000 USD
3.	E&S related capacity building	300,000 USD
4.	Establishment of GRM mechanism	300,000 USD
5.	Implementation of SEP	300,000 USD
6.	Preparation of ESMPs, IPPs (where needed), BMWMP and ICWMP for all sub-projects*	3,000,000 USD
Total		5,000,000 USDTBD
Note: *Will be part of the sub-project detailed project report and budget		

Annexures

Annex I: Screening Format for Environmental and Social Risks/Impacts

The Screening checklist is applicable to any civil work activities leading to repair, renovation, expansion and/or construction of district hospitals, and secondary health facilities under the project. This form is to be used by architectural firm to rule out any adverse environment and social impacts due to program intervention under the guidance of the State Project Management Unit (SPMU) to screen for the potential environmental and social risks and impacts of a proposed sub-project.

Name of the District	
Name of the Block/ Town	
Category of Health Facility	DH/SDH/CHC
Name of facility	

(Please provide answer to each sub-part of the question as far as possible)

Sl.No.	Key Question	Answer		Due diligence/ Actions
		Yes	No	
1	Is there any risk/ impact/ disturbance to forests and/ or protected areas because of subproject activities?			If yes, any interventions should be avoided.
2	Is the Health Facility within 100 meters of any cultural, historic, religious site/ buildings?			If yes, any interventions should be avoided ⁴² .
3	Is the Health Facility between 100 - 200 meters of any cultural, historic, religious site/ buildings?			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	Is the Health Facility located in a sixth scheduled area (tribal)?			If yes, determine the level of impacts on indigenous communities. High risk sub-project to be excluded from the project. Prepare an IPP for substantial to low risk sub-project.
5	Will the subproject result in demolition of existing health facility/ utilities/ staff accommodation in the vicinity?			Please specify the structures and its total area (sq ft) to be demolished.
6	Have alternate location been identified to temporarily shift the facility/utilities/staff?			Please specify the distance from the site.

⁴²Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010 there is ban on construction within 100 metres of a centrally protected monument and regulated construction within 100-200 metres construction. Any construction activity within 100-200 meters of the monument requires ASI permission.

Sl.No.	Key Question	Answer		Due diligence/ Actions
		Yes	No	
7	Does the subproject require additional land for upgradation/expansion/construction?			Please specify the area (sq ft).
8	Will the additional land requirement be met through land acquisition or direct purchase?			If yes. It is not supported by the project. Alternate options to be explored.
9	Will the additional land requirement be met through transfer from another government department?			If yes. Follow government norms for transfer. Construction activities can be initiated only after transfer is completed.
10	Does the subproject require any informal/ illegal occupants' removal in case of any upgradation/expansion in health facility?			Please provide details. If yes, such interventions should be avoided. Alternative options to be explored. However, if completely unavoidable, approval from World Bank to be taken and necessary assessment and safeguard tools to be prepared as per ESS 5.
11	Does the subproject involve recruitment of workers including direct, contracted, primary supply, and/or community workers?			Follow the Labor laws provisions including the welfare measures.
12	Does the subproject require shifting of any common property resources (CPRs) - such as water supply structure; sanitation structures; power supply infrastructure etc. or approach way			Adequate provision to be made for shifting of the CPR along with proper coordination with respective departments and consultations with local users of the CPR/ community.
13	Does the subproject require obtaining Environmental Clearance from State Environmental Impact Assessment Authority?			If yes, proceed to initiate the process as required by Environmental Impact Assessment (EIA) Notification 2006 & and subsequent amendments, including Draft Notification March 2020
14	Is there civil works/building rehabilitation civil work planned at the facility that is likely to lead to following impacts? ⁴³ <input type="checkbox"/> Increase in dust and			If yes, an Environment and Social management and monitoring plan to be prepared and shall include among other things: <ul style="list-style-type: none"> All legally required permits (to include not limited to resource use, dumping, sanitary inspection permit) have been acquired for

⁴³ It is expected that the HCFs to be renovated/refurbished will pass the screening criteria with no problem and will be found suitable for improvements and any small civil works required. In such cases the standard mitigation measures would be all that is needed to minimize any risk of negative environmental and social impact. The generic Environmental and Social Management Plan (ESMP) of this ESMF would apply in these cases.

Sl.No.	Key Question	Answer		Due diligence/ Actions
		Yes	No	
	<p>noise from demolition and/or construction</p> <p><input type="checkbox"/> Generation of construction waste</p> <p><input type="checkbox"/> Impacts on accessibility to the facility</p> <p><input type="checkbox"/> Excavation impacts and soil erosion</p> <p><input type="checkbox"/> Increase sediment loads/wastewater discharges in receiving water</p> <p><input type="checkbox"/> Removal and disposal of toxic and/or hazardous substances⁴⁴</p> <p><input type="checkbox"/> Increase in soil erosion or changes in local drainage pattern</p>			<p>construction and/or rehabilitation.</p> <ul style="list-style-type: none"> • 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.
15	Is there a STP-ETP/ Soak Pit in the facility, if facility is 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	Does the facility have an Individual wastewater treatment system?			If yes, ensure that discharges into receiving waters meeting adequate water quality standards as prescribed by State pollution Control Board/ Central Pollution Control Board.
17	Is there adequate provision of (a) potable drinking water and (b) sanitation services at the facility?			If no, specify the mitigation measures to be adopted to provide adequate supplies of potable drinking water and sanitation services
18	Does the facility have a valid authorization from State Pollution Control Board, under BMW Rules, 2016 for generation, handling and transportation of BMW?			If no, ensure compliance requirements of Biomedical Waste Management Rules, 2016 and amendments thereof 2018
19	Are appropriate colour coded bins/ bags as per BMW Rules, available and being used for bio-medical waste segregation?			If no, specify compliance requirement to Schedule I of BMW Rules, 2016

⁴⁴Toxic / hazardous material includes and is not limited to asbestos, toxic paints, removal of lead paint, etc.

Sl.No.	Key Question	Answer		Due diligence/ Actions
		Yes	No	
20	Is Biomedical Waste handling equipment in (a) adequate number, (b) in good working condition and (c) available in key areas generating BMW e.g., OPD, dressing room, Labour room, operation theatre, laboratory etc?			If no, then specify the on-site measures/ equipment needed for waste segregation and follow CPCB guidelines on (i) <u>CPCB Implementation Guidelines for Management of Healthcare Waste in Health Care Facilities as per Bio Medical Waste Management Rules, 2016</u> (ii) <u>Guidelines for Management of Healthcare Waste as per Biomedical Waste Management Rules, 2016</u> (iii) <u>Guidelines for Bar Code System for Effective Management of Bio-medical Waste</u>
21	Is the subproject facility connected to a Common Biomedical Waste Treatment Facility (CBMWTF)?			If No, then specify the availability and current status of on-site measures for waste disposal such as Deep Burial Pit, Incinerator, sharps pit etc
22	Is there a temporary storage area for storage of BMW separate from general wastes storage?			If no, ensure designation of an identified area for collection and temporary storage of BMW as per CPCB Guidelines.
23	Is there a procedure to assess and manage workplace hazards and risks, based on the best practice guidelines e.g. WBG General EHS guidelines ?			If no, design a procedure and carry out hazards identification and risk assessment (see point 27 for risk assessment)
24	Are there following occupational health and safety and infection prevention and control procedures and arrangements available for healthcare and sanitation workers? Personal protective equipment? Preventive immunizations? Periodic health screening? Safe work procedures to handle sharps, infectious wastes etc.? Incident and accident reporting and investigation? Other, specify			If no, ensure availability of appropriate PPE e.g. gloves, face masks, gown, boots etc., and train workers for their usage. Ensure provisions for preventive immunization against Hepatitis B and Tetanus. Implement preemployment and periodic screening of workers on annual basis Ensure availability of needle cutters and safe work practices for handling sharps and infectious wastes. Ensure availability of hand washing and environmental cleaning and sanitation procedures. Develop SOP for accident management and systems for reporting and recording: <ol style="list-style-type: none"> i. Occupational accidents and diseases ii. Dangerous occurrences and incidents iii. These systems should enable workers to report immediately

Sl.No.	Key Question	Answer		Due diligence/ Actions
		Yes	No	
25	Are there procedures and tools e.g., spill kits available and used to manage accidental spills due to blood, Mercury etc.?			If no, follow NHM Infection Management and Environment Plan (IMEP) guidelines ⁴⁵ and CPCB guidelines on management of mercury. ⁴⁶
26	Does the facility have appropriate fire safety Infrastructure and norms?			If yes, specify the infrastructure and procedures / plans available. If No, Fire safety recommendations applicable to occupational areas are presented under 'Occupational Health and Safety' in the <u>WBG General EHS Guidelines</u> ⁴⁷ <u>Additional recommendations for fire safety include:</u> i. <u>Installation of smoke alarms and sprinkler systems</u> 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).

Health Facility/ Laboratory In-charge

Name.....

Designation:

Phone No.

Signature

Date:

27. The outcome of the screening process is to categorize the sub-project in terms of its environmental and social risks. Below is the key consideration for risk rating.

- **High Risk:** Projects with potential significant adverse social or environmental risks or/an impacts that are diverse, irreversible or unprecedented. (Based on initial screening such activities are not part of project design and are ineligible for financing under the project.)
- **Substantial Risk:** Projects with potential moderate adverse social or environmental risks and/or impacts that are moderate in number, mostly reversible and possible addressed through mitigation measures.
- **Moderate Risk:** Projects with potential limited adverse social or environmental risks and/or impacts that are few in number, generally site-specific, largely reversible and readily addressed through mitigation measures.

⁴⁵ <https://nhm.gov.in/index1.php?lang=1&level=2&sublinkid=1083&lid=151>

⁴⁶ http://cpcb.nic.in/uploads/hwmd/Guidelines_for_ESM_MercuryW_fromHCFs.pdf

⁴⁷ <https://www.ifc.org/wps/wcm/connect/9aef2880488559a983acd36a6515bb18/2%2BOccupational%2BHealth%2Band%2BSafety.pdf?MOD=AJPERES>

- **Low Risk:** Projects with minimal or no adverse social or environmental risks and/or impacts.

Proportionate to the sub-project's risks and impacts (substantial, moderate or low), the level of detail and complexity of the ESMP and other E&S instruments (IPP, where required; BMWMP; and ICWMP) to be prepared for all sub-projects would be considered, consistent with the mitigation hierarchy and the World Bank ESSs.

Annex II: Generic Biomedical Waste Management Plan

Introduction

Biomedical waste management (BMWM) Plan is a management tool for effective management of BMW and associated risks on health functionaries and communities. Biomedical waste management is an essential requirement for compliance to the Biomedical Waste Management Rules, 2016 and for managing environmental, occupational health and safety, community safety aspects and their impacts under Environment and Social Management Framework (ESMF) of the project. The component 2 of the project concerned with the process quality improvement that includes BMW Management system strengthening as an essential element of overall quality improvement.

Current status of the health sector and BMWM in the state

This section covers description of the health sector in the state i.e.an overview of the state department of health and the type of the health facilities and location, key health manpower and their distribution etc.

The section covers current assessment of BMW Management in the state health facilities, as carried out by assessing the information collected through administered questionnaire and through compilation of state health statistics from various routine health reporting instruments. The assessment must include estimates of the types of wastes generated, average rate of generation and location, arrangements for handling, storage, treatment and disposal of the wastes. In addition, an assessment of the current practices and adverse impacts on health, safety and environment needs to be accounted for in the section. This would also include assessment of current epidemic outbreaks that might be occurring in the country as well as the world that may have potential impacts on healthcare systems e.g., Covid-19 pandemic in the current situation.

Framework of regulatory and other mechanisms for BMW management

The section includes information about the various international and national regulatory and other mechanisms governing environmental aspects in health sector. Such instruments set the boundaries for managing BMW at national and local levels. These include but not limited to following:

- international multilateral environmental agreements such as Minamata Convention, Stockholm convention,
- WHO guidelines on BMW Management and outbreaks management e.g., Covid-19 pandemic etc.
- World Bank best practices and specific guidance.
- National regulation on BMWM e.g., BMWM Rules, 2016 and associated Central pollution control board guidelines, public health guidelines etc.
- Other environmental regulations e.g., Air act 1974, Water act 1981, etc.

Organizational arrangements

At the state level (SPMU)

The organizational arrangements include a nodal officer appointed with the responsibility for BMW Management, supported by a technical specialist in Environment management. The roles and responsibilities of the nodal officer and BMWM team need to be specified at the outset.

At the state level, constitution of a state level BMWM Advisory committee, headed by Secretary-Health, is required to monitor BMW management and coordinate among stakeholders. The committee need to include representatives from stakeholder organizations such as state departments e.g., pollution control board, labour inspectorate, NGOs, Professional associations-

doctors, nursing, dentists etc., medical and nursing educational institutions, NGOs etc. In addition, a District level committee, headed by District Magistrate may be set up for district level coordination functions.

Facility level

BMWM Committee at facilities: For larger facilities e.g., medical college, district hospital etc, such committee to have representatives from different clinical, pathology, laboratory and engineering / sanitation departments etc. The TORs covering roles and responsibilities to be specified in the plan. For smaller facilities, smaller teams with representatives from clinical area, laboratory and sanitation to be constituted.

Training and capacity building

The section covers an account of assessment of training needs of different categories of health workers at different tiers of functioning need to be made up. Based on the identified needs, training plan for awareness and training on BMW management covering state health facilities including private ones is required to be in place. The training sessions need to be designed for specific groups of workers.

The BMW Management plan must be supplemented with an Information, Communication and Education (IEC) plan covering types of communication modes, target populations and messages etc. to be prepared and implemented across the state targeted to health workers, visitors and patients and general community living near the health facilities. The plan needs to cover clear messages on BMW in the facilities and its impacts as well as responsibilities of various stakeholders. The IEC must also include information about grievance redressal mechanisms available to the communities on project activities related to BMW management.

Measures for the strengthening of capacity of SPMU need to be identified and specified. Such measures may include technical support of Environment Specialist, orientation of Nodal officer and team on World Bank requirements on ESMF including BMW, regulatory and other requirements and technical measures required for BMW management. Availability of budgetary provisions for BMW Management with clear indication of measures planned as per the BMW plan need to be put in place.

Implementation of waste management in health facilities

The implementation plan covers details of options and mitigative measures to be implemented covering entire cycle of different types of BMW at facility level including special provisions for meeting requirements during outbreaks, including following:

- Generation of waste
- Segregation
- Handling and storage within the facilities
- On-site treatment of wastes e.g., disinfection, microwaving, incineration, deep burials etc.
- Transportation to external facilities
- End treatment
- Final disposal
- Compliance status

Resources and tools for BMW management

Effective management of wastes such as sharps and infectious wastes cannot be achieved without provision of safety to waste handlers and proper equipment for storage and transportation of wastes. Therefore, an account of various BMW tools and other resources e.g., waste collection bags, trolleys, needle cutters, personal protective equipment, disinfectants etc., must be included in the plan.

Occupational health and safety provisions to be implemented at health facilities covering:

- Infection, prevention and Control (IPC) protocols for biological hazards, with special emphasis for high-risk infectious diseases agents for health sector workers e.g., MERS, SARSCov2, Ebola etc.
- Safe work practices for hazardous works e.g., handling sharps, cytotoxic drugs, radiation work, environmental sanitation, etc.
- Preventive immunization of health workers against Hepatitis B
- Availability of Post Exposure Prophylaxis against HIV infections.

Key points for daily supervision of BMW implementation by Nodal officer / members of Waste Management Committee is required, covering following minimum aspects:

- Segregation of waste into appropriate bags and bins.
- Availability and use of needle cutters, waste collection and transportation materials etc.
- Availability and use of personal protective gears by waste handlers.
- Regular environmental cleaning e.g., cleaning of walls, surfaces and equipment etc by housekeeping staff.
- Regular transport of biomedical wastes from wards / clinics to central wastes storage area (if present) or to deep burial site / common treatment facility and quantities of wastes disposed.

Monitoring and evaluation mechanism

Monitoring and evaluation mechanisms need to be specified at state, district and facility levels, with role and responsibilities and resources available for carrying out activities. The monitoring activities and organization must be aligned to the Quality Assurance activities for patient safety.

Details of procedures for supervision and monitoring of BMW to include but not limit to following key aspects of BMW Management:

- Organizational set up at state and facilities level- Human, Financial and technical resources
- Institutional mechanisms across departments and various disease control programs for coordination of BMW management.
- Compliance status of HCFs under BMW Management Rules, 2016
- BMW material and equipment resources at facilities level. This includes additional supplies e.g., PPE, Bins, bags etc for surge in BMW due to disease outbreaks such as Covid-19.
- BMW Management practices e.g., segregation levels, sharps management systems, duration of storage of BMW in facilities, etc.
- Occupational health and safety provisions at facilities and their implementation e.g., PEP availability, immunization status of health functionaries etc.
- Incidents and accidents monitoring including sharps injuries, hospital acquired infections, mercury spills and their management etc.
- Training and capacity building activities at various levels of the healthcare delivery system on BMW Management.
- Availability of WASH services and usage of clean water and proper sanitation by health facilities
- Number of health facilities accredited with Quality certification.

Appendix

Covering specific details of the areas as specified in the plan need to be added. A suggestive list may include following at the minimum:

- Organizational set up for BMW management at various functional levels
- List of regulatory and other requirements for BMW management in the state
- Types of BMW and their potential impacts and available treatment and disposal options, based on specific assessment study e.g., ESIA study and based on state data compilation
- Composition and TOR of State, district and facility level BMW Management committees

- List of key monitoring indicators for BMW management

Annex III: GBV, Sexual Exploitation and Abuse (SEA)/ Sexual Harassment (SH) Guidance

The SEA/SH risk of the project has been rated 'Low' through the application of the SEA/SH screening tool for civil works and health. The construction of district hospitals might draw laborers from outside the state or from neighboring districts, posing a risk to the host communities. Similarly, the project will finance the recruitment and deployment of the health workforce, which may exacerbate the risks of sexual harassment and sexual abuse in the workplace. To address the risk of SEA/SH, it is important to build capacity of all project personnel and health care professionals by sensitizing them to GBV, sexual exploitation and abuse (SEA) and sexual harassment (SH) issues and measures as part of their training, and address mandatory provisions of *'The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013'* in the DoHFW and its directorates, line departments and in project facilities (district hospitals, nursing institutions). Additionally, HR policies of health institutions will be strengthened under the project laying out zero tolerance for SEA/SH at the workplace. Staff of implementing agencies, line departments including contract workers will also be subject to and trained on codes of conduct, for interacting with co-workers, beneficiaries, and local communities.

The following key measures will be undertaken:

Component 1: Improved governance and management capacity of health systems at state, district, and facility level			
S No.	Activities	Key Measures	Responsible Agency
	Allocation of grants to state level entities, district health societies and district hospitals against achievement of results according to the IPA.	Inclusion of indicators in health quality monitoring dashboard to measure user experience targeting women patients (personal safety, accessibility, quality of care, etc.) Action plan to embed measures that strengthen health care staffs' capacity to manage and respond to SEA/SH cases – e.g., SOP for PWD entailing need for gender informed designing/planning of health infrastructures; resource allocation, trainings, and adoption of medico-legal proceedings relevant for sexual assault survivors in hospitals, etc.	SPMU-AHIDMS, DHS, NHM and consulting agencies
Component 2: Improved process quality and access to secondary healthcare system			
	Development and implementation of quality improvement plans to increase the quality of health services and overall accountability in the health system. Technical work for HRH reforms to improve quality	Awareness raising and information sharing at hospitals— on respectful maternity care; legal rights of SEA/SH survivors; information on referral to other relevant services (One-Stop Centres, 181 Helpline, legal, psychosocial, shelter, livelihood, etc.) through mapping of GBV service providers	SPMU-AHIDMS, DHS-FW and DME, DHS and NHM

	<p>and availability of health workforce through a robust HRH strategy and management framework. Strengthening governance and management system; and improvement in quality of pre-service education of nursing.</p>	<p>Adoption of legal proceedings such as (a) development of internal policy/protocol, (b) setting up of Internal Complaints Committee (ICC) in health institutions, (c) trainings and awareness building on ICC proceedings to healthcare staff— as per the requirements of the <i>Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013</i></p> <p>Trainings to health care providers (doctors, nurses, attendants) in hospitals and pre-service education institutions on the health response to GBV/SEA/SH.⁴⁸</p> <p>Develop a Code of Conduct (CoC) for the staff and workers that explicitly sets out standards of behaviour for all health care staff and conveys that breaches will be investigated and penalized.</p> <p>Design and implementation of gender-informed HRH strategies including improved pre-service nursing education.</p> <p>Prioritization of childcare, flexible work hours, creche facilities and career advancement opportunities for female employees at the DHs</p>	
Component 3: Improved structural quality and access to secondary care			
	<p>Upgradation of up to 10 CHCs and SDH to DH in newly formed districts</p> <p>Repairs and renovation of select secondary care facilities and DHs for NQAS certification</p> <p>Infrastructure improvement in nursing institutions</p>	<p>Ensure gender informed designing/ planning of health infrastructures.</p> <p>Setting up of grievance redressal mechanism for workers. The GRM will also be responsive to SEA/SH complaints.</p> <p>Sensitization of contractor’s key staffs and workers on prevention of GBV, SEA/ SH.</p>	<p>EPC Contractors; with supervision from PMC</p>

⁴⁸ [‘Guidelines and Protocols for Medico-legal care for survivors/ victims of sexual violence’ by MOHFW \(https://main.mohfw.gov.in/sites/default/files/953522324.pdf\)](https://main.mohfw.gov.in/sites/default/files/953522324.pdf) illustrating the need to play the dual role of responding to the survivors of sexual assault by providing required medical treatment and psychological support, and at the same time assist survivors in their medico-legal proceedings by collecting evidence and ensuring a good quality documentation.

		<p>Awareness building on the Code of Conduct (CoC) to ensure that contractor's staff understand the expectations of behaviour and have been informed of these standards.</p> <p>Creating awareness about GBV, SEA/SH services that one can access.</p>	
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Template of Workers' Code of Conduct

This Code of Conduct applies to all staff (healthcare workers, SPMU staff, etc.), labourers, and other employees at the project worksites. It also applies to the personnel of each contractor, sub-contractor and any other personnel assisting in the execution of civil works under the project. All such persons are referred to as "Personnel" and subject to this CoC. This code of conduct identifies the acceptable standard of behaviour required from all personnel.

The project workplace must be an environment where unsafe, offensive, abusive or violent behaviour will not be tolerated and where all persons should feel comfortable raising issues or concerns without fear of retaliation.

Required Conduct

Personnel shall-

1. Carry out his/her duties competently and diligently.
2. Comply with this code of conduct and all applicable laws, regulations, and other requirements, including requirements to protect the health, safety, and well-being of other personnel and any other person.
3. Maintain a safe working environment including by:
 - a) Ensuring that workplaces, machinery, equipment, and process under each person's control are safe and without risk to health
 - b) Wearing required personal protective equipment
 - c) Using appropriate measures relating to chemical, physical and biological substances and agents; and
 - d) Following applicable emergency operating procedures.
4. Report work situations that he/she believes are not safe or healthy and remove himself/herself from a work situation which he/she reasonably believes presents an imminent and serious danger to his/her life or health.
5. Treat other people with respect, and not discriminate against specific groups such as women, people with disabilities, migrant workers, or children.
6. Not engage in sexual harassment, which means unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature with other Employers Personnel.
7. Not engage in sexual exploitation, which means any actual or attempted abuse of a position of vulnerability, differential power, or trust, for sexual purposes, including, but not limited to, profiting monetarily, socially, or politically from the sexual exploitation of another.
8. Not engage in sexual abuse, which means that actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions.
9. Complete relevant training courses that will be provided related to the environmental and social aspects of the contract, including on health and safety matters, sexual exploitation and abuse, and sexual harassment.
10. Report violations of this code of conduct; and
11. Not retaliate against any person who reports violations of this code of conduct.

Raising Concerns

If any person observes behaviour that he/she believes may represent a violation of this code of conduct, or that otherwise concerns him/her, he/she raise the issue promptly to the (a) Personnel designated as a grievance redressal officer by the contractor, or the (b) Internal Complaints Committee (ICC) constituted by the contractor as mandated by Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013.

The person's identity will be kept confidential, unless reporting of allegations is mandated by the country law. Anonymous complaints or allegations may also be submitted and will be given all due and appropriate consideration. All reports of possible misconducts are seriously taken and will investigate and take appropriate action. There will be no retaliation against any person who raises a concern in good faith about any behaviour by this Code of Conduct. Such retaliation would be a violation of this code of conduct.

Consequences of violating the code of conduct

Any violation of this code of conduct by the contractor's personnel may result in serious consequences, up to and including termination and possible referral to legal authorities.

Annex IV:

Environment, social, health, and safety (ESHS) safeguard elements to be included in ESMP by the Contractor(s) for construction work projects

1. Scope- The scope of construction work shall be clearly identified for which the ESHS preventive and management actions shall be applicable. This shall be included in their contractual agreement for civil work constructions.
2. Regulatory and other requirements: The various rules applicable for managing ESHS during construction works shall be identified for their relevant sections requirements and listed for implementation. The laws related to key areas of concern i.e. labour welfare, health and safety and environmental protection shall be reviewed and their requirements identified for implementation.
3. Organizational ESHS policies
The ESHS policies requirements as committed by the client organization shall be reviewed and their requirements taken into consideration while managing ESHS during construction works.
4. ESMP implementation
The Contractor shall appoint qualified safety Officer(s) as per the regulatory requirements, for effective implementation of Plan at construction sites. In addition, the contractor shall ensure availability of technical support from time to time, to the project safety officers and supervisors on specific environmental and social aspects
5. Site Environment, Social, Health, and Safety (ESHS) Organization:
The site in-charge shall be overall responsible for implementation and assurance of all Plan requirements and their implementation. The responsibilities of key ESHS personnel e.g., Site in-charge, EHS Specialist / Coordinator, Subcontractor's safety officer / supervisor shall be specified.
6. ESHS Training

The Contractor shall develop and implement a site ESHS training plan covering ESHS hazards and risks during construction works for training and retraining of different cadres of workers and employees so as to improve awareness and implementation of safe work practices through appropriate behavioural change. The plan shall take into consideration job description and training need assessment of different categories of employees.

7. ESHS Inspection system

The Contractor shall develop and implement a system of continuous ESHS inspection of construction activities.

8. Hazards identification, risk assessment and control measures

The procedures for identification and assessment of hazards and risks associated with construction activities shall be developed by the Contractor, based upon regulatory requirements and best practice guidance available. The risks shall be characterized and control measures developed using "Hierarchy of controls" i.e., engineering controls to eliminate the hazard in first place, followed by administrative controls to reduce exposure, followed by use of personal protective equipment to reduce exposure to the workers.

9. Personal protective equipment

The Contractor shall identify requirement for personal protective equipment based upon risk assessment and make provisions for providing adequate number of PPE conforming to international specifications, develop plan for training of workers in their usage and mechanisms for monitoring their usage during activities.

10. Accident reporting and investigations

Mechanisms for recording, investigating and reporting of incidents and accidents shall be put into place, based on regulatory requirements, for all routine and non-routine activities. All accidents / incidents shall be investigated and corrective and preventive measures shall be identified and applied for their prevention in future. All incidents and accidents shall need to be reported to the client.

11. Emergency preparedness plan

Emergency response plan for all worksites covering key hazards and risks shall be developed as part of overall ESHS plan. The plan shall cover natural disasters, disease outbreaks and worksite events e.g., fire, structural damage, electrical incidents, fall from heights etc. The emergency procedures and organization for managing shall be designed and mock drills conducted at regular periods covering different emergencies.

12. Visitors' safety

Provisions for ensuring visitor safety shall be designed and implemented. In addition, risks due to visitors at work shall also be assessed and managed accordingly.

13. Traffic management

Traffic management plan covering transportation and receipt of materials and goods from vehicles at the construction site as well as internal transport and movement of vehicles and other equipment e.g., cranes, trucks etc shall be developed and implemented to protect the community as well as workers.

14. Safe work practices / procedures

Safe work practice based upon sound ESHS principles and best international practices shall be developed for activities with key hazards and risks. These shall include but not limit to the following:

Working at height

Excavation

Use of scaffolds

Crane usage

Blasting

General housekeeping and slip, trips and falls protection

Transportation of heavy materials,

Use of hand and power tools etc.

15. Work permit system

For high-risk activities requiring close supervision and control measures, work permits shall be used, approved by and under the supervision of qualified ESHS specialist / supervisor.

These may include but not limited to following:

Welding and cutting

Confined space work

Electrical work

Deep trench work, etc.

16. Manual lifting and carrying of weights

Provisions need to be in place for ensuring that manual lifting is done for weights as per the regulatory requirements. For heavy materials mechanical aids e.g., lifting tackles, pulleys, etc need to be in place and maintained throughout usage.

17. Occupational health and safety and welfare

Provisions shall need to be developed for the following aspects:

- Medical surveillance of workers covering pre-employment and periodic health examinations by a qualified medical practitioner as per regulations.
- Medical centre / Occupational Health centre-based upon regulatory requirements, the services of a qualified medical practitioner and facility for carrying out examination and clinical care shall need to be in place.
- Ambulance for carrying out sick / injured persons
- First aid boxes
- Drinking water
- Latrine and urinals for males and females separately

18. Alcohol and drug usage

Policies and procedures need to be in place for ensuring that workers do not consume these before coming for duty and on the worksites.

19. Grievance redressal mechanism

The contractor shall ensure that the grievance redress mechanism for workers is established, and workers are informed of its purpose and how to use it.

20. Prevention and response to SEA/SH

Mechanisms need to be in place to identify, prevent and manage SEA/SH incidents at workplace. The workers must abide by the Code of Conduct (CoC). Reporting of such incidents has to be based on regulatory and other requirements.

21. Prohibit Child and Forced Labour

Employment of child under 14 years of age will be strictly prohibited. Contractors will be required to verify and identify the minimum age of all workers through government identification documents.

22. Terms of Employment

The contractor will ensure that terms of employment of all workers are based on all applicable national laws and regulations.

23. Environment management

The contractor shall take all preventive and control measures to protect environment while carrying out activities at the construction sites. The key environmental parameters that shall be addressed, based on regulatory requirements and best practice guidelines and shall include but not be limited to following:

- Air quality monitoring and management
- Water quality management and water resources protection
- Waste management covering general, hazardous and construction wastes etc.
- Energy management
- Noise monitoring and management
- Vibration control

Annex- V

SI No.	Name of the District	Population as per Census 2011	Medical college functioning (Yes/No)	Whether District Civil Hospital is annexed with Medical College (Yes/No)	Proposed Medical College in the District (Yes/No)	No. of Health Institution					Other information				
						District Hospital	SDCH	CHC	PHC	SC	FRU (DH/SDCH/CHC)	Upgraded to HWC			
												PHC	SC	UHC	Total HWC
1	Baksa + Tamulpur	950,075				1		8	35	157	1	34	73		107
2	Barpeta + Bajali	1,693,622	Yes			1	1	11	50	262	3	50	134		184
3	Biswanath Chariali	612,491					2	3	26	139	2	24	24		48
4	Bongaigaon	738,804				1		4	29	108	2	29	45	1	75
5	Cachar	1,736,617	Yes			1		7	35	270	2	31	62	1	94
6	Charaideo	458,615					1	2	19	70	1	2	25	1	26
7	Chirang	482,162				1		4	23	87	1	22	34		56
8	Darrang	928,500				1		7	34	159	3	30	103		133
9	Dhemaji	686,133				1		5	23	98	3	22	81		103
10	Dhubri	1,394,144	Yes				1	9	33	192	2	31	95	1	127
11	Dibrugarh	1,326,335	Yes					10	31	234	2	30	197	2	229
12	Dima Hasao	214,102				1		3	12	76	1	12	37		49
13	Gowalpara	1,008,183				1		7	37	155	2	38	145	1	184
14	Golaghat	1,066,888				1	1	9	39	144	2	36	63		99
15	Hailakandi	659,296				1		4	14	107	1	15	66		81
16	Hojai	931,218				1		6	8	94	2	7	26		33
17	Jorhat	924,952	Yes				1	6	36	110	2	33	105	2	140
18	Kamrup Rural	1,517,542				1	1	13	65	283	9	66	239		305
19	Kamrup Metro	1,263,938	Yes			1		3	48	50	3	12	26	34	72
20	Karbi-Anglong	660,955	Yes					6	24	115	0	21	45	1	67
21	Karimganj	1,228,686				1		8	29	232	1	26	78	1	107
22	Kokrajhar	887,142				1	1	3	46	161	2	42	59		101
23	Lakhimpur	1,042,137	Yes				1	9	29	154	1	27	89	1	117
24	Majuli	167,304				1		2	8	34	1	8	24		32
25	Morigaon	957,423				1		6	34	141	1	35	83		118
26	Nagaon	1,892,550				1	1	12	72	258	5	57	148	3	208
27	Nalbari	771,639				1	1	10	45	124	4	42	92		134
28	Sivasagar	692,435				1	1	2	27	150	3	29	51	1	81
29	Sonitpur	1,311,619	Yes			1		6	29	146	2	30	79	1	110
30	South Salmara - Mankachar	555,114					1	2	7	51	0	6	16		22
31	Tinsukia	1,327,929				1	1	8	22	166	5	20	67	2	89
32	Udalguri	831,668				1		8	23	150	1	23	76		99
33	West Karbi-Anglong	295,558					1	2	18	50	0	19	8		27
	Assam	31,205,776	0	0	0	24	16	205	1010	4727	70	911	2495	53	3459