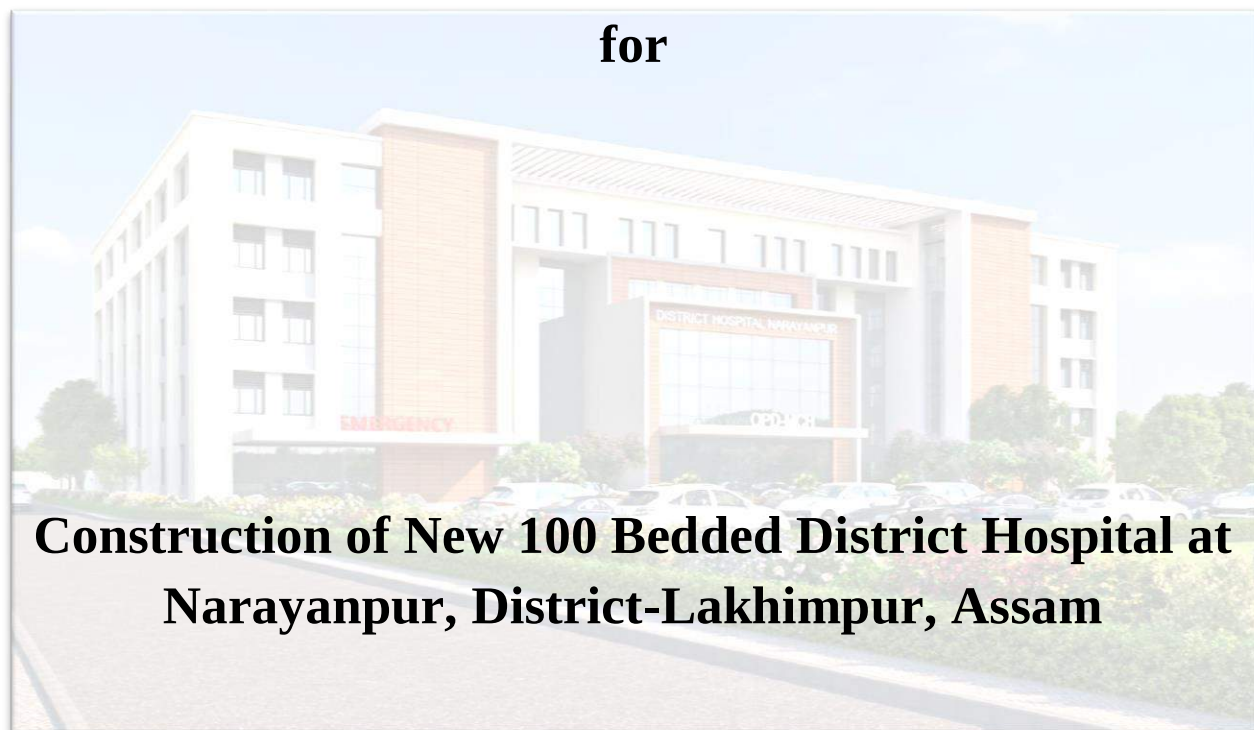


Environmental and Social Impact Assessment (ESIA) & Environmental and Social Management Plan (ESMP)

for



**Construction of New 100 Bedded District Hospital at
Narayanpur, District-Lakhimpur, Assam**

**Assam State Secondary Health Care Initiative for Service
Delivery Transformation Project (ASSIST)**

**Assam Health Infrastructure Development & Management Society (AHIDMS),
Medical Education & Research Development,
Govt. of Assam**

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LIST OF ABBREVIATIONS

AAAS-	Atal Amrit Abhiyan Society
AHIDMS-	Assam Health Infrastructure Development and Management Society
AHU-	Air Handling Unit
AMSCL-	Assam Medical Supply Corporation Limited
ANC-	Antenatal Care
ANM-	Auxiliary Nursing Midwifery
ASHA-	Accredited social health activist
ASSIST-	Assam State Secondary Healthcare Initiative for Service Delivery Transformation
AQM-	Automated Quality Management
BEE-	Bureau of Energy Efficiency
BMWM-	Biomedical Waste Management
BIS-	Bureau of Indian Standards
BPL-	Below Poverty Line
BSC-	Bio-safety Cabinet
CBWTF-	Common Bio-medical Waste Treatment Facility
C&D-	Construction and Demolition
CDC-	Centers for Disease Control and Prevention
CHC-	Community Health Centre
CMNND-	Communicable, Maternal, Neonatal and Nutritional Diseases
CPCB-	Central Pollution Control Board
CFL-	Compact Fluorescent Lamp
CTF-	Common Treatment Facility
DG-	Diesel Generator
DH-	District Hospital
DHS-	District Health Society
DHFW-	Departments of Health and Family Welfare
DoHFW-	Department of Health & Family Welfare
DME-	Durable medical equipment
DPR-	Detailed Project Report
EAP-	Employee Assistance Program
ECBC-	Energy Conservation Building Code
ECG-	Electrocardiogram
ECoP-	Environmental Code of Practices
EHS-	Environment Health and Safety
EMP-	Environment Management Plan
ESIA-	Environment and Social Impact Assessment
ESMP-	Environment and Social Management Plan
ESMF-	Environmental and Social Management Framework
ESS-	Environmental and Social Standards
EPA-	Environmental Protection Agency
ETP-	Effluent Treatment Plan
FAAMCH-	Fakhruddin Ali Ahmed Medical College and Hospital, Assam
FRU-	First Referral Unit

FPIC- Free, Prior & Informed Consent
GBV- Gender Based Violence
GLS- General Lighting Service
GoA- Government of Assam
GOI- Government of India
GRM- Grievance Redressal Management
HAI- Health care-associated infections
HCF- Health Care Facility
HIV- Human Immunodeficiency Viruses
HRH- Human Resources for Health
HQ- Head Quarters
H&S- Health and Safety
IGBC- Indian Green Building Council
IHD- Ischemic Heart Disease
IRC- Indian Road Congress
IP- Indigenous Peoples
IPA- Internal Performance Agreement
IPC- Infection Prevention and Control
IPHS- Indian Public Health Standards
IPP- Indigenous Peoples Plan
IPPF- Indigenous Peoples Policy Framework
IS- Indian Standard
JCB- Joseph Cyril Bramford
LED- Light Emitting Diode
LMO- Liquid Medical Oxygen
MCH- Maternal and Child Health
MHA- Ministry of Home Affairs
MMR- Maternal Mortality Rate
MoEF& CC- Ministry of Environment, Forest & Climate Change
MoHFW- Ministry of Health and Family Welfare
MoU- Memorandum of understanding
NAAQS- National Ambient Air Quality Standards
NBC- National Building Codes
NBCC- National Buildings Construction Corporation Ltd
NBSU- Newborn Stabilization Unit
NCD- Non-Communicable Diseases
NDMA- National Disaster Management Authority
NFHS- National Family Health Survey
NGO- Non Government Organization
NH- National Highway
NHM- National Health Mission
NICU- Neonatal intensive care unit
NOC- No Objection Certificate
NQAS- National Quality Assurance Standards
OHS- Occupation and Health Safety

O &M- Operation and Maintenance
OPD- Out Patient Department
ORT- Oral Rehydration Therapy
OT- Operation Theatre
PDO- Project Development Objective
PCU- Passenger Car Unit
PHC- Primary Health Centre
PM- Particulate Matter
PMU- Project Management Unit
PPE- Personal Protective Equipment
PUC- Pollution under control certificate
PwD- Person with a Disability
PWD- Public Works Department
RCC- Reinforced Cement Concrete
RMC- Ready Mix Concrete
RNTCP- Revised National Tuberculosis Control Programme
RTO- Regional Transport Office
RWH- Rain Water Harvesting
SC- Sub Centre
SDH- Sub-District Hospital
SEA/SH- Sexual exploitation and abuse/Sexual harassment
SEMP- Site Specific EHS Plan
SEP- Stakeholder Engagement Plan
SH- State Highway
SMACNA- Sheet Metal and Air Conditioning Contractors' National Association
SMP- Social Management Plan
STD- Sexually Transmitted Diseases
STP- Sewage Treatment Plant
SNCU- Special Newborn Care Unit
SPCB- State Pollution Control Board
SPMU- State Project Management Unit
SOP- Standard Operating Procedures
SC-ST- Scheduled Caste Scheduled Tribe
SS- Social Security
ToR- Terms of Reference
TSSU- Theatre Sterile Supply Unit
UNESCO- United Nations Educational, Scientific and Cultural Organization
USG- Ultrasound or Sonogram or Ultrasonogram
UT- Union Territory
WHO- World Health Organization

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

1.0 Introduction

Government of Assam (GoA) is implementing World Bank assisted “Assam State Secondary Health Care Initiative for Service Delivery Transformation Project (ASSIST)” Project under Assam Health Infrastructure Development & Management Society (AHIDMS), Medical Education and Research Department, GoA with an objective to initiate improvement in the quality and delivery of health care system in the state and under this project, 100 to 200 Bedded District Hospitals (DHs) are going to be constructed in 10 Districts of the state.

One of the proposed sites is Narayanpur in Lakhimpur district of the state where a new 100 Bedded District Hospital is proposed to be constructed at the premise of Mahatma Gandhi Model Hospital, Narayanpur (Lakhimpur), Assam. It has been envisioned that the proposed DH at Narayanpur (Lakhimpur) will come a long way in fulfilling the gap in providing secondary health care services to the people of the area.

2.0 Project Description

The proposed project involves construction of 100 bedded District Hospital at the premise of Mahatma Gandhi Model Hospital, Narayanpur (Lakhimpur), situated at 26°58'02.8"N 93°51'59.2"E. The proposed DH covers an area of 15,566 square meters which will house all the necessary contemporary facilities as per IPHS, 2022 norms which will further be human centric and GRIHA compliant.

3.0 Environment and Social Impact Assessment (ESIA)

The baseline environment and social attributes of the proposed site and the vicinity has been assessed to identify possible impacts of construction of DH on the same.

The screening of environmental parameters showed that all the results are within norms and thereby it can be derived that impacts arising during the construction works of the proposed project is not likely to have any major impact on the environment. However, site issues may occur which includes disturbance to top soil and existing green cover of the site, soil erosion and contamination, flooding due to surface runoff and water contamination, air pollution due to dust and smoke, noise pollution due to vibrations and noise coming out of construction activity.

Likewise social issues may occur at site which includes risks related to community health and safety, public inconveniences and disruption of medical service at Mahatma Gandhi Model Hospital, Narayanpur (Lakhimpur), due to construction activity, conflict between migrant workforce and local, risks of Gender based violence and SEA/SH at site and its vicinity and occupational health and safety of labors at site.

4.0 Environmental and Social Management Plan (ESMP)

The ESMP has been prepared considering the identified risks and impacts of construction of proposed DH at Narayanpur (Lakhimpur) along with the name of agency/department that is responsible for the mitigation action in a specified time period starting from the pre-construction period to construction and operation period.

As a part of mitigation measures, there is a need to obtain Consent/ Permit/ Clearance/ No Objection Certificate (NOC), etc. for establishment of new DH, RMC/ Batching Plant, Labor Camp, Storage for construction materials, tree felling, use of vehicles and equipment, connections

of water supply, electricity etc. by the Contractor who is assigned with the task of construction DH at Narayanpur (Lakhimpur).

The mitigation measures are planned against the identified environmental and social risks of the pre-construction and construction period of proposed project at Narayanpur (Lakhimpur). Proposed mitigation measures aim to protect, prevent and minimize environmental issues of disturbance of land, water, soil and air arising out of construction activity at site and surrounding areas. Further, the mitigation measures addressing the social issues will minimize and prevent risks to community health and safety, occupational health and safety of labors, and inconveniences and disturbance to public. The measures will also address road safety, stakeholder engagement for awareness and involvement in the project and prevent or mitigate Risks of SEA/SH to community members, particularly women and children by contractors' workers during construction period, workplace sexual harassment at project site (consultants and contractors' staff & laborers).

5.0 Stakeholder Engagement

World Bank's ESS10 recognizes that effective engagement with the stakeholders can significantly improve the project outcomes and their sustainability through better community acceptance and ownership, enhance the environmental and social sustainability of the project, and hence make a significant contribution to successful project implementation.

In view of the above, Stakeholder engagement through talks, interviews, and public meetings with the stakeholders were conducted for assessing their views and opinions on the project at Narayanpur (Lakhimpur). Suggestions of important stakeholders have been considered as inputs for preparation of the ESIA-ESMP. Site inspections that were required to confirm the information gathered have been carried out.

6.0 Alternatives

To implement the project at Narayanpur (Lakhimpur), State Government of Assam has provided the land i.e. land of Mahatma Gandhi Model Hospital, Narayanpur (Lakhimpur), so no alternate locations were explored for the project. The best building materials and technologies that are appropriate for the project site and surrounding environment will be used.

7.0 Conclusion and Recommendations

Based on the ESIA findings, it has been determined that there are no major negative effects of the planned project. However the proposed project shall have temporary negative impacts during the project construction period, which shall be reversed during the project operation. The report's objectives are in line with World Bank Safeguard Policies and Governmental (India and Assam) regulatory requirements.

It is recommended that the project implementing agency to Obtain all statutory clearances before start of activities and ensures that conditions/provisions are incorporated in the detailed design. ESIA-ESMP should be included in contract documents, Commitment from contractors to protect the environment and the people from any impact during project implementation.

CHAPTER-1

INTRODUCTION AND BACKGROUND

1-INTRODUCTION AND BACKGROUND

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. At present, Assam has 35 administrative districts. As per the Census 2011, the total population of Assam is 31,205,576 of which 15,939,443 are males while female are 15,266,133. Thus, the population of Assam forms 2.58 percent of the population of India in 2011. Assam is one of the highest maternal mortality rate (MMR) states, with around 205 deaths per 100000 live births in 2017-19 (Office of the Registrar General, India). Low ANC Coverage in Cachar, Bongaigaon, South Salmara Mancachar, Kokrajhar, and Increased Prevalence of anemia in women aged 15-49 years. Neonatal mortality rate and Still Birth (per 1,000 live births) rates have significantly decreased with the life expectancy at birth also improved (66.9) though it is below the national average of 69.4 years. The proportion of communicable, maternal, neonatal, and nutritional diseases (CMNND) contribute to 34.06% of total disease burden. Further, the burden of non-communicable diseases (NCDs) is growing in Assam.

The Assam State Government is planning to construct 100 to 200 Bedded District Hospitals (DHs) in 10 Districts of the state under “Assam State Secondary Health Care Initiative for Service Delivery Transformation Project (ASSIST)” Project. One of the proposed sites is Narayanpur in the Lakhimpur district of the state where a new 100 Bedded District Hospital is proposed to be constructed at the premises of Mahatma Gandhi Model Hospital, Narayanpur (Lakhimpur), Assam.

1.2 Requirement of New District Hospital

The Area is one of the major districts of Assam however it is worth noting that there is a high shortage of public healthcare services. The Public health facilities are predominant health service providers. Presently public healthcare services are provided by Gosaibari Sub-PHC, Bahugora Mini PHC, Menaha PHC, Howajan PHC are available at a distance of 15 km, but the facilities provided by those are not sufficient.

The proposed new District Hospital will be providing advanced health care services to the people of the locality as well as areas like Gosaibari, Bahugora, Menaha, Howajan etc.

At present, Mahatma Gandhi Model Hospital exists at the site which is catering the medical needs of the local people. Most of the patients who visit the Mahatma Gandhi Model Hospital are related to mainly obstetric cases coming from the nearby areas. The Model Hospital is providing health care services to a good number of patients. But the services are not adequate in terms of facilities, manpower, space, infrastructure and equipment. The Model Hospital will be upgraded to new 100 Bedded District Hospital with modern facilities and infrastructure.

1.3 Objective to undertake the Environmental and Social Impact Assessment (ESIA) and Environmental and Social Management Plan (ESMP) and its necessity

The Objective of the consulting assignment is to develop site specific architectural and engineering designs for construction of district hospital of Narayanpur (Lakhimpur) as per the IPHS standards and patient movement, interior design complying with human-centric design

philosophy in the proposed hospital, develop specifications for the works and estimate the costs for development of the Hospital.

GoA is committed to carry out the project in accordance with World Bank's Environmental and Social Standards (ESSs) and Environmental and Social Commitment Plan (ESCP), is a part of the Legal Agreements. Under ESS 1 i.e. Environmental and Social Assessment, ASSIST commits adoption of the site-specific ESIA and ESMP for the respective subproject. Once adopted, ESIA and ESMP will be implemented throughout Project implementation period i.e. pre-construction, construction and operation phase.

1.4 Objectives of Environmental and Social Impact Assessment (ESIA)

- Assessment of legislative, institutional and policy frameworks and guidelines relevant to the project
- Environment and social baseline
- Anticipated environmental and social impacts & mitigation measures
- Institutional capacity building
- Monitoring program and project benefits
- Identify potential environmental and social risks arising out of the proposed schemes
- Recommend ways in which such risks could be mitigated or managed by the project, including recommendations to carry out projects specific environment and social management plans (ESMP)
- Provide inputs into the detailed design of the project
- To study the socio-economic status of the people living in the study area and impact of the project on socio-economic environment in the study area.
- To evaluate and recommend the community development measures proposed to be taken up by the project authorities if any.

1.5 Objectives of Environmental and Social Management Plan (ESMP)

- Identifying potential adverse and beneficial environmental and social impacts of the Project along with the extent of short- and long-term effects
- Developing a set of mitigation and enhancement measures for the adverse and beneficial impacts and define the roles of personnel in charge
- Specifying actions which would help in mitigation of the environmental impact of the project along with ensuring what safety measures should be followed during the occurrence of an emergency.

1.6 Methodology for ESIA-ESMP

An Environmental and Social Impact Assessment (ESIA) & Environmental and Social Management Plan (ESMP) is a decision-making tool to ensure that the project design and implementation are environmentally and socially sound and sustainable. During the implementation phase, environmental and social management plans will provide guidance for executing the mitigation, enhancement and monitoring measures. The key steps/methods taken for preparing for this ESIA-ESMP are:

- Desk Review
- Scoping
- Baseline data collection and its analysis
- Collection of primary and secondary socio-economic data for the assessment of Socio-economic environment
- Screening and identification of Environmental and Social risk and impacts;
- Analysis of Alternatives
- Stakeholder engagement
- Assessment of impacts and identification of mitigation measures
- Reporting and disclosure

CHAPTER-2

PROJECT DESCRIPTION

2-PROJECT DESCRIPTION

2.1 Proposed Location of District Hospital

The site for proposed District Hospital is located in Narayanpur (Lakhimpur), Assam. Presently Mahatma Gandhi Model Hospital exists at the site. The Total Plot Area is **30250.18 Sqm** (7.48 Acre, 22 Bigha 3 Katha 1.18 Lessa).

The site is surrounded by Deuri Memorial Playground in North (132 m), Madhabdev University in east (422 m), Narayanpur Block Development Office in south (489 m), Borkhamti Buddhist Temple in west direction (355 m).

The Geographical Location is 26°58'02.8"N, 93°51'59.2"E. The Google image of the project site is given in **Figure 2.1**.

Table 2.1: Site Surroundings Related To Study Area within 15 Kms

S. No.	Particulars	Details
1.	Nearest National /State Highway/Road	SH 43: 20.0 m
2.	Nearest Railway Station	Tatibahar Railway Station: 4.72 km
3.	Nearest Airport	Lilabari Airport: 41.887 km
4.	Nearest Town/ City/Village	Narayanpur: 1.50 km
5.	Nearest Water Body	Dikrong River: 7.195km
6.	Nearest School	Navodaya High School: 0.483 km
7.	Nearest Hospital	Bihpuria Hospital: 6.704 km
8.	Nearest Fire Station	Bihpuria Fire Station: 6.417 km
9.	Site Topography	Flat topography
10.	Archaeologically Important Site	Maghnawa Temple: 6.74 km
11.	National Parks/ Wildlife Sanctuaries	None
12.	State Boundary	Arunachal Pradesh state boundary: 11.552 km
13.	Seismicity	Zone –V, as per BIS,2016



Figure 2.1: Google image of the project site

2.2 Existing Site Situation

Presently Mahatma Gandhi Model Hospital exists at the site which is catering the medical needs of the local people.

At present the existing structures at Model Hospital are used as below:

1. Out – patient department
2. In-patient department
3. Maternity ward
4. NBSU
5. Labor room
6. Operation theatre Complex
7. Blood storage
8. Laboratory
9. Medicine Dispensing Room
10. Nurse Duty Room
11. General administration
12. Emergency Ward and Conference Hall
13. Color coded dustbins to segregate different type solid waste
14. Biomedical waste disposal through sharp pits and deep burial
15. Waste water disposal including liquid waste through pipeline within the campus

Present mode of BMW disposal is through Sharp pits and Deep Burial at the site.

Further in operation phase, for safe disposal of biomedical waste a CBWTF is coming up at Jorhat. Once, the facility becomes functional, an agreement with will be done (a private land has been identified for the same, land acquisition yet to be initiated) and the disposal at this facility will be streamlined. A 10 KLD ETP is proposed to be provided as a part of construction of the DH for treatment of infectious effluent. The treated effluent will be further sent to the STP for treatment and final disposal.

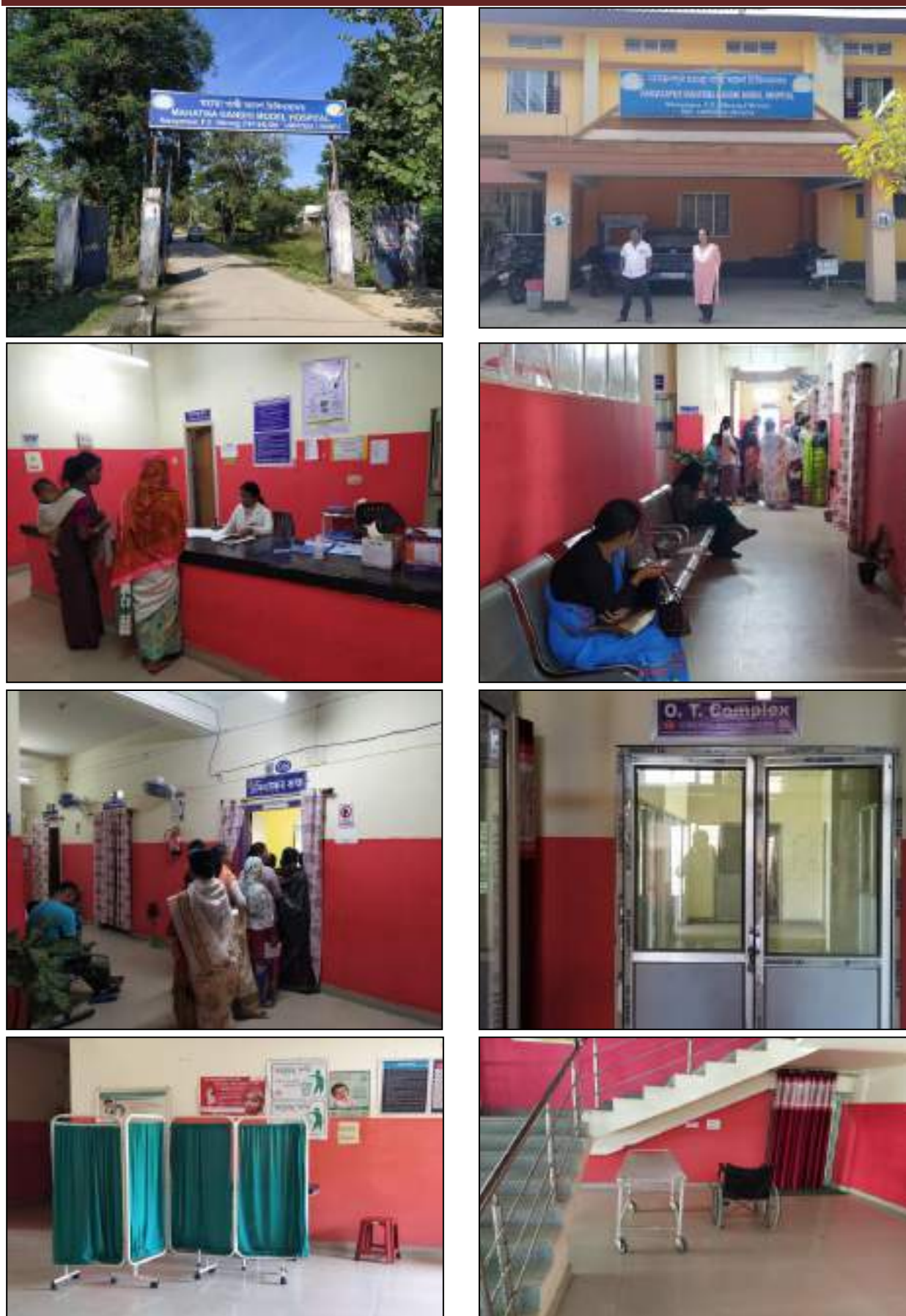


Figure 2.2: Existing site photographs showing functioning of Mahatma Gandhi Model Hospital, Narayanpur

2.3 Proposed Project Details/Components

Presently Mahatma Gandhi Model Hospital exists at the site of proposed District Hospital. Old Assam type quarters will only be demolished. Presently, 10-12 electric poles, overhead tank structure, 1 hand pump (non-functional), 2 ring wells exists at the site. Some of them may be shifted or closed. At present, 40-45 trees are present at the proposed DH site. 30-35 trees will be retained and rest will be cut. The existing site photographs of the project site are given in **Figure 2.2**.

Components of proposed 100 bedded District Hospital are: Emergency care Unit, Police Post, Triage Room, Doctor's Room, CCMO Room with attached toilet and Medico-Legal Case, Emergency OT Lobby, Patient Holding Area, Emergency TSSU, OT Pharmacy, Sterile store, Dirty Utility, Outpatient Department, Radiology, Laboratory, OPD consultation rooms, Support Services (Dietary), OPD consultation rooms, District Early Intervention Centre, Administrative unit, Ward Complex, Nutrition Rehabilitation Centre, Treatment room, Nurse's station, CU & DU, Dialysis Complex, Mother & Child Hospital, Obstetrics Critical Care unit, OPD Consultation room, Mother's & new born Ward, SNCU & NICU, Hospital Stores, Burn unit, General ward complex, Paying cain complex, Blood bank, HDU Ward, OT Complex, 3 categories of room for BMW and Mortuary & Gas manifold Room.

The details of Facilities-proposed in 100 bedded District Hospital are given separately in **Annexure-II**.

2.4 Area Statement

The built-up area of proposed project is **13332.80 sqm**. The details area statement is given in given in **Annexure III**.

2.5 Other Project requirements

2.5.1 Water Requirement: The total water requirement as per NBC-2016 of the proposed project is 70 KLD. Out of this 48 KLD is fresh water demand and 22 KLD is for flushing water demand. The available water source at the model hospital is ground water which is drawn through submersible pumps with softener. The total sewage generated will be 57 KLD. The waste water will be treated in the STP of 70 KLD capacity and ETP of 10 KLD (for treatment of used water from Laboratory, O.T). Total treated water available for reuse will be 46 KLD, which will be used in Flushing, DG set cooling, Filter Backwash and Horticulture. The detailed water requirement along with water balance is attached as **Annexure XIII**.

2.5.2 Power requirement: The power requirement for the proposed project is 1250 KVA. The two DG sets of 625 KVA capacity is proposed to install as 100% power backup. Power factor for Transformer considered is 0.95 and loading factor is 0.80. Minimum capacity of Transformer shall be 2 x 630 KVA. However, for future load, additional transformer space as well as HT/LT Panel space shall be provided as per Engineer-in-charge.

2.6 Volume of Civil Works

At present no civil works has been done for proposed DH only geotechnical investigation has been done till date. Civil work will be done according to the DPR and sanction drawings.

CHAPTER-3

LEGAL AND INSTITUTIONAL FRAMEWORK

3-LEGAL AND INSTITUTIONAL FRAMEWORK

3.1 Introduction

This Chapter outlines and provides a review of existing policies, legislations, and regulations. It identifies the requirements that guide the implementation of the ESIA. There are several 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.

3.2 Environmental and Social Standards of World Bank and Indian National and State Regulations

3.2.1 The World Bank's Environmental and Social Standards (ESS)

The World Bank's Environmental and Social Standards (ESSs) is cornerstone to its support to sustainable development. The Environmental and Social Standards set out the requirements for ASSIST project relating to the identification and assessment of environmental and social risks and impacts associated with project 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 in **Table 3.1** as follows:

Table 3.1 Environment & Social Standard relevant to the project

S.No.	Environment & Social Standard	Relevance
1.	ESS1: Assessment and Management of Environmental and Social Risks and Impacts	Yes
2.	ESS2: Labor and Working Conditions	Yes
3.	ESS3: Resource Efficiency and Pollution Prevention and Management	Yes
4.	ESS4: Community Health and Safety	Yes
5.	ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	No
6.	ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	No
7.	ESS7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Yes
8.	ESS8: Cultural Heritage	Yes
9.	ESS9: Financial Intermediaries	No
10.	ESS10: Stakeholder Engagement and Information Disclosure	Yes

3.2.2 Environmental, Health, Safety and Social Regulations (Acts/Law) applicable to the Projectare:

Indian National Regulations and State Specific Laws and Regulations:

- ✓ The Constitution of India (especially, Articles 15, 16 and 46)
- ✓ Biomedical Waste (Management and Handling) Rules 2016, as amended up to 2019
- ✓ E-Waste (Management and Handling) Rules 2011 as Amendment up to 2018
- ✓ Hazardous Waste (Management, Handling and Trans-boundary Movement) Rules 2008
- ✓ Hazardous and Other Wastes (Management and Trans boundary Movement) Amendment Rules, 2016
- ✓ Plastic Waste Management Rules 2016
- ✓ The Epidemic Diseases Act 1897
- ✓ 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
- ✓ The Water (Prevention and Control of Pollution) Cess Act, 1977 Rules framed under the water (Prevention & Control of Pollution) Act, 1974 (Assam) Rules 1977
- ✓ CPCB Guidelines for BMW Incinerators (2003)
- ✓ Draft Guidelines for Biomedical Waste Incinerator, 2017
- ✓ Revised guidelines for Common Biomedical Waste Treatment Facilities (2016)
- ✓ The Assam Air (Prevention and Control of Pollution) (Amendment) Rules 2010
- ✓ Noise (Regulation and Control) Rules, 2000 amended in 2010
- ✓ National Disaster Management Act, 2005
- ✓ Solid waste management rules, 2016
- ✓ The Epidemic Diseases (Amendment) Ordinance, 2020
- ✓ Construction and demolition waste management rules, 2016
- ✓ Guidance note on Liquid Medical Oxygen (LMO) Storage Tanks, April 2021
- ✓ Maternity Benefit Act, 1961 and Assam Rules, 1965
- ✓ Child Labor (Prohibition and Regulation) Act, 1986 and Assam (Amendment) Rules, 2017
- ✓ Contract Labor (Regulation and Abolition) Act, 1970 and Assam Rules 1971
- ✓ Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and Assam Rules, 2007
- ✓ Inter State Migrant Workmen's (Regulation of Employment and Conditions of Service) Act, 1979 and Assam Rules 1981
- ✓ Equal Remuneration Act, 1976
- ✓ Minimum Wages Act, 1948 and Assam Rules, 1952
- ✓ Payment of Wages Act, 1936 and Assam Rules, 1937
- ✓ Employees' Compensation Act, 1923
- ✓ Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (RFCTLARR) Act, 2013 and Assam Rules, 2015
- ✓ Scheduled Caste and the Scheduled Tribes (Prevention of Atrocities) Act, 1989 and Rules, 1995
- ✓ Rights of Persons with Disabilities (PwD) Act, 2016

- ✓ Sexual Harassment of Women at Workplace Prevention, Prohibition, and Redressal Act, 2013
- ✓ Right to Information Act, 2005
- ✓ Assam Scheduled Castes and Scheduled Tribes (Reservation of Posts in Services) Act, 1978
- ✓ Settlement Rules under Assam Land and Revenue Regulation, 1886.

The details about provisions, Agency responsibility, Key provisions and relevance to project is summarized in *Chapter 3 of ESMF*, The link is attached here: https://ahidms.assam.gov.in/sites/default/files/public_utility/Environmental%20and%20Social%20Management%20Framework%20ASSIST_PMU.pdf

CHAPTER-4

BASELINE ENVIRONMENTAL AND SOCIAL DATA

4-BASELINE ENVIRONMENTAL AND SOCIAL DATA

4.1 Physical Environment

Project Site: Narayanpur is a Town in Lakhimpur District of Assam State, India. The proposed location of the District Hospital is in plot of Mahatma Gandhi Model Hospital, Narayanpur (Lakhimpur), Assam. The Total Plot Area is **30250.18 Sqm** (7.48 Acre, 22 Bigha 3 Katha 1.18 Lessa). The site is surrounded by Deuri Memorial Playground in North (132 m), Madhabdev University in east (422 m), Narayanpur Block Development Office in south (489 m), Borkhamti Buddhist Temple in west direction (355 m).

The Geographical Location is 26°58'02.8"N, 93°51'59.2"E. The site location, description and topography can be seen with the help of the 500 m and 5 km buffer map of the project site as given in **Figure 4.1 & 4.2** below.

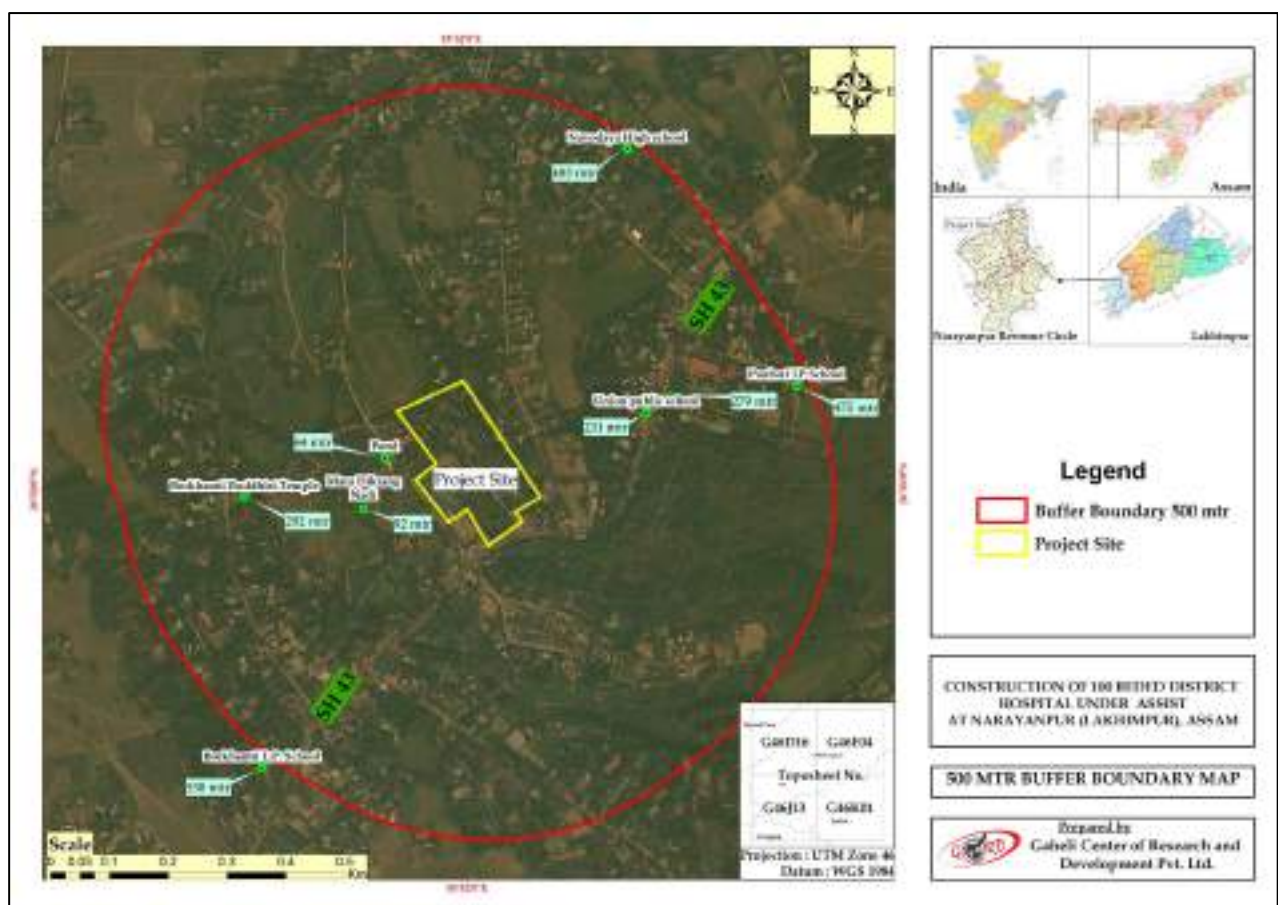


Figure 4.1: 500 m buffer map of the site

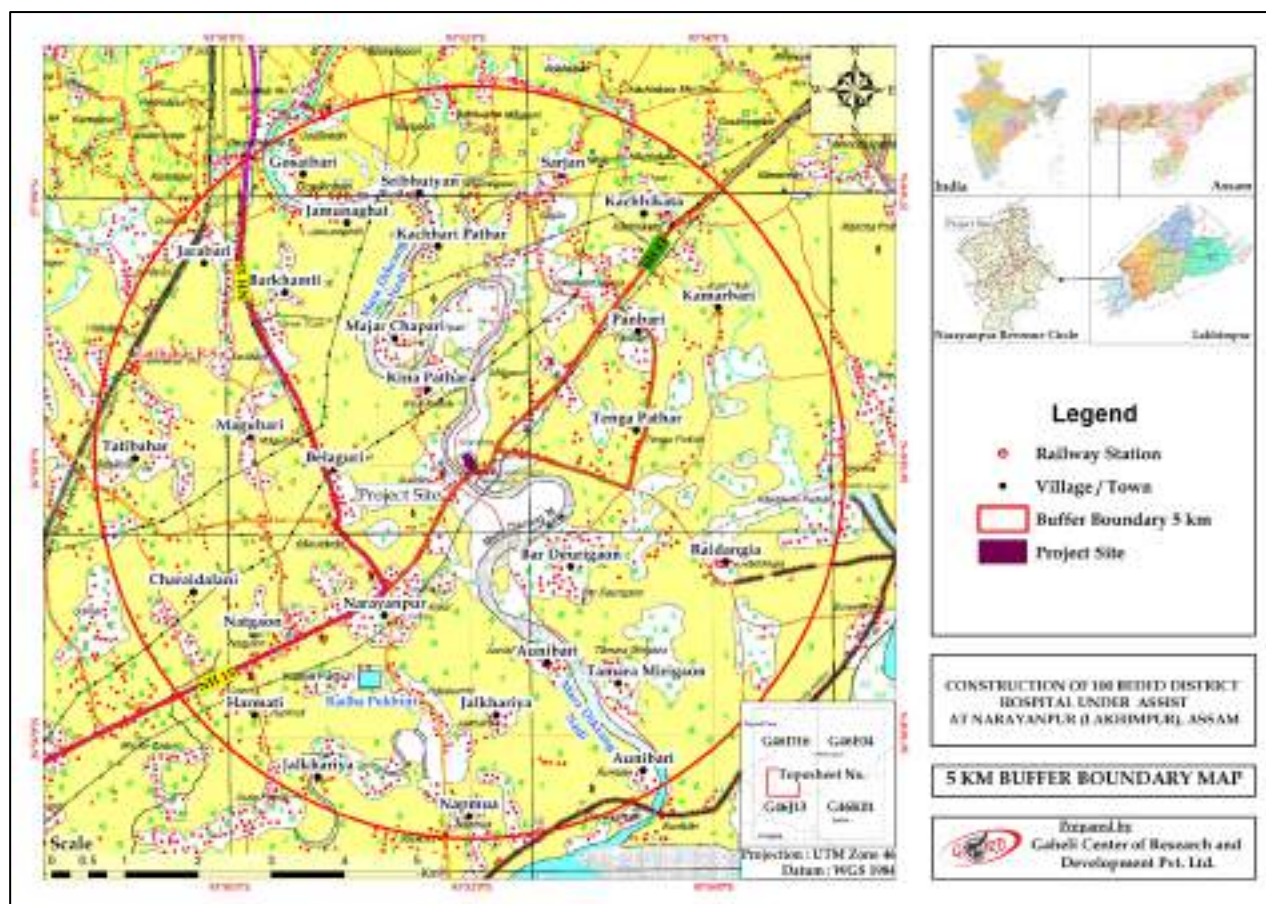


Figure 4.2: 5 km buffer map of the site

Out of the total plot area, proposed built up are 13332.80 is sqm. Here the plinth or the physical footprint area is 3388.3 sqm. the proposed land is a government land.

4.2Climate:The climate of Lakhimpur district is more endurable than any of the plain districts of Assam. The summers here have a good deal of rainfall, while the winters have very little. The district enjoys a moderate climate, although atmosphere is highly humid. The summer season (June to August) is mostly rainy and cloudy, hence temperatures, do not rise very high. In Lakhimpur, the average annual temperature is 25° C. The rainfall here averages 1200 mm. In March and April the district enjoys a pleasant spring.

(Source- Brief Industrial Profile of Lakhimpur District 2018-19, Carried out by Ministry of MSME, Govt. of India)

4.2.1 Rainfall

The rainfall data for the district was sourced from Customized Rainfall Information System (CRIS) Hydromet division, India Meteorological Department (IMD). The data was collected for last 5 years i.e. 2018-2022. The data is presented in **Table 4.1**.

Table 4.1: Rainfall Data (in mm)

	2018	2019	2020	2021	2022
January	29.6	7.1	50.6	21.6	25.1
February	30.9	49.4	39.9	7	93.4
March	110.6	66.8	38.3	43	34.5
April	171.9	119.9	68.7	68.2	405.6

May	280.2	414.7	340.5	310.1	454.2
June	486.9	502.3	671.4	650.7	891.7
July	633.7	875.2	671	504.8	322.9
August	441.7	134.5	332.6	507.6	326
September	443.4	556.3	537.1	180.6	325.8
October	103	227.5	230	103	448.1
November	54.4	12.9	12.8	6.1	0
December	23.6	13.7	8.7	6.8	10.3
Average	234.16	248.36	250.13	200.79	278.13
Min	23.6	7.1	8.7	6.1	0
Max	633.7	875.2	671.4	650.7	891.7

4.2.2 Earthquake

As per the plate tectonics, Assam is in the eastern-most projection of the Indian Plate, where the plate is thrusting underneath the Eurasian Plate creating a subduction zone and the Himalayas. The Northeastern region falls in the high seismic zone, making earthquakes frequently hit the region. This led the state of Assam fall under the seismic zone V making the entire State prone to earthquake of moderate to very high intensity. The Northeastern region falls in the high seismic zone, making earthquakes frequently hit the region. The Assam State has experienced two major earthquakes in the year 1897 and 1950. The intensities of these two earthquakes were 8.7 and 8.5 on the Richter scales respectively.

(<https://asdma.gov.in/hazardous.html#:~:text=This%20led%20the%20state%20of,the%20year%201897%20and%201950.>)

An earthquake of magnitude five on the Richter scale jolted Assam's Morigaon district in the early hours on 27th February, 2025, the National Center for Seismology (NCS) noted. According to the quake monitoring agency, the earthquake occurred at a depth of 16 kilometer at around 2:25 am, on the southern bank of Brahmaputra in the district. Darrang, Tamulpur, Sonitpur, Kamrup, Biswanath, Udalguri, Nalbari, Bajali, Barpeta, Baksa, Chirang, Kokrajhar, Bongaigaon and **Lakhimpur** on the northern bank of Brahmaputra too felt the tremor.

(Source: Newspaper article published in "The Hindu" dated February 27, 2025)

(<https://www.thehindu.com/news/national/assam/earthquake-of-magnitude-5-jolts-assams-morigaon-district/article69268858.ece>)

Apart from this incident, during stakeholder consultation with local people, no recent major earthquake event was reported in the area.

4.2.3 Flood Scenario

There is problem of drainage /floods in the Narayanpur area. There were incidence of flood in year 2019 as per discussion with the locals and available records during site visit. Further, as per last 5-year Flood data of Assam State, Flood events had occurred in Narayanpur, Lakhimpur, Assam in June 2020, June 2022, June 2023 and June 2024 as per data reported in the Flood Reports published by Assam State Disaster Management Authority. The supporting flood data is given in **Annexure XVIII**.

The nearest water body i.e. Dikrong River (located about 8.5 km from project site) has 86.60m danger level and 89.07m HFL.(Source: <https://waterresources.assam.gov.in/portlets/flood-information-system>)

As per the Geotechnical Investigation Report, the existing water level in the proposed DH is 2.0 m. The lowest contour of the proposed DH is 97.75m and highest is 100.0 m. Adequate measures will be taken from flooding point of view by raising plinth level of proposed DH and proposing cantilever retaining walls.

4.3 Baseline Environment Data

Base line attributes like ambient air, water, meteorology, noise, and soil were collected on 02.12.2023. Secondary data was also collected from various government department as well as local people. Baseline attributes studied for the project are discussed below along with the methodologies adopted for collecting the data.

4.3.1 Soil Environment

The composite soil samples were collected from the study area analyzed for characterization. The locations of the monitoring sites are depicted in the **table 4.2** within the study area of the proposed project. The sample was collected by driving an auger into the soil. The present study on the soil quality establishes the baseline characteristics and identifies the incremental concentrations if any, due to the proposed project. The objective of the sampling are:

- To determine the baseline soil characteristics of the study area;
- To determine the impact of proposed activity on soil characteristics and;
- To determine the impact on soil more importantly agriculture production point of view.

The test results for soil sampling locations are provided below and map showing the monitoring location is given in **Figure 4.3** and monitoring photographs are given in **Annexure XVII**.

Table 4.2: Soil Sampling Locations

S. No	Location of monitoring	Distance from site (km)	Latitudes	Longitudes
1	Project Site	--	26°58' 1.07"N	93°51'59.28" E
2	Narayanpur Village	1.656	26°57' 9.72"N	93°51'32.12" E

Soil Analysis

Result obtained is compared with the standard soil classification as given in Agriculture Handbook. Two numbers of soil samples have been collected within study area and analyzed for physical and chemical properties. The table showing the results of soil analysis is given in **table 4.3**. The Environment Monitoring Report for soil quality analysis has been attached as **Annexure XII**.

Table 4.3: Soil Analysis Monitoring Results

S. No.	Parameters	Units	Test Method	SQ1	SQ2
				Project Site	Narayanpur Village
1	Texture	-	GEL/LAB/SOP/SOIL/22	Sandy Loam	Sandy Loam
	Sand	%		63	62
	Silt	%		32	32
	Clay	%		05	06
2	*Color	-	GEL/LAB/SOP/SOIL/07	Light Brownish to grey	Light Brownish to grey

3	pH (1:2 Suspension)	-	IS 2720 (P-26): 1987, RA 2011	6.76	6.72
4	Specific Conductivity	µmhos/cm	IS 14767: 2000, RA 2016	502	514
5	Moisture	%	IS 2720(Part-2): 1973, RA 2015	23.2	24.1
6	Exchangeable Potassium	mg/kg	GEL/LAB/SOP/SOIL/07	8.2	7.1
7	Exchangeable Sodium	mg/kg	GEL/LAB/SOP/SOIL/06	20.7	21.5
8	Exchangeable Calcium	mg/kg	GEL/LAB/SOP/SOIL/08	301	299
9	Exchangeable Magnesium	mg/kg	GEL/LAB/SOP/SOIL/08	81.2	82.0
10	Porosity	%	GEL/LAB/SOP/SOIL/20	34.5	33.9
11	Organic Matter	%	IS 2720 (P-22) : 1972, RA 2010	0.60	0.63
12	Phosphorous	mg/kg	GEL/LAB/SOP/SOIL/10	12.8	11.6
13	*Nitrogen	mg/kg	GEL/LAB/SOP/SOIL/09	76	75
14	Chloride	mg/kg	GEL/LAB/SOP/SOIL/14	63	61
15	Bulk Density	gm/cc	IS 2720 (P-28) : 1974, RA 2010	1.9	1.9

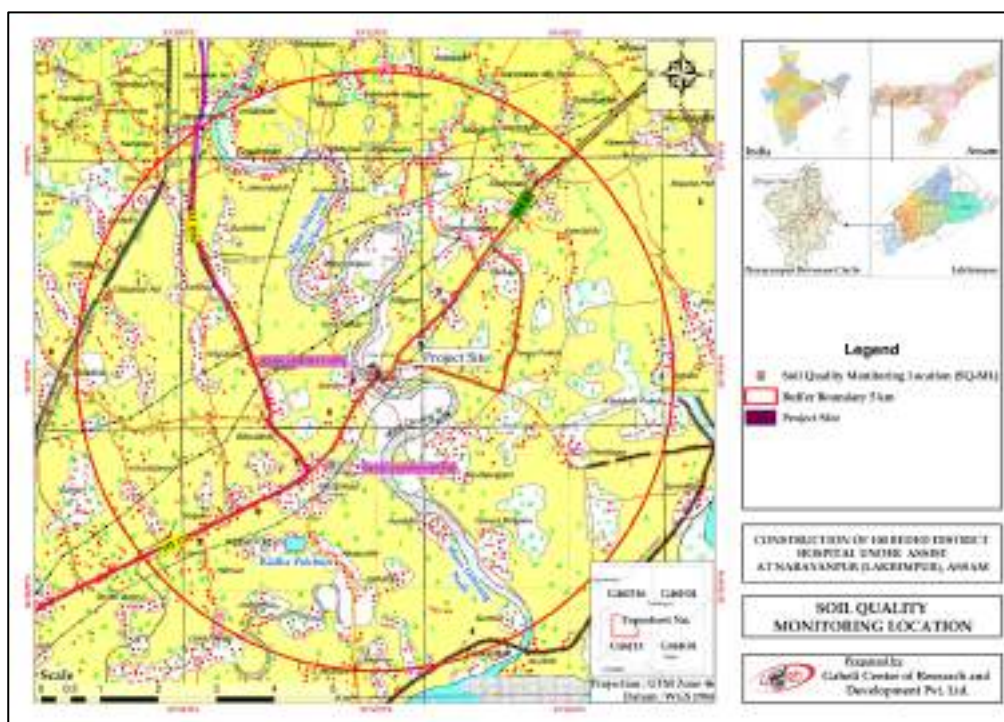


Figure 4.3: Map Showing the Soil Quality Locations

4.3.2 Ambient Air Quality

The ambient air quality at selected 05 locations was carried out as per Indian standards guidelines and monitoring stations was selected as per CPCB manual. The location of the monitoring stations

with reference to the proposed project is given in the **table 4.4** and map showing the monitoring locations are given in **Figure 4.4**. Monitoring photographs are given in **Annexure XVII**.

Table 4.4: Ambient Air Monitoring Stations

S. No	Location of monitoring	Distance from site (km)	Coordinates	Criteria
1	Project site	--	26°58'0.26" N 93°51'59.02" E	Sensitive Receptor
2	Near Project site	0.15	26°57'57.69" N 93°52'3.36" E	Residential area
3	Budhist Temple	0.316	26°57'59.37" N 93°51'45.48" E	Sensitive Receptor
4	L.P School	0.530	26°57'44.78" N 93°51'47.48" E	Sensitive Receptor
5	Narayanpur	0.637	26°57'10.77" N 93°51'31.51" E	Residential area

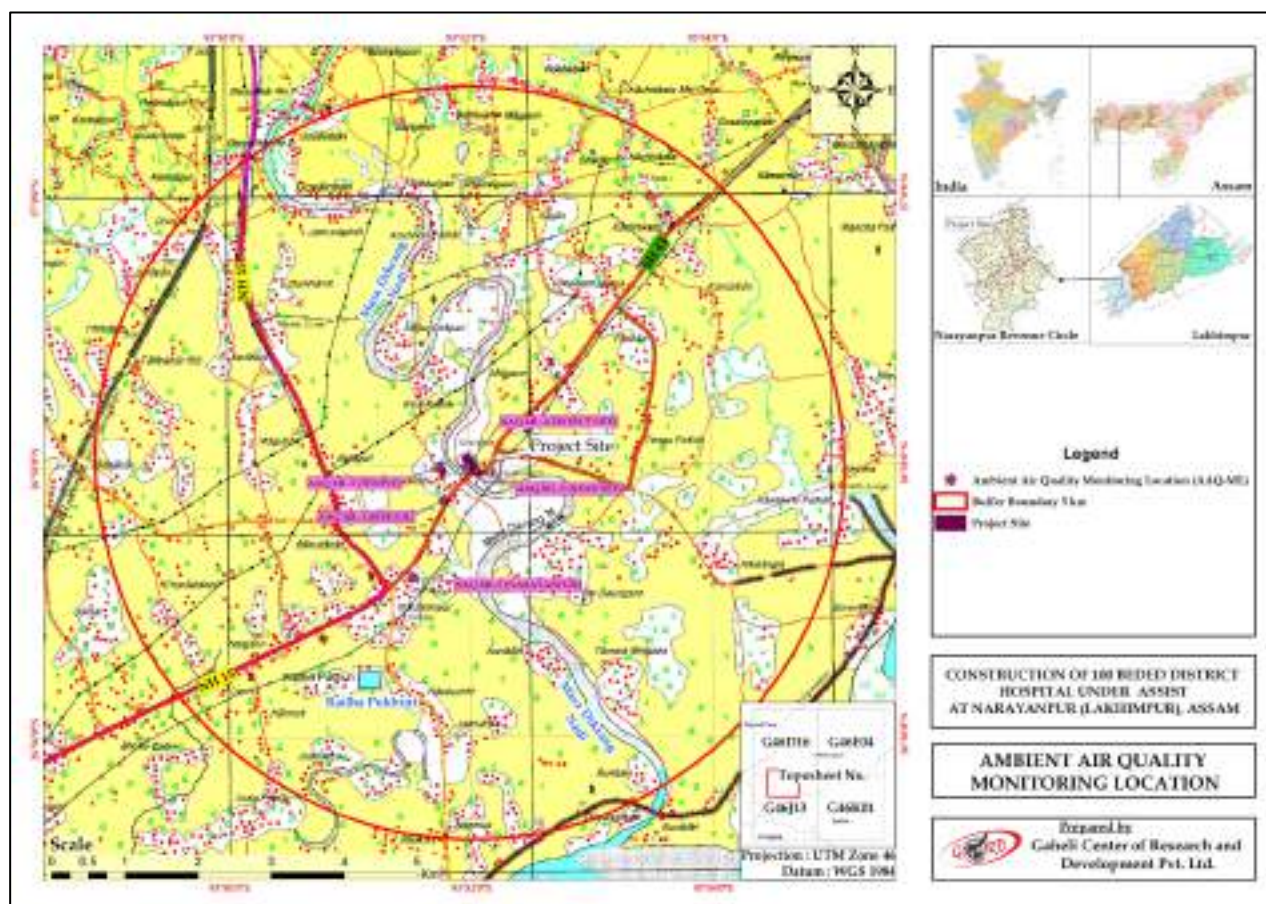


Figure 4.4: Map Showing the Ambient Air Quality Locations

4.3.2.1 Ambient Air Quality Monitoring Inference

All the measured parameters were found below the standards prescribed by CPCB, New Delhi. The Environment Monitoring Report for Ambient Air Quality has been given in **Annexure XII**.

Table 4.5: Ambient Air Quality Analysis Results

S. No	Location of monitoring	Parameters						
		PM10 µg/m ³	PM 2.5 µg/m ³	PM1 µg/m ³	So ₂ µg/m ³	No ₂ µg/m ³	Temperature °C	Humidity %
1.	Project site	09	08	06	4.2	5.1	28	42
2.	Near Project site	08	07	05	4.1	4.3	28	43
3.	Budhist Temple	10	09	06	5.1	6.3	28	41
4.	L.P School	16	14	10	4.3	4.1	28	44
5.	Narayanpur	09	08	07	5.2	6.1	28	44
NAAQS		100	60	--	80	80	--	--

4.3.3 Noise Level in the Study Area

A preliminary reconnaissance survey was undertaken to identify the major noise generating sources in the area. The noise survey was conducted on 02.12.2023, to assess the background noise levels in different zones viz. industrial, commercial, and residential and silence zones.

The sampling locations for noise are confined to residential, commercial, and sensitive areas; however, no industrial area is present within the study area.

The baseline noise levels have been monitored at 05 locations within the study zone. Locations were identified for assessment of existing noise level status, keeping in view the land use pattern, industrial area, Silence Zone, residential areas in villages etc., if available within the study area. The day levels have been monitored during 6.00 AM to 10.00 PM and night noise levels, during 10.00 PM to 6.00 AM. The noise monitoring stations are shown in the **table 4.6** and map showing the monitoring locations are given in **Figure 4.5**. Monitoring photographs are given in **Annexure XVII**.

Table 4.6: Noise Quality Monitoring Locations

S. No	Location of monitoring	Zone	Latitude	Longitude
1	Project site	Silence zone	26°58'0.25" N	93°51'58.93" E
2	Near Project site	Residential area	26°57'57.53" N	93°52'3.39" E
3	Budhist Temple	Silence zone	26°57'59.31" N	93°51'45.35" E
4	L.P School	Silence zone	26°57'44.80" N	93°51'47.57" E
5	Narayanpur	Residential area	26°57'10.71" N	93°51'31.69" E

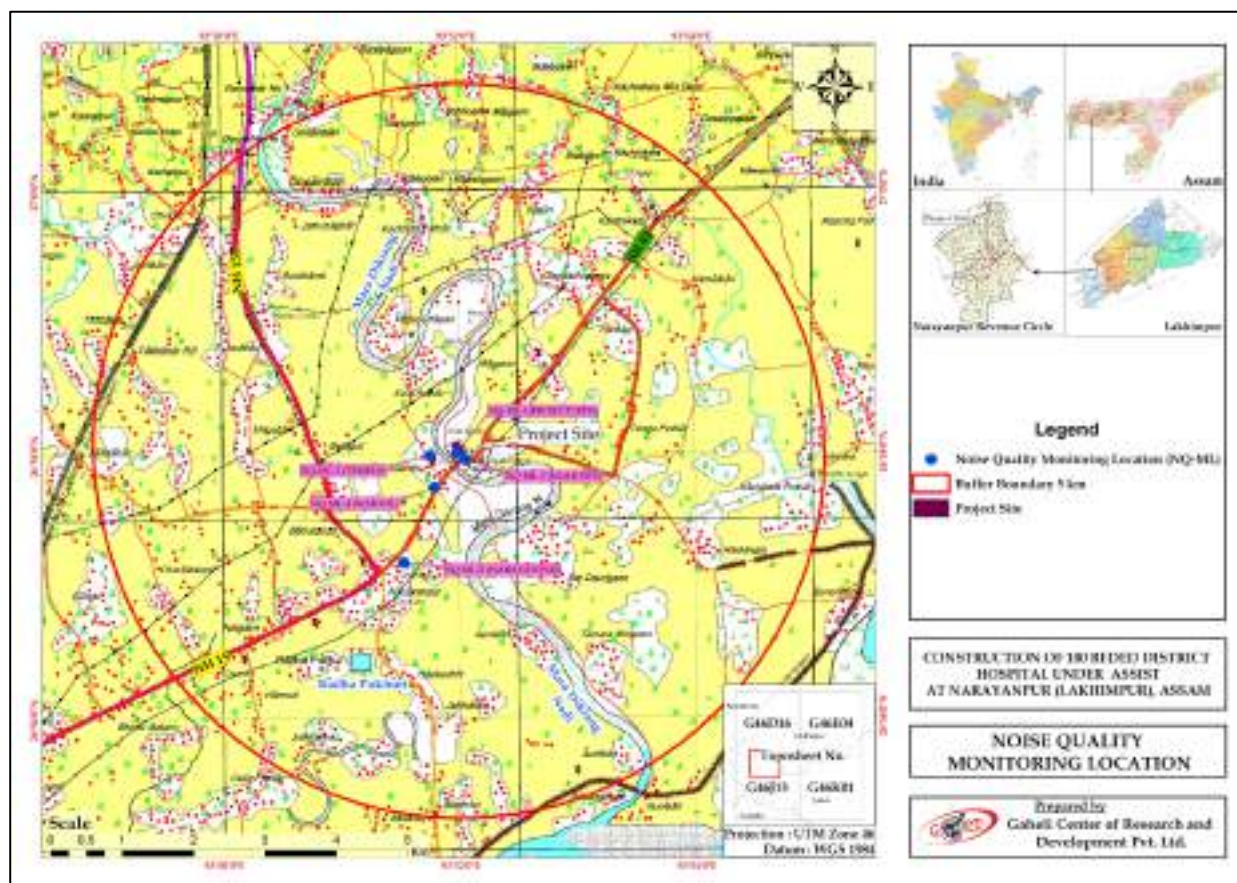


Figure 4.5: Map Showing the Noise Quality Locations

4.3.3.1 Interpretation and conclusion

Generally, noise levels in public places like temples and community hall have higher values in day time. The table showing the results of noise level is given in table 4.7.

Table 4.7: Noise Level Monitoring Results

S. No.	Date	Location	Zone	Limit for As Per EPA, 1986 ; Leq, dB (A)		Observed Value Leq, dB (A)	
				Day Time*	Night Time**	Day Time*	Night Time**
1.	02.12.2023	Project site	Silence zone	50	40	48.4	38.5
2.	02.12.2023	Near Project site	Residential area	55	45	53.4	44.7
3.	02.12.2023	Budhist Temple	Silence zone	50	40	47.4	38.1
4.	02.12.2023	L.P School	Silence zone	50	40	48.9	39.2
5.	02.12.2023	Narayanpur	Residential area	55	45	54.6	41.5
* Day Time			6.00 a.m. to 10.00 p.m.				
**Night Time			10.00 p.m. to 6.00 a.m.				

The Environment Monitoring Report for noise quality has been given in **Annexure XII**. It was observed from the noise monitoring results that the noise levels near project site and the surrounding were on the higher side due to close proximity of the site to commercial area and SH-43. However, results are within the noise standards prescribed by CPCB for residential, sensitive, and industrial areas.

4.3.4 Water

To analyze the surface and ground water quality of study area, sampling was carried out on 02.12.2023 for primary data. Sampling of surface and ground water was collected as per IS 3025 Part I. Water quality assessment is one of the essential components of Baseline study. Such assessment helps in evaluating the existing health of water body and suggesting appropriate mitigation measures to minimize the potential impact from proposed project.

4.3.4.1 Water Monitoring Sampling Locations

Ground water and Surface have been collected from the study area. The water sampling locations are provided in the **table 4.8** and monitoring photographs are given in **Annexure XVII**. Map showing the monitoring locations are given in **Figure 4.6**.

Table 4.8: Water Monitoring Sampling Locations

S. No.	Sampling Locations	Latitude	Longitude
1.	Project Site (Ground Water)	26°58'0.09" N	93°51'59.45" E
2.	L.P. School (Ground Water)	26°57'44.86" N	93°51'47.34" E
3.	Dikrong River(Surface water)	27°1'26.82" N	93°55'34.46" E

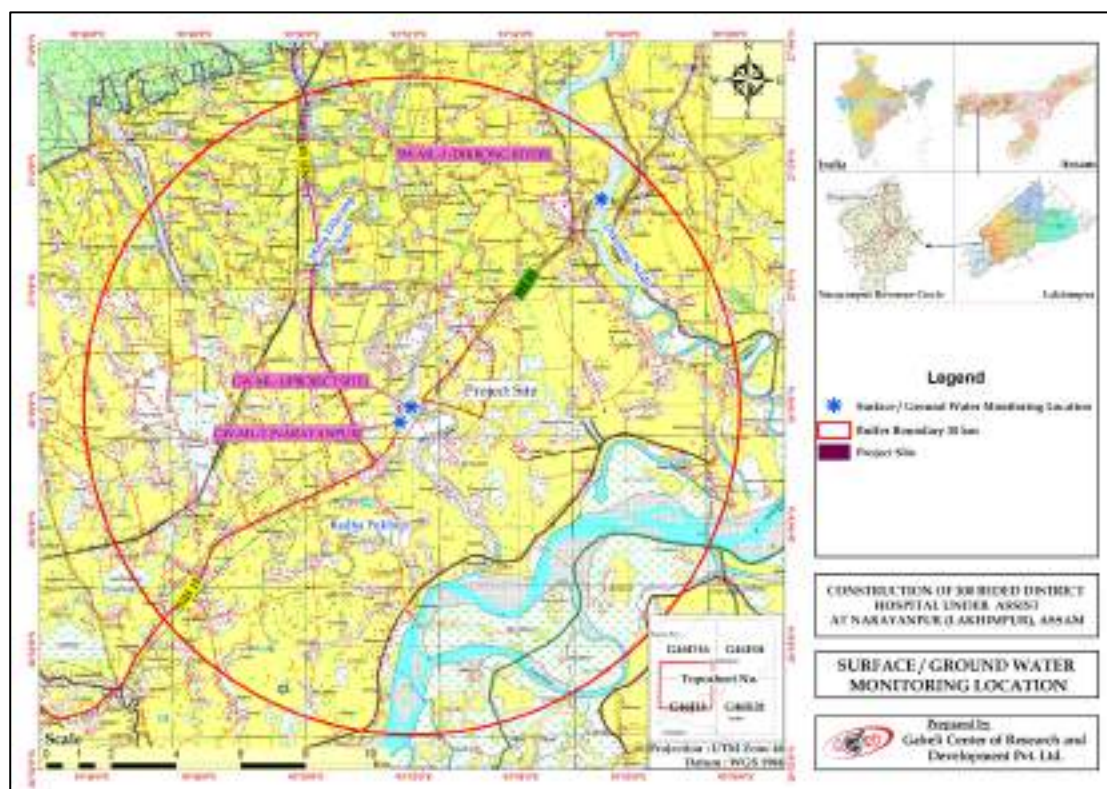


Figure 4.6: Map Showing the Surface/Ground Water Monitoring Locations

4.3.5 Ground Water Level

Average Ground water level data of the district is sourced from India Water Resources Information System (India-WRIS). The data is presented in **table 4.9** and **figure 4.7** below:

Table 4.9: Year wise Average Ground water level in the district

S. No.	Year	Average Ground water level (m)
1.	2018	1.89
2.	2019	2.23
3.	2020	1.96
4.	2021	1.62
5.	2022	2.06
6.	2023	2.55



Figure 4.7: Year wise Average Ground water level in the district

4.3.6 Surface and Ground Water Quality

There is 1 water supply overhead tank structure, 1 hand pump (non-functional) and 2 ring wells present there. These water structures will not be used further. Further, the available water source at the Model Hospital is ground water which is drawn through submersible pumps with softener. The same can be considered in the new proposed project activity.



Figure 4.8: Source of Water at Project site

4.3.7 Inference

4.3.7.1 Surface Water

Surface water samples were collected and analyzed and compared with Indian standard. The table showing the results of Surface Water is given in **table 4.10**. The Environment Monitoring Report for Surface Water has been given in **Annexure XII**. The overall surface water quality of the available sources within the study area was found to be good physico-chemically with respect to all the parameters. There is no organic load observed in the sources monitored indicating no pollution load in the source.

Table 4.10: Surface Water Monitoring Results

S. No.	Parameter	Protocol Used	Results	IS: 10500:2012 (Second Revision)		Unit
				Desirable Limit	Max. Permissible Limit	
1.	pH	IS: 3025: Part 11	6.84	6.5 – 8.5	No Relaxation	pH unit
2.	TDS	IS: 3025: Part 16	32	500	2000	mg/L
3.	Turbidity	IS: 3025: Part 10	<0.5	1	5	NTU
4.	Chloride	IS: 3025: Part 32	22.68	250	1000	mg/L
5.	Total Hardness	IS: 3025: Part 21	24	200	600	mg/L
6.	Total Alkalinity	IS: 3025: Part 23	15	200	600	mg/L
7.	Colour	IS: 3025: Part 4	<5	5	15	Hazen
8.	Residual Chlorine	FTK	0	0.2	1	mg/L
9.	Taste	IS: 3025: Part 8	-	Agreeable	Agreeable	
10.	Calcium	IS: 3025: Part 40	9.60	75	200	mg/L
11.	Magnesium	APHA 3500- Mg B	<5	30	100	mg/L
12.	Iron	APHA 3500- Fe B	<0.05	1	No Relaxation	mg/L
13.	Nitrate	APHA 3500- Fe B	4.23	45	No Relaxation	mg/L
14.	Fluoride	APHA 4500- NO ₃ B	1.01	1	1.5	mg/L
15.	Sulphate	APHA 4500- SO ₄ E	6.43	200	400	mg/L

16.	Arsenic	IS: 3025: Part 37	<0.009	No Relaxation	0.01	mg/L
17.	Bacteria	H ₂ S Vial	Absent	0	No Relaxation	

4.3.7.2 Ground Water

The table showing the results of Ground Water is given in **Table 4.11**. The Environment Monitoring Report for Ground Water has been given in **Annexure XII**.

Table 4.11: Ground Water Monitoring Results

S. No.	Parameter	Protocol Used	Project Site Results	L.P. School, Narayanpur, North Lakhimpur Results	IS: 10500:2012 (Second Revision)		Unit
					Desirable Limit	Max. Permissible Limit	
1.	pH	IS: 3025: Part 11	6.25	5.82	6.5 – 8.5	No Relaxation	pH unit
2.	TDS	IS: 3025: Part 16	72	138	500	2000	mg/L
3.	Turbidity	IS: 3025: Part 10	0.6	0.8	1	5	NTU
4.	Chloride	IS: 3025: Part 32	19.85	17.72	250	1000	mg/L
5.	Total Hardness	IS: 3025: Part 21	64	90	200	600	mg/L
6.	Total Alkalinity	IS: 3025: Part 23	44	55	200	600	mg/L
7.	Colour	IS: 3025: Part 4	<5	<5	5	15	Hazen
8.	Residual Chlorine	FTK	0	0	0.2	1	mg/L
9.	Taste	IS: 3025: Part 8	-	-	Agreeable	Agreeable	
10.	Calcium	IS: 3025: Part 40	21.62	25.62	75	200	mg/L
11.	Magnesium	APHA 3500- Mg B	<5	7.29	30	100	mg/L
12.	Iron	APHA 3500- Fe B	<0.05	<0.05	1	No Relaxation	mg/L
13.	Nitrate	APHA 3500- Fe B	5.11	5.67	45	No Relaxation	mg/L
14.	Fluoride	APHA	1.01	1.06	1	1.5	mg/L

		4500-NO ₃ B					
15.	Sulphate	APHA 4500-SO ₄ E	5.08	4.98	200	400	mg/L
16.	Arsenic	IS: 3025: Part 37	<0.009	<0.009	No Relaxation	0.01	mg/L
17.	Bacteria	H ₂ S Vial	Absent	Absent	0	No Relaxation	

4.3.8 Data of inflow of patients in the existing facilities

Based on records and data provided by the Hospital Authorities for the last week of November 2023, it was found that:

- Average OPD patients per day was about 170 and average IPD was about 50. About 10-12 deliveries per day were taking place.
- The Labour room records also included information such as age, address of patient, type of delivery, delivery outcome, Gestation (full term or premature), weight and gender of baby, complications, Hbgms %, blood group, gravida/Parity/abortion/living children etc. On the basis of this record, it was analyzed that average age of patient during sample period was found to be 26 years and all the babies delivered were normal and alive and average weight of the baby observed was 2.7 kg. No high-risk pregnancies were observed during the sample period and G1P0 gravida/Parity/abortion/living children was prevalent.
- Child Immunization Services are provided by the hospital which includes vaccinations of BCG, OPV-1&2, PCV-1, Pentavalent 1, 2 & 3, IPV-1, RVV-1,2& 3, vitamin A (A1-A9) etc.

The extracts of patient inflow data received from hospital is given in **Annexure IV**.

4.3.9 Biological Environment

The Biological Study was undertaken which comprises of primary and secondary data collection gathered during field survey and from records of Forest Dept. and published literatures.

4.3.9.1 Flora

Vegetation observed during site visit- The common trees observed are gulmohar (*Delonix regia*), banyan tree (*Ficus benghalensis*), siris (*Albizia sp.*), bakain (*Melia azedarach*), kadamba (*Bauhinia malabarica*), bakain (*Melia azedarach*), sissoo (*Dalbergia sissoo*), imli (*Tamarindus indica*), rubber tree (*Ficus elastica*), amaltas (*Crassia fistula*), semal (*Bombax ceiba*), Jamun (*Eugenia jambolana*), coconut (*Cocos nucifera*) and Bamboo etc. The herbs and shrubs observed in the area are lantana (*Lantana camara*), Pragmites (*Pragmites karkar*), congress grass (*Parthenium hysterophorus*), dub grass (*Cynodon dactylon*), jimson weed (*Datura stramonium*), barnyard grass (*Echinochloa crus galli*), Johnson grass (*Sorghum halepense*), Echinochloa colona, chick weeds (*Ageratum conyzoides*) and green giant (*Alocasia sp.*).

4.3.9.2 Fauna

The common fauna species observed are: Gilahri (*Funambulus pennant*), Chuha (*Bandicota bengalensis*), Nevala (*Herpestes sedwardsi*), Langur (*Presbytis entellus*), Bandar (*Macaca mulatta*), Chamgadad (*Cynopterus sphinx*), Bamboo Rat (*Rhizomys pruinosus*), dog (*Canis*

lupus familiaris), Sheep (*Ovis Aries*), Cow (*Bostaurus*) etc. The detailed list of flora and fauna is given in **Annexure V**.

4.4 Socio-Economic Characteristics

4.4.1 Description of the study area

In conducting the ESIA, area within 5 km radius from the “Project Site” is considered as the “Study Area”. The proposed project covers 53 Villages of Lakhimpur District in Assam State.

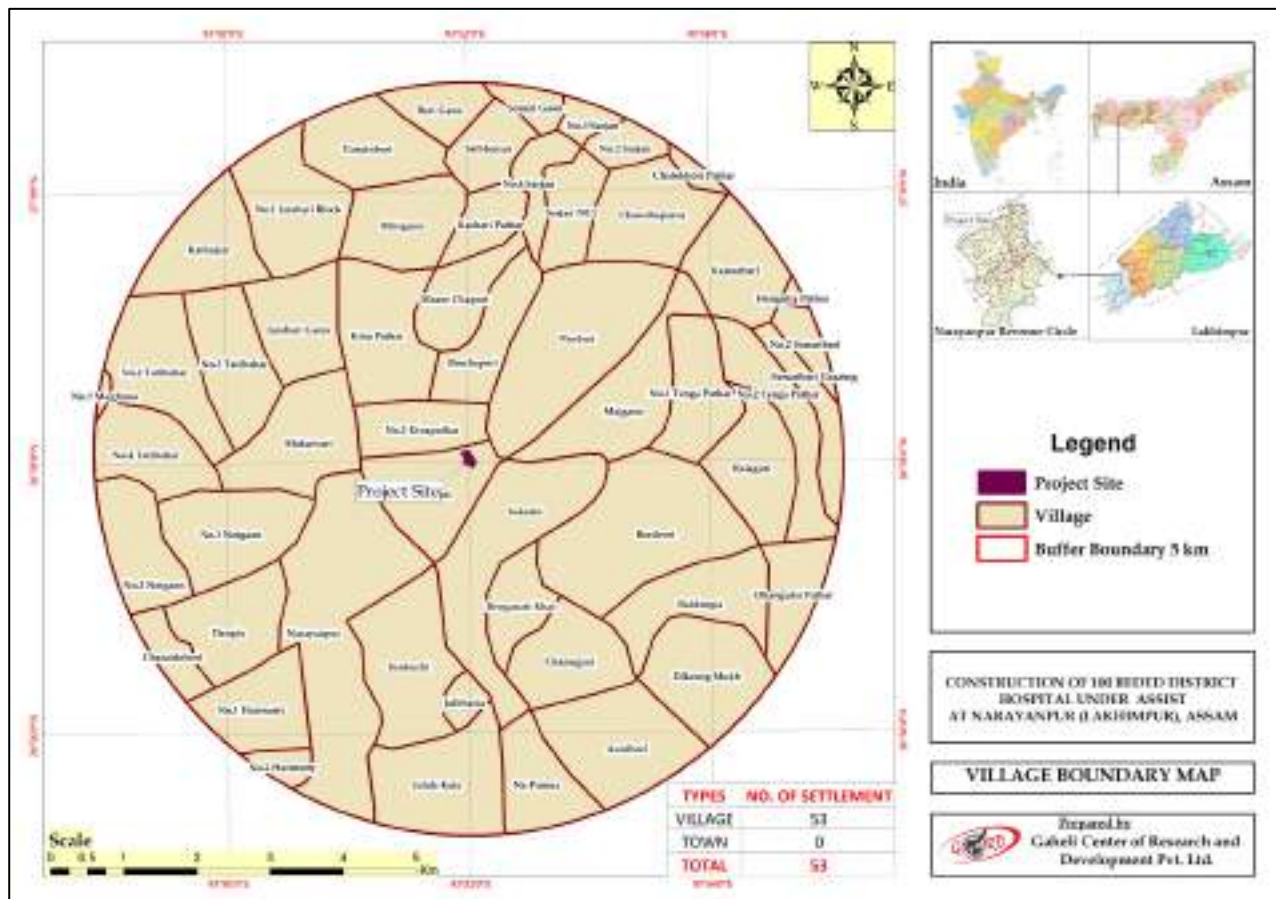


Figure 4.9: Village Boundary Map

4.4.2 The salient features of the study area includes –

1. Total population of study area is **7415**. The percentages of male & female population are 49.93 % & 50.07% respectively with sex ratio (number of Females per thousand Male) of the study area is 1003.
2. Total household in the study area are **1540** with a family size of 5.
3. Total number of literates in the study area is **5530** (74.58%).
4. Sex ratio (number of Females per thousand Male) of the study area is **1003** which shows that female population is higher in the study area as compared with the male population.
5. Out of the total population, Scheduled Caste population in the study area is **717**(9.67%) and Scheduled Tribe population is **2027**(27.34%).
6. Child population (0-6 years) in the study area is **977** which is 13.18% of the total Population out of which **477** (6.43%) is boys population and **500**(6.74%) is girls population.

4.4.3 Social Structure

a) The Schedule Caste:

The total number of Schedule caste within the study area is approximately **717** which is 9.67% of total population with 346 (4.67%) Male and 371 (5.00%) are female. The graphical representation is given below-

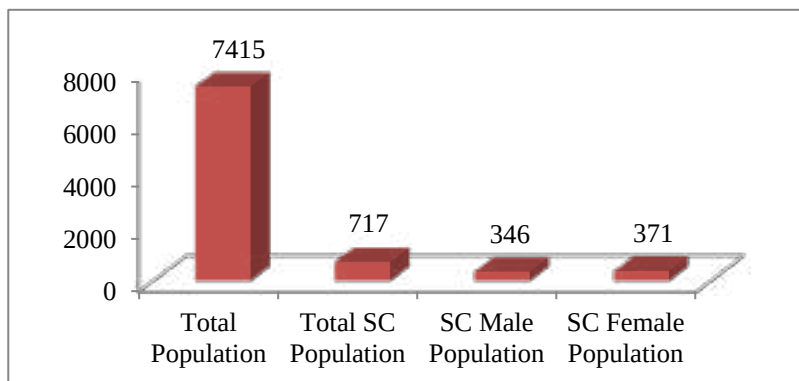


Figure 4.10: Graph Showing Schedule Caste Structure of the Study Area

b) The Schedule Tribe:

The Schedule Tribe (ST) population within the study Area is **2027**(27.34%) of the total population with 1014 (13.67%) Males and 1013 (13.66%) Females. Detailed status of social structure and their graphical representation for the same is given below –

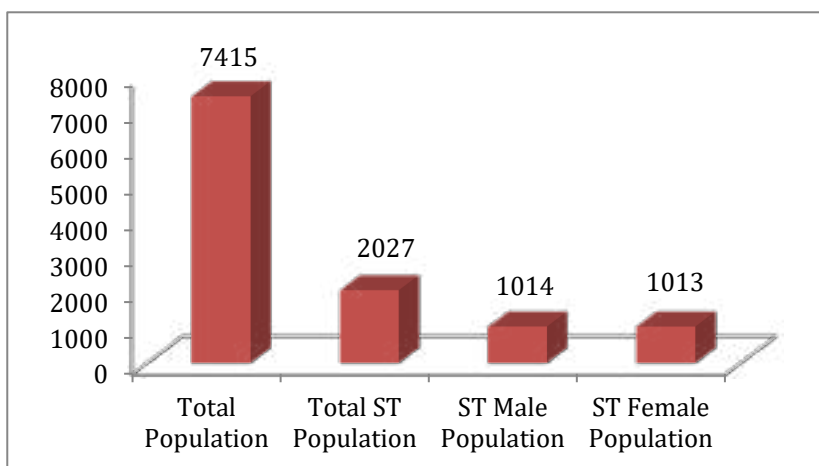


Figure 4.11: Graph Showing Schedule Tribe Structure of the Study Area

c) Literacy

The total number of literates within the study area is approximately **5530** which are 74.58% of total population. Male literacy rate of the study area is 2916 (52.73%) and female literacy rate is 2614 (47.27%). Detailed status of literacy is given below. Graphical structure of the literacy & illiteracy structure of the area is as follows:

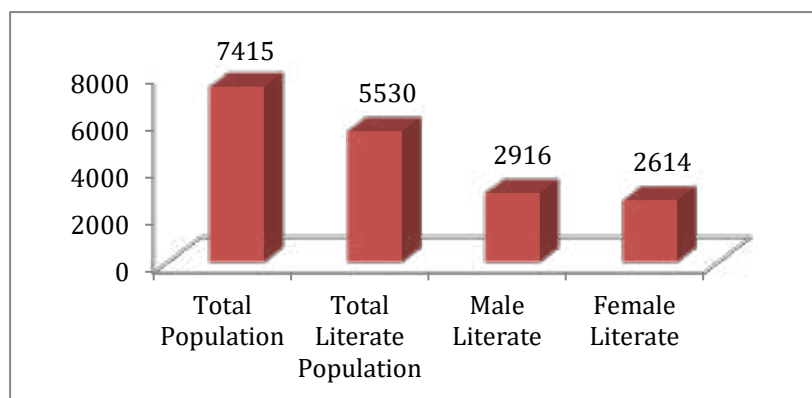


Figure 4.12: Graph showing Literacy Structure of the Study Area

d) Illiteracy

The total number of illiterates within the study area is approximately **1885** which are 25.42% of total population. Male Illiteracy in the study area is 786 (41.70%) and female Illiteracy is 1099 (58.30%). Graphical representation for the same is given below:

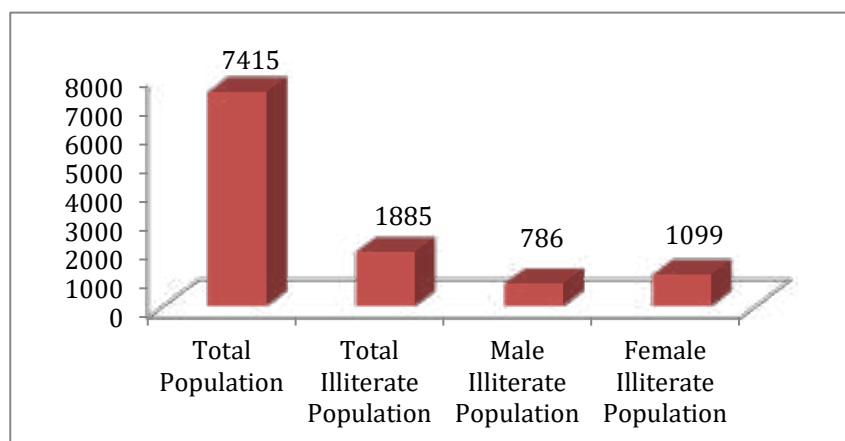


Figure 4.13: Graph showing Illiteracy structure of the Study area

The details of Demographic Structure of the Study Area is given in **Annexure VI**.

4.4.4 Occupational Structure

“Occupational Structure” of the population in the ‘Study Area’ has been studied with reference to the total workers and non-workers. Further total workers grouped into two categories “main workers” and “marginal workers”.

4.4.4.1 Total workers

“Work” is defined as participation in any economically productive activity with or without compensation, wages or profit; such participation may be physical and/or mental in nature.

The number of total workers in the study area is approximately **3354** (45.23%) out of which 2101 (62.64%) are male and 1253 (37.36%) are female workers.

Total workers further divided into main workers and marginal workers –

(i) Main Workers

The workers who had worked for the major part of the reference period (i.e. 6 months or more) are termed as “Main Workers”. Total number of main workers in the Study Area is approximately **1928** persons, which is 57.48% of total workers and 26.00% of total population.

(ii) Marginal Workers

Marginal Workers are those workers, who are engaged in some work for a period of less than six months, during the reference year prior to the census survey. Total number of marginal workers in the Study Area is approximately **1426** persons which, is 42.52% of the total workers and 19.23% of total population.

4.4.4.2 Non-Workers

The non-workers include those engaged in unpaid household duties, students, retired persons, dependents, beggars etc. More than half **4061** (54.77%) of population is not working. 39.42% of male population and 60.58% is female population are non-workers.

Occupation structure of each village in the study area is tabulated below and the graphical representation has also been provided.

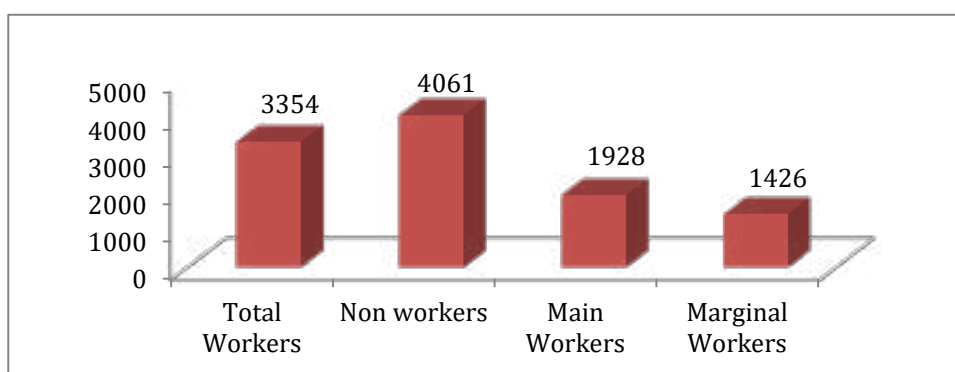


Figure 4.14: Occupational Pattern in the Study Area

The details of Occupational Pattern of the Study Area is given in **Annexure VII**.

CHAPTER-5

ENVIRONMENT AND SOCIAL RISKS AND IMPACTS

5. ENVIRONMENT AND SOCIAL RISKS AND IMPACTS

5.1. Screening and Identification of Environmental and social risks and impacts

This Chapter identifies and discusses both positive and negative impacts associated with the proposed project. Screenings of potential environmental and social impacts are categorized into three categories considering project phases: pre-construction impacts, construction impacts and operations and maintenance impacts.

Screening of environmental and social impacts has been assessed on the basis of screening format for Environment & Social Risks/Impacts as given in ASSIST-ESMF (Jan-Feb 2023), baseline data collected through primary as well as secondary sources and stakeholder consultations.

5.1.1. Pre-Construction Impacts

i. Consents, permits, clearances, no objection certificate (NOC), etc.

All the consents, permits, clearances and NOCs should be obtained before start of construction activities. Failure to obtain necessary consents, permits, NOCs, etc. can result to design revisions and/or stoppage of works. Suggestive list of consents, permits, NOCs etc. required before construction works are given in table below:

Table 5.1: Suggestive lists of consents, permits, NOCs

S. No	Construction Activity	Statute under which Clearance is Required	Responsibility
1	Establishment of new 100 bedded DH / Temporary Labor camps / storage of construction materials batching plant etc.	Pre establishment permission (consents, authorization) from Assam Pollution Control Board.	Contractor
2	Tree Cutting (if required)	Assam State Forest department	Contractor
3	RMC/Batching plants (if required)	Consent to establish and consent to operate under Water and Air Act, 1981 from ASPCB	Contractor
4	Use of vehicles and equipment	Pollution under control certificate (PUC) form RTO	Contractor
5	Temporary water supply and Electrical Connections for work site and camps during construction phase	Concerned local state department	Contractor
6	Labor License	Concerned local / state department	Contractor

ii. Risks / impacts during Pre-construction Activities**Table 5.2: Pre-Construction Activities and its Anticipated Risk**

S. No	Pre-Construction Activity	Anticipated Risk/Impacts
1.	Site Clearance	• Old Assam type quarters will only be demolished and temporarily shift to nearby areas within 1 km radius such as Kundil Nagar (Ward no. 6), Sakrahi and College para (Source: As per discussion with Hospital Authority during site visit). • Presently, 10-12 electric poles, overhead tank structure, 1 hand pump (non-functional), 2 ring wells exists at the site. Some of them may be shifted or closed. • At present, 40-45 trees are present at the proposed DH site. 30-35 trees will be retained and rest will be cut.
2.	Site Selection	Selection of proper sites for Construction worker camps, stock pile areas, storage areas and sources of materials safeguarding environmental and social concerns governing the same.
3.	Debris disposal	Prior to the commencement of works, contractor shall identify a debris disposal site (possibly near to project site) in consultation with local body and implementing agency. It will prevent impending soil and water pollution to be caused by construction activities. Further, There is no use of asbestos at the existing facility hence there will not be generation of asbestos at the site.
4.	Consultations	• Lack of awareness on the project among community may restrict public participation in decision making • Lack of knowledge on the facilities to be provided by the proposed DH at their own neighborhood will prevent them from availing the facilities. • Lack of prior intimation of the demolition and construction activities may lead to health hazards caused by probable air, water and noise pollution.
5	Grievances of community	• Public resistance anticipating negative impacts of the project like tree felling for site clearance, air and land and water pollution due to heavy construction activities • Accessibility issues of public • Land demarcation issues.

5.1.2. Construction Phase Impacts**Table 5.3: Construction Activities Impacts**

S. No	Concerns	Anticipated Risk
1.	Demolition of existing structures	Generation of noise and dust emissions. Demolition materials may be scattered and thrown away in a manner that may cause hindrance to neighborhood and in the access routes.
2.	Ground Water	Ground water contamination and Ground water depletion due to construction works and machine operations.
3.	Surface Water	Temporary flooding at site and nearby areas and contamination of the surface water bodies in and around site.
4.	Ambient Air Quality	Dust Emissions (PM), SO ₂ , NO ₂ and CO from construction activities, Vehicular movement, DG sets.
5.	Noise and visual impacts	Environmental noise can cause Hearing impairment, hypertension, and ischemic heart disease (IHD), annoyance and sleep disturbances. Noise exposure may also cause birth defects.
6.	Land Environment	Loss of topsoil, soil erosion, and soil contamination due to construction activities. Loss of agricultural productivity due to contamination of drained off water & sludge from construction site or drained off cement from batching plant.
7.	Waste Management	Water pollution, emissions and soil degradation.
8.	Storm Water Management	Poor sanitation, drainage problem which results in water running over roads and water logging.
9.	Hazardous material storage and waste handling & disposal	Storage and handling of hazardous substances: substances that may harm people or the environment shall be handled and stored in a way that prevents accidental release.
10.	Energy Efficiency	Loss of natural resources.
11.	Fire Fighting	Loss of Life and Property.
12.	Occupational Health & Safety (OHS)	Contractors staff and Labours will be

	and Community Health & Safety	engaged in the proposed construction. So there will be Health and Safety risks to construction workers; as well as to the community living near the proposed construction sites.
13	Gender based violences, SEA/SH	During construction phase, probable incidents of gender-based discrimination in employment and Sexual Exploitation and Abuse/ Sexual Harassment (SEA/SH) of women workers at site (consultants and contractors' staff & laborers) as well as in the community in and around may take place.
14	Road safety	Issues and concerns of Road safety to pedestrians and community staying nearby site due to movement of construction vehicles
15	Grievances of workers as well as community	• The workers at the construction site may have grievances due to non-receipt of basic facilities, PPE related, non- Receipt of dues, work place discrimination, excessive work load etc • Potential conflict between migrant workforce and local may take place • Moreover, local residents and passers-by may raise concerns regarding the lack of transparency about the project, construction-related issues such as pollution, water logging, and tree felling for site clearance, as well as problems related to demolition and restricted accessibility.

5.1.3 Operation Phase Impacts

The project has positive impact on the society as provider of health care services to the local people. This will alleviate the overall health status of the local people in terms of affordable health care services.

During the operational phase, various impacts relating to the functioning of the healthcare facilities supported under the project are summarized below:

Table 5.4: Anticipated Risk during operation phase

S. No	Concerns	Anticipated Risk
1.	Consent to Operate under Air & Water Act	Violations to applicable environment norms, which overall affects the start of

		operations of proposed project.
2.	Authorization for Handling, Storage, Treatment of BMW under BMW Rules	Violations to applicable environment norms, which overall affects the start of operations of proposed project.
3.	Air Pollution	Emissions from vehicular movement and functioning of DG sets are envisaged.
4.	Water	Risk of Ground water contamination is envisaged from wide range of medications, Pharmaceuticals activities can persist in wastewater and contaminate groundwater, sterilization and cleaning processes which lead to the release of heavy metals into wastewater and Pathogens.
5.	Solid waste	Risk of Improper solid waste generation is envisaged. from various departments and activities, including surgical operations, dialysis, laboratories, and general areas is envisaged.
6.	Infection control	Improper handling and disposal of Bio-medical waste. Improper waste disposal can create unsanitary conditions that can spread infectious diseases.
7.	Occupational Health and Safety	Health, Hygiene and Safety of employees
8.	Life and fire safety	Loss of Life and Property
9.	Gender based violences, SEA/SH	There may be issues of GBV, SEA/SH of women patients and attendants as well as the women employees & staff at the new Hospital.
10	Grievance redressal of community/ patients and employees	The community people/ patients may have grievances of not receiving or delay in treatment, lack of doctors/nurses, insurance, facilities at hospital, lack of medicines etc. And employees may have grievances of not having basic and proper facilities at hospital, hectic schedules etc.

The Environment Health and Safety (EHS) committee assisted by other members of healthcare facility will be formed which will do the best to minimize the environment and social risk.

CHAPTER-6

STAKEHOLDER ENGAGEMENT

CHAPTER 6-STAKEHOLDER ENGAGEMENT

6.1 Introduction on Stakeholder Engagement

Stakeholder Engagement is a process made to involve the public as stakeholders in project preparation through consultations and focus group discussion meetings. Stakeholder Engagement seeks to provide a transparent engagement and open communication between and among the project stakeholders to maximize participation and inclusion for project design, implementation, monitoring and evaluation; enhance project acceptance and improve the environmental and social sustainability.

The main objectives of undertaking these consultations are dissemination of information to build awareness among stakeholders and inform them about the objective, the adverse and positive impacts, design aspects of the project and discuss about the training requirements to enhance their skills and livelihood options.

6.2 Key Stakeholders

(i) **Affected Parties** are impacted or likely to be impacted directly or indirectly, positively or adversely, by the Project.

The Stakeholder engagement with affected parties such as patients, healthcare workforce were undertaken.

(ii) **Interested Parties** may have an interest in the Project. They include individuals or groups whose interests may be affected by the Project and who have the potential to influence the Project outcomes in any way.

The Stakeholder engagement with interested parties such as ASHA workers and Panbari Gaon Panchayat were undertaken.

(iii) **Vulnerable Groups** include:

- Patients: Elderly, persons with disabilities, persons below poverty line, female and minor patients at heightened risk of gender-based violence, ethnic minorities, LGBTQI.
- Communities affected by the construction activities: Scheduled tribes (ST), scheduled castes (SC), and communities living in remote and hilly locations, female headed households, illiterate and poor population.

6.3 Methods of Stakeholder Engagement

Different tools were employed in interviews conducted and discussions ranged from informal and undirected to formal and directed.

6.3.1 Stakeholder Consultation

As part of the ESIA process, the project team has undertaken consultation with the stakeholders of the project to understand their expectations from the proposed project. The main objective of the stakeholder consultation is to develop an understanding and awareness on the project among the different stakeholders, assess the level of stakeholder interest and support for the project, and to ensure that appropriate measures for mitigating environmental and social risks and impacts are disclosed to stakeholders in a timely, understandable, accessible and appropriate manner.

6.3.2 Stakeholder Engagement Meeting

Stakeholder Meeting for the proposed project has been conducted on 02.12.2023 at existing Mahatma Gandhi Model Hospital, Narayanpur, P.O- Dikrong (784164), District Lakhimpur, Assam. The meeting was attended by 26 people including (i) Deputy Superintendent, (ii) Medical and Health officer, (iii) Pharmacist, other employees like (iv) Dresser, (v) Lab Technician, (vi) Local villagers, (vii) patients, (viii) ANM and (ix) ASHA Workers. The attendance sheet is given in Annexure VIII. The photographs of stakeholder Engagement are given in **figure 6.1**.



Figure 6.1: Photographs of stakeholder engagement

6.3.3 Information, Education and Communication (IEC)

The Information, Education & Communication (IEC) aims to create awareness and disseminate information regarding the benefits available under various schemes/programmes through banner, leaflets, posters, announcements, newspaper, notices, signages, social media etc. The aim of such advertisements is to encourage people to adopt positive behavior, raise awareness and disseminate information regarding availability and access to quality healthcare provided by the Government. Snippets of incorporation of IEC in the Model Hospital are shown in the figure below:





Figure 6.2: Banners & posters displayed at Mahatma Gandhi Model Hospital, Narayanpur

6.3.4. Outcome of the stakeholder Consultation

During stakeholder consultation, dissemination of information for building awareness about the project was discussed. The outcome of the meeting was that all the stakeholders supported for the development of proposed New District Hospital and were in support of the upgradation of existing facility to proposed DC. Further, Due to absence of any CBWTF for safe disposal of biomedical wastewithin 75 km from the site, other possibility for safe disposal of BMW may be explored as per talk with Medical Officer (In charge). But as per current status of CBWTFs in Assam state, there is such facility in Jorhat which presently is in acquisition stage.

The proposed project will cater to all the concerns of stakeholder once it gets start functioning. The key suggestion given by stakeholder are presented in table below:

Table 6.1: Key issues and suggestions of different Stakeholders

S. No.	Stakeholders	Commitment made during the Stakeholder Engagement meeting
1.	Medical Officer	• Dr. S. Kakati, Deputy Superintendent, is the representative of the Mahatma Gandhi Model Hospital, Narayanpur. • He supports the proposed project. • The present mode of BMW disposal is through Sharp pits and Deep Burial at the site. Further in operation phase for safe disposal of biomedical waste a CBWTF is coming up at Jorhat. Once, the facility

		becomes functional, an agreement will be done (a private land has been identified for the same, land acquisition yet to be initiated) and the disposal at this facility will be streamlined. • They will ensure all the activities related to healthcare facilities are followed. • There will no discrimination on the basis of gender, age, and color.
2.	Panbari Gaon Panchayat	• NOC is issued regarding the proposed project activities and same is given in Annexure VIII.
3.	Residents from the locality within 100 m from the hospital building	• Mrs. Ranjan Nazrilla and Ms. Priyanka, locals within 100m from the hospital building attended the Stakeholder Engagement meeting. • They supported the proposed project and are looking forward for the upcoming DH.
4.	Pharmacist	• Mr. Bipul Deonand Mr. Dibakar Sarma support the project.
5.	Patients (Vulnerable Group)	• Mr. Manash Bondu attended the Stakeholder Engagement meeting under vulnerable group (patient). • He was contented to hear the upcoming services coming up at the hospital and was in support of the upgradation of existing facility to proposed DH. • Various Pregnant women, Elderly patients and Patients with Disabilities were interacted and informed about various ongoing Govt. Insurance Schemes such as Pradhan Mantri Jan Arogya Yojana (PM-JAY) and Janani Suraksha Yojana (JSY).

6.4. Cost for implementation of IEC, Community meetings and Awareness & Training

The budget for the same has been allocated and mentioned under **table 6.2** given below:

Table 6.2: Cost for implementation of IEC, Community meetings and Awareness & Training

S. No.	Particular	Stage	Total Cost INR
1.	IEC Development (Banner, Leaflets, posters, announcement costs, new paper Notices, signage, etc.)	Pre-Construction, Construction and facility operation phase	1,00,000/-
2.	Community meetings in nearby locations	Construction	50,000/-
3.	Awareness & training programs with Stakeholders	Construction	2,00,000/-
Total			3,50,000/-

CHAPTER-7

ENVIRONMENT AND SOCIAL MANAGEMENT PLAN (ESMP)

7- ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

7.1 Environment and Social Management Plan Introduction

The objective of ESMP is to manage and monitor environmental and social impacts during the **pre-construction, construction and operation phase** of the proposed project. To attain this, the ESMP identifies possible adverse impacts from the proposed project activities and outlines mitigation measures required to reduce the likely negative effects on the built, natural and social environment.

ESMP is covering the following parameters-

1. Legal Consents, permits, clearances, NOCs, etc. required before the commencement of the project.
2. Existing condition of Air Environment, Noise Environment, Water Environment (Ground water/ Surface Water) and Biological Environment and impact induced on these during the Pre-construction, Construction and Operational Phases.
3. Community Health and Safety, Labor welfare, Occupational Health & Safety, Transportation and Vehicle Movement, Socio-economic condition during and after commencement of the project.
4. Key areas/activities/concerns resulting in adverse environmental and social impacts and its mitigation measures including impacts, operating procedure and agencies that would be responsible.
5. Estimation of potential environmental and social impacts and their mitigation measures given in **Table 7.1.** below:

Table 7.1(i): Environmental and Social Risks/Impacts assessment and Mitigation Measures during Pre-Construction Phase

Key Area/Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
Consent to Establish from Assam State Pollution Control Board, Land ownership documents from Government of Assam, tree cutting permission from Assam State Forest Department.	Non availability of the necessary consents or permits can result in stoppage of further processing of works.	➤ Ensure availability of necessary consents, clearances and permits, land compensation, design, engineering, equipment, material, construction, erection, testing & commissioning.	Contractor, Joint Director, DH & Project In-charge
Site Clearance	Presently, 10-12 electric poles, overhead tank structure, 1 hand pump (non-functional), 2 ring wells, old existing buildings and 40-45 trees are present and they may possess the risk during the development of new building structures.	➤ Electric poles will be shifted within the site. ➤ Overhead tank structure, hand pump and Ring well will be closed as it is an old structure. The available water source at the Model Hospital would be ground water which is drawn through submersible pumps with softener. ➤ Old Assam type quarters will only be demolished and temporarily shift to nearby areas within 1 km radius such as Kundil Nagar (Ward no. 6), Sakrahi and Collegepara. ➤ Total number of trees cutting expected is about 10. Rest of the trees will be retained ➤ Use barriers to protect tree trunks from mechanical injuries caused by	Contractor, Joint Director, DH & Project In-charge

		construction equipment. ➤ Maintain a regular watering schedule to support tree health throughout the construction process, especially during dry periods. ➤ Regularly monitor the condition of protected trees and adjust protection measures as needed to respond to potential stress or damage. ➤ Mark and provide sign boards in order to prevent any mishap.	
Archeology and Cultural Heritage	Not within 5 km Radius of the study area; A historical type Structure Maghnawa Temple is located at a distance of 6.74 km from Mahatma Gandhi Model Hospital, Narayanpur	➤ The proposed District Hospital Project No Archeology and Cultural Heritage site is present within 5 km Radius of the study area, therefore, no impact expected from this component.	NA
Site Selection	Selection of site for Construction worker camps, stockpile areas, storage areas, sources of materials	➤ For establishing temporarily workers camp, the priority should be to locate these near the subproject sites. ➤ The temporary workers camp, storage of fuel and lubricants should be avoided near any water body, at land being used for production of crops, near to any sensitive area. ➤ Prior permission is required from concerned agency for establishing workers camps, stockpile areas, storage areas. ➤ Verify the suitability of all material	Contractor, Joint Director, DH & Project In-charge

		sources and to obtain the approval of applicable department and local revenue administration.	
Debris disposal	Prior to the commencement of works, contractor shall identify a debris disposal site (possibly near to project site) in consultation with local body and implementing agency.	➤ The site shall be selected preferably from barren, infertile lands. ➤ Prepare a construction and demolition waste management plan in preconstruction phase for safe disposal. Asbestos is not a part of debris disposal at site as there is no use of asbestos in the existing structures on this site. ➤ As the proposed DH is surrounded by residential area, at the time of selecting the disposal site minimum distance criteria will be followed and minimum 7.195 km (Dikrong River) away from sensitive locations like hospitals, religious places, ponds/lakes or other water bodies.	Contractor, Joint Director, DH & Project In-charge
Stakeholder Engagement	Lack of awareness on the project among community may restrict them from participating in decision making and knowing about the facilities to be provided by the proposed DH at their own neighborhood thereby preventing them from availing the facilities. Further lack of prior intimation of the demolition and construction activities may lead to health hazards caused by probable air, water and noise	• Prior intimation to the public about the time and the duration of the particular construction works which causes inconveniences to the community residing nearby. • Stakeholder consultation for ○ allowing them to participate in decision making for the proposed DH ○ making people aware of the proposed DH and the facilities to be provided by the DH at specific intervals with representation from all the sections of the	Contractor, Joint Director, DH & Project In-charge

	pollution.	community in and around the proposed site including women members of the community. o responding to their queries regarding, proposed DH, construction activity etc..	
Grievances of community	- Public resistance for the project anticipating negative impacts of the project like tree felling for site clearance, air and land and water pollution due to heavy construction activities - Accessibility issues of public - Land demarcation issues.	- Public consultation to gather data on the proposed site while also raising awareness about the potential impacts and benefits of the project. - Installation of Drop Boxes with proper signages at entry gate so that it is visible to community to drop grievances. - Display of contact number and e-mail dedicated for GRM at entry gate - Developing of Grievance Redressal Protocol to address the grievances received at site - Designation of manpower to register the grievances at site - Developing of proper formats to capture all the relevant details of complainant for registering grievances of Community	Contractor, Joint Director, DH & Project In-charge

Table 7.1(ii): Environmental and Social Risks/Impacts assessment and Mitigation Measures during Construction Phase

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
Disruption of Health services at CHC	Temporary disruption/delay of health services due to change in location of existing medical facilities (to nearby areas) during up gradation of Model Hospital/ construction of District Hospital.	There will be no delay in health services at the site, as OPD will be functional from this existing Mahatma Gandhi Model Hospital (as it is a new building and will be retained). So no major problem in this regard.	Project In-charge
Demolition of brick wall/ existing structures	Noise, dust, disruption of the neighborhood, underground or overhead services (if any) etc.	➤ Structures to be demolished should be wetted through water sprinkling to reduce dust emission. ➤ C&D rules and mitigation measures should be displayed at the project site. ➤ Green net fencing (3m high) all around the site. ➤ The location of any underground or overhead services (water, electricity, gas, etc.) ➤ Appropriate site for storage and disposal of demolished materials (properly covered) ➤ All the safety measures such as providing appropriate Personal Protective Equipment (PPE) should be adopted during demolition activities. ➤ Development of greenbelt in and around project site. ➤ A Management Plan for Construction	Contractor

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
		and Demolition waste is prepared and attached as Annexure- I.	
Ground Water	➤ Ground Water Contamination ➤ Ground Water Depletion	➤ Waste water generating at the project site will be disposed of in the septic tanks/soak pits conforming to CPCB/ASPCB norms. ➤ Waste water to be treated in STP and reused for flushing toilets and irrigation purposes. ➤ Disposal of liquid waste from Labs, blood bank, O.Ts etc during operations phase shall be disposed through proposed ETP in operational phase. ➤ Will use the available water more efficiently. ➤ Will use Re-cycled water ➤ Use of Water Efficient fixtures like flow regulators & dual flushing cisterns ➤ Provision of RWH pits to collect rain water for ground water recharge.	Contractor and Project In-charge
Surface Water	Surface water contamination	➤ Curing will be done by spraying water to reduce run-off. ➤ It will be ensured that surface water runoff will be disposed through proper drainage channel to minimize the contamination risk. ➤ Rain water harvesting	Contractor

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
Ambient Air Quality	Dust Emissions (PM), SO ₂ , NO ₂ and CO from Construction activities, Vehicular movement, DG sets	➤ Water sprinkling will be carried out. ➤ Regular sweeping of construction site ➤ Construction material & debris carrying vehicles will be covered. ➤ Regular monitoring of emissions and control measures will be taken to reduce the emission levels. ➤ Use of low sulfur diesel. ➤ Regular maintenance and servicing of vehicles. ➤ Stack height of DG set as per CPCB standards ➤ Developing of Green belt ➤ All vehicles must carry Pollution under Control Certificate. ➤ All transportation/vehicle movements for material transport shall be carried out during 10.00 pm to 6.00 am ➤ All the material shall be properly covered at site as well as during transportation so that the dust cannot get airborne ➤ Hard barricading shall be provided around the construction site ➤ Regular ambient air monitoring (twice a year)	Contractor in consultation with hired consultant (environment monitoring)

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
Noise and visual impacts	➤ Environmental noise can cause Hearing impairment, hypertension, and ischemic heart disease (IHD), annoyance and sleep disturbances. Noise exposure may also cause birth defects	➤ Construction activities involving high level noise generation will be restricted to day time only. ➤ Provision of ear muffs to workers. ➤ Use of machinery of modern make meeting the noise standards ➤ Development of green belt. ➤ DG sets will be provided with acoustic enclosures and will be placed in a room to reduce noise level. ➤ Proper traffic management & circulation. ➤ Honking will be prohibited in the premises. ➤ All vehicles will carry PUC. ➤ Regular ambient noise monitoring and work site noise monitoring	Contractor
Land Environment	Soil Contamination	➤ Construction debris will be used for leveling or sent to authorized site or disposal ➤ Proper work management to avoid spillage ➤ Excavated topsoil will be re-used for landscaping in the project area.	Contractor
Waste Management	Water pollution, emissions and soil degradation	➤ Estimation of waste generated, on site handling, storage and processing, collection, transfer and transport,	Contractor in consultation with Architect

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
		processing and recovery & disposal through following methods. ➤ Installation of STP for domestic effluent and ETP for Lab, OT and blood bank waste separately. ➤ Garbage chute system and color-coded bins for segregation of domestic waste and biomedical waste respectively. ➤ Organic Waste Compost Machine for 100 Kg/Day Waste per Day will be installed.	
Storm Water Management	Poor sanitation, drainage problem which results in water running over roads and water logging.	➤ Re-establish the drainage pattern to the extent practicable. ➤ Provision of dual plumbing system/ two pipe (stack) system and use of zero liquid discharge technology. Water balance chart is attached in Annexure XIII. ➤ The rain water to be diverted using rainwater pipes to the drainage network. ➤ The entire site storm water to be diverted into the rainwater harvesting well for recharging the aquifer and the surplus will be connected to the municipal drain.	Contractor in consultation with Architect
Transportation and Vehicle Movement	Increase in volume of traffic	➤ As proposed works of construction of DH at Narayanpur is limited to	Contractor and Project In-charge

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
	Issues and concerns of Road safety to pedestrians and community staying nearby site due to movement of construction vehicles	proposed site only, which is a closed premise bounded by distinct wall and gate. Separate routes for transportation of vehicles for construction are planned in the site. ➤ The road will be metaled and regularly water sprinkled during construction activities. ➤ During construction, transportation during busy traffic hours will be avoided and time schedules will be prepared for transportation of construction materials in consultation with the authorities concerned. ➤ Proper Traffic Management & circulation with adequate lighting and signage system. ➤ Provision of adequate parking spaces as per Norms. ➤ Trained and qualified drivers/operators. ➤ Separate routes for the movement of machineries and vehicles away from the patients/visitors route. ➤ Regular checks and inspections for the ambulances and other vehicles. ➤ Traffic Survey was conducted near the vicinity of the project and details of	

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
		survey forms and its analysis are given in Annexure-X .	
Hazardous material storage and waste handling & disposal (no asbestos generated)	Storage and handling of hazardous substances: substances that may harm people or the environment shall be handled and stored in a way that prevents accidental release.	➤ Drip trays shall be placed under leaking under vehicles and other equipment to prevent spills of hydrocarbons reaching the soil or watercourses. ➤ Storage of hazardous substances shall have secondary containment, so that leaking liquids can be contained in the event of a failure. Secondary containment should ideally have a capacity of at least 110% of the holding capacity of the primary storage. ➤ To avoid leaks, proper funnels should be used when decanting to other containers. It is recommended to use a hand pump rather than a funnel and smaller containers for frequent/routine transfers from one container to another (or to a vehicle tank). ➤ Disposal of waste from site must only be carried out as per the applicable rules and regulations in an authorized and licensed areas / facilities. ➤ Asbestos is not a part of debris disposal at site as there is no use of asbestos in the existing structures on this site.	Contractor and Project In-charge

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
Occupational Health and Safety	➤ Workers Injuries ➤ Health, Hygiene and Safety of Workers during construction activities	➤ In the construction phase, approx. 60 workers (preferably local) including both skilled and unskilled workers will be engaged at site. The workers for civil construction (on contract basis- on payroll of construction agency will be employed for the period of one year initially; later on, contract will be extended further. Several workers including casual laborers, plumbers, and engineers are expected to work on the site. Occupational Health and Safety of the workers is utmost essential as it could prevent risks of injuries and accidents, health, hygiene and safety of workers. ➤ Comply with the labor laws. ➤ Provide training on occupational health and safety to all the workers. ➤ Ensuring all workers are provided with personal protective equipment's like helmet, gumboot, safety belt, gloves, nose mask and ear plugs. ➤ Provision of harness, lifts etc. for workers working on heights ➤ Ensuring that qualified first-aid is provided along with standard first aid	Contractor and Project In-charge

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
		box with all standard contents at Site. ➤ Provide medical insurance coverage for workers. ➤ Provide worker's accommodation which may include Provision of fuel for cooking, proper & hygienic lodging/living facility, proper toilets & bathroom, liquid and solid waste management facilities for workers and safety measures in labor camps ➤ No child labor will be employed. ➤ Emergency Readiness Plan to be displayed at a prominent site ➤ Training to workers on emergency readiness. ➤ During construction activities local's workers will be preferred. ➤ Adequate training through regular awareness programme for safe working at construction site, mock drills, use PPE kits, dust masks, basic amenities for workers. ➤ Occupational Health and Safety Plan is attached as Annexure XIV.	
Community Health and Safety	➤ Injury, accidents and sickness of workers and local people ➤ Restricted movement of visitors within the	➤ Organizing regular health check-ups and creating awareness about diseases like on communicable diseases like	Contractor and Medical In-charge

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
	facility premises	COVID, Tuberculosis, HIV and STDs. ➤ Alternative and safe routes for patients flow. ➤ Mandatory deployment of security personnel at site specifically at high risk zones ➤ Scheduling of fixed time for movement of vehicles carrying construction machineries and materials in consultation with the authority of existing CHC to ensure safe movement of passersby. ➤ Construction area to be properly hard barricaded and safety signage's viz. "No entry for public"; "Work is going on, be careful"; "Area for reinforcement", "Construction Zone", etc and also important signage's indicating diversion, danger signs at appropriate locations are to be installed during construction. ➤ 24×7 security in and around project a	
Employment	Employment generation during construction phase and operation phase.	➤ Demand for skilled, semi-skilled and unskilled workers during construction period. ➤ Employment opportunities will be generated.	Contractor

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
		➤ Equal and minimum wages as per govt. norms will be provided.	
Energy Efficiency	Loss of natural resources	➤ Use energy efficient measures as per DPR such as Water Efficient fixtures, STP treated water after regular testing shall be used for, flushing & landscape irrigation, Rain water harvesting system, Pressure reducing device, Sprinkler Irrigation etc.	Architect and Contractor
Fire Fighting	Loss of Life and Property	➤ Provision of Fire extinguisher system at site. ➤ Staff should be trained to handle emergency situations like firefighting and should be responsible to contact the emergency personnel in case of any emergency. ➤ Provision of Fire Alarm System fire buckets, fire extinguishers, fire pumps, fire proof enclosures etc. ➤ Storage of raw water in underground fire water tanks has been provided for hospital building.	Architect and Contractor
Stakeholder Engagement	Lack of prior intimation of the demolition and construction activities may lead to health hazards caused by probable air, water and noise pollution. Community health and safety concerns	Prior intimation to the public about the time and the duration of particular construction works which causes inconveniences to the community residing nearby • Stakeholder consultation for	Contractor, Joint Director, DH & Project In-charge

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
		➤ responding to the queries of community regarding, proposed DH, construction activity etc. ➤ making community aware that all safety measures in terms of air pollution, noise pollution, water pollution, community health and safety will be undertaken in the construction phase.	
Gender based violences, SEA/SH	• Risks of SEA/SH to community members, particularly women and children by contractors' workers during construction period • About 75 percent of the contract workers are anticipated to be men, and women's participation is around 25 percent. The women labor force may face GBV/SEA/SH because of their numerical inferiority at the workplace • Risks of workplace sexual harassment at project site (consultants and contractors' staff & laborers).	➤ Codes of conduct will be prepared in languages easy to understand, preferably in local language and adopted by Contractor as well as all the workers under Contractor of the project. Annexure XV ➤ Any GBV/SEA/SH complaints to be taken care by <u>Local Committee</u> notified under POSH Act by District Commissioner to receive complains on SEA/SH from establishments where Internal Committee has not been constituted. ➤ Duties of Contractor who employs the labours are to : ○ provide a safe secure working environment for workers like provision of lighting around project sites, including around latrines and	Contractor, Joint Director, DH & Project In-charge

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
		access routes, separate and lockable toilets for female construction workers etc. - o display (a) warnings which say “Respect the dignity of women” alike at conspicuous positions in site premises , (b) project site is an area where GBV/SEA/SH is prohibited (c) order constituting the Local Committee (LC) - o organize regular trainings on (a) CoC and (b) prevention of GBV/SEA/SH to all workers, including contractors, subcontractors, core suppliers, and relevant consultants and clients (c) sensitization on Local Committee (LC) - o ensuring all employees should attend regular training programs on the prevention of SEA/SH in the workplace, including training for new workers/employees - o treat Sexual harassment as misconduct and initiate action for such misconduct. - o facilitating complainants by	

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
		providing linkages with One Stop Centres of the district, orienting on Women Helpline Number 181 , etc.	
Grievances of workers as well as community	<u>Grievances of workers</u> - The workers at the construction site may have grievances due to non-receipt of basic facilities, PPE related, non- Receipt of dues, work place discrimination, excessive workload etc - Potential conflict between migrant workforce and local may take place <u>Grievances of Community</u> - Tree felling for site clearance. - Inconveniences caused to community by construction activities like dust, water source contamination, noise, water logging, etc - Community health and safety concerns - Community residing nearby site or passers-by may have grievances related to non-disclosure of project information, tree felling	❖ GRM at proposed DH Site (Manual): - Submission of grievances by workers and community - Installation of Drop Boxes with proper signages at workers camp and entry gate so that it is visible to workers and community to drop grievances in person at site. - Display of contact number and e-mail dedicated for GRM at workers camp and entry gate for submission of grievances by workers and community. - Designation of manpower to register grievances at site - Developing of proper formats to capture all the relevant details of complainant for registering grievances of Labours and Community received at the site physically. - Developing a Grievance Redressal Protocol to address the grievances physically received at site (till the time	Contractor, Joint Director, DH & Project In-charge

Key Area/Activities/Concerns	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
		the online platform is operationalised) - Sensitization of workers on the existing physical GRM mechanism at site. ❖ <u>GRM Portal (Online)</u> - An online GRM Portal to be developed for grievance online submission and redressal of the grievances of the workers and community. The grievances received through drop boxes, email, online entry, mobile phone will be registered on the online portal and the redressal will be done following a protocol developed for the purpose. The stakeholder departments will have the credentials to redress and escalate the grievances. The complainant will be communicated receipt and final redressal of the grievances with SMSs. - Grievance Redressal Mechanism is detailed at Annexure XVI.	

Table 7.1(iii): Environmental and Social Risks/Impacts assessment and Mitigation Measures during Operation Phase

Key Area/Activities	Potential E&S Risks and Impacts	Proposed Mitigation Measures	Responsibilities
Consent to Operate, Authorization under BMW Rules 2016, Land ownership documents, Fire NOC	Non availability of the necessary consents, authorization or permits can result in closure of the facility by concerned authority.	➤ Ensure availability of consent to establish and consent to operate under Water Act 1974 and Air Act 1981, Authorization under BMW Rules 2016/2018 from PCBA, other necessary clearances, Licenses and permits	Contractor, Hospital Authority, Narayanpur DH & Project In-charge
Flora and Fauna	Deforestation and loss of vegetation cover (if happened post construction phase)	➤ Development of thick green belt with local and indigenous species in consultation of forest department ➤ To maintain the aesthetic beauty of the site.	Contractor, Hospital Authority, Narayanpur DH & Project In-charge
Ground Water	➤ Ground Water Contamination ➤ Ground Water Depletion	➤ Dual plumping system is proposed in the project. ➤ Waste water to be treated in STP and reused for flushing toilets and irrigation purposes. ➤ Use of Water Efficient fixtures like flow regulators & dual flushing cisterns	Hospital Authority, Narayanpur DH& Project In-charge
Surface Water	Surface water contamination	➤ It will be ensured that surface water runoff will be disposed through proper drainage channel to minimize the contamination	Hospital Authority, Narayanpur DH& Project In-charge

		risk. ➤ Regular maintenance of rain water harvesting system	
Ambient Air Quality	Emissions from vehicular movement and operation of DG sets	➤ Water sprinkling will be carried out to reduce emission ➤ Regular monitoring of emissions and control measures will be taken to reduce the emission levels. ➤ Use of low sulfur diesel. ➤ Acoustic enclosures ➤ Green belt development	Hospital Authority, Narayanpur DH& Project In-charge
Noise and visual impacts	➤ Environmental noise can cause Hearing impairment, hypertension, and ischemic heart disease (IHD), annoyance and sleep disturbances. Noise exposure may also cause birth defects	➤ DG sets will be provided with acoustic enclosures and will be placed in a room to reduce noise level. ➤ Proper traffic management & circulation. ➤ Honking will be prohibited in the premises. ➤ All vehicles will carry PUC. ➤ Regular ambient noise monitoring and work site noise monitoring	Hospital Authority, Narayanpur DH & Project In-charge
Waste Management	Solid Waste generation	➤ Garbage chute system for domestic waste and color coded bins for at source segregation of biomedical waste respectively. ➤ Organic Waste Compost Machine	Hospital Authority, Narayanpur DH & Project In-charge

		for 100 Kg/Day Waste per Day will be installed.	
BMW Management	Infections and Toxicity due to improper handling of bio-medical wastes	➤ The authorization for handling of BMW will be obtained from Assam State Pollution Control Board. ➤ Separate temporary storage area shall be provided inside the premises of DH for temporary storage of color-coded biomedical waste bags/containers and disposal to take place within 48 hrs. ➤ For safe disposal of Biomedical waste, in operation phase, an agreement with CBWTF will be done for disposal of BMW, located 75 km from the site. Present mode of BMW disposal is through Sharp pits and Deep Burial at the site. ➤ Formation of BMW Management Committee as per BMW Rules. ➤ Details about biomedical medical waste are given in Waste management plan which is attached as Annexure IX.	Hospital Authority, Narayanpur DH & Project In-charge
Water Management	Poor sanitation, drainage problem which results in water running over roads and water logging.	➤ Re-establish the drainage pattern to the extent practicable.	Hospital Authority, Narayanpur DH

		➤ Provision of dual plumbing system/ two pipe (stack) system and use of zero liquid discharge technology. ➤ The rain water to be diverted using rain water pipes to the drainage network.	&Project In-charge
Transportation and Vehicle Movement	Increase in volume of traffic	➤ Proper Traffic Management & circulation with adequate lighting and signage system. ➤ Provision of adequate parking spaces as per Norms. ➤ Trained and qualified drivers/operators. ➤ Separate routes for the movement of machineries and vehicles away from the patients/visitors route. ➤ Regular checks and inspections for the ambulances and other vehicles.	Hospital Authority, Narayanpur DH &Project In-charge
Occupational Health and Safety	➤ Health, Hygiene and Safety of employees	➤ Provision of PPE to healthcare workers ➤ Provision of PPE to BMW handling staff ➤ Regular immunization of the staff and waste handlers ➤ Regular Health checkup ➤ Provide training on health and safety to all the employees.	Hospital Authority, Narayanpur DH &Project In-charge

		➤ Provide medical insurance coverage for employees. ➤ Emergency Readiness Plan to be displayed at a prominent site ➤ Training to employees on emergency readiness. ➤ Occupational Health and Safety Plan is attached as Annexure XIV.	
Gender based violences, SEA/SH	• Risks of SEA/SH to community members, particularly women and children by contractors' workers during construction period • About 75 percent of the contract workers are anticipated to be men, and women's participation is around 25 percent. The women labor force may face GBV/SEA/SH because of their numerical inferiority at the workplace • Risks of workplace sexual harassment at project site (consultants and contractors' staff & laborers).	➤ Codes of conduct will be prepared in languages easy to understand, preferably in local language and adopted by Contractor as well as all the workers under Contractor of the project. Annexure XV ➤ Any GBV/SEA/SH complaints to be taken care by <u>Local Committee</u> notified under POSH Act by District Commissioner to receive complains on SEA/SH from establishments where Internal Committee has not been constituted. ➤ Duties of Contractor who employs the labours are to : ○ provide a safe secure working environment for workers like provision of lighting around project sites, including	Hospital Authority, Narayanpur DH & Project In-charge

		around latrines and access routes, separate and lockable toilets for female construction workers etc. - o display (a) warnings which say “Respect the dignity of women” alike at conspicuous positions in site premises , (b) project site is an area where GBV/SEA/SH is prohibited (c) order constituting the Local Committee (LC) - o organize regular trainings on (a) CoC and (b) prevention of GBV/SEA/SH to all workers, including contractors, subcontractors, core suppliers, and relevant consultants and clients (c) sensitization on Local Committee (LC) - o ensuring all employees should attend regular training programs on the prevention of SEA/SH in the workplace, including training for new workers/employees - o treat Sexual harassment as misconduct and initiate	
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		action for such misconduct. o facilitating complainants by providing linkages with One Stop Centres of the district, orienting on Women Helpline Number 181. etc.	
Grievance redressal of community/ patients and employees	➤ The community people/ patients may have grievances of not receiving or delay in treatment, lack of doctors /nurses, insurance, facilities at hospital, lack of medicines etc. ➤ And employees may have grievances of not having basic and proper facilities at hospital, hectic schedules etc.	• Installation of Drop Boxes with proper signages at multiple sites of the Hospital so that it is visible to community to drop grievances. • Display of contact number and e-mail dedicated for GRM at specific sites. • Developing a Grievance Redressal Protocol to address the grievances received at Hospital • Designation of manpower to register the grievances at Hospital • The online GRM Portal will facilitate submission of grievance of Patients and Hospital Staff and redressal of the same. The grievances received through drop boxes, email, online entry, mobile phone will be registered in the	Hospital Authority, Narayanpur DH & Project In-charge

		online portal and the redressal to be done will follow a protocol where stakeholder departments will have the credentials to redress and escalate the grievances. The complainant will be communicated receipt and final redressal of the grievances with SMSs.	
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CHAPTER-8

ANALYSIS OF ALTERNATIVES

CHAPTER 8- ANALYSIS OF ALTERNATIVES

8.1 Introduction

This chapter includes the assessment of various options may be available for different components of the project in terms of environmental sustainability. Consideration of alternative technologies to be used in building material, energy conservation, and transportation methods are addressed in this chapter. The various applicable options are thus evaluated for their suitability or availability to project site and local environment.

8.2 Building Material

Only IS approved building materials will be used for the construction. Construction material will be selected based on their thermal characteristics and the U and R values. The additional considerations are as under.

- The major materials required for construction of the project are steel, cement, bricks, metal, stones, electrical fittings, water, etc.
- All the items used in the project are as per the national building code specification.
- The basic materials used for the construction of the proposed project are cement, steel, bricks, stones, ready mix concrete, sand, plywood, hard wood, aluminum, glass etc.

The following measures are proposed for conserving the energy

- Low energy embodied materials will be preferred.
- Energy efficient construction materials such as Autoclaved Aerated Concrete Blocks (AAC Blocks) will be used. Apart from energy efficiency, AAC Blocks are durable and a high-strength building material that has excellent insulation properties and is resistant to fire and moisture.
- Ready Mix Concrete will be used for construction of RCC structures
- Minimizing overall waste and the transport of waste from site
- Provision for Solar powered street lighting for common areas is planned
- LED's, CFL bulbs, lights, and fixtures for most of the common area
- Use of energy efficient lighting
- All the items used in the project will be as per the National Building Code-2016 and ECBC

8.2.1 Use of Recycled Material

Recycled materials will be used in filling of roads as well as for pavers. Also, materials with low embodied energy used in construction which will significantly result in energy savings. The total savings in terms of roads and paving may be up-to 20%. Whole Bricks received from segregation of C&D Waste will be kept separately for use. Recyclable waste construction materials will be sold to authorized recyclers and recycled into aggregates which are converted to Ready Mix Concrete (RMC), pavement blocks, kerb stones and concrete bricks. Recycled coarse aggregate will be used in construction of roads within the site.

8.2.2 Walls

8.2.2.1 Conventional Material

Redbrick for peripheral walls and AAC blocks for internal walls are used for construction. Bricks are laid in courses and numerous patterns known as bonds, collectively known as brickwork, and

laid in various kindsof cement mortar to hold the bricks together to make a durable structure. Cement mortar becomes hard when it cures, resulting in a rigid aggregate structure.

8.2.2.2 Alternatives

- **Structural Insulated Panels-** Structural Insulated Panels are modular wall sections made from foam sandwiched between two pieces of Oriented Strand Board. They're incredibly strong and energy efficient, as the foam inside the Oriented Strand Board acts not only as the web to provide strength but also as insulation.
- **Brick and block** products with waste and recycled contents (waste from coal burning plants), blast furnace slag, sewage sludge, waste wood fiber, rice husk ash, etc.
- **Concrete blocks using lime or waste wood fiber** provide reduction of waste and savesenergy.

8.2.3 Roofs Conventional Material

Roofing is RCC, as it is suitable for longer spans. The constituents of RCC, i.e., cement, sand, aggregate and steel all are energy intensive materials and high-embodied energy content.

Alternatives

- **Pre-cast/aerated cellular concrete walling blocks and roofing slabs-** These aremanufactured by the aerated cellular concrete manufacturing process. When used in multistoried structures, they reduce the weight, resulting in a more economical design.
- **Roofing sheets-** Corrugated roofing sheets for their reliable utility and enhanced strength, Polycarbonate roofing sheets for their insulation properties and high strength quotient and Metal roofing sheets for their high insulating capabilities can be used.

8.2.4 Roads & Open Spaces

Use of grass pavers along the roadside, parking and pedestrian areas is a solution to reduce the heat island effect. Recycled materials are being used for construction of road purpose as well as for pavers and will be followed for expansion purpose if locally available.

- **Permeable Paving-**Permeable (porous) paving will be provided to control surface waterrunoff by allowing storm water to infiltrate the soil and return to the ground water. Thetraffic areas will however continue to be impermeable

Gravel/crusher fines: Loose aggregate materials from masonry wastes will be used tocover pedestrian surfaces.

- **Drainage System:** Drainage system is placed under gravels for collection of rainwater andwill be collected to the sump.

8.3 Natural Hazards Prone Areas

The project falls under zone V (as per IS 1893 (Part-I):2002), as per the Seismic Zone Map of India and Assam. Zone 5 covers the areas with the highest risk of suffering earthquakes of intensity MSK IX or more significantly. Adequate measures will be adopted during operation phase of the project-by-project proponent. All applicable guidelines will also be followed in this regard to ensure safety of the building.

8.4 Alternatives of Location

The State Government of Assam has allotted the required land to the project proponent for development of 100 Bedded Hospital; hence no other alternative of the location was explored.

8.5 Energy Efficiency & Renewable Energy

To promote energy conservation, it is proposed to provide the buildings with low energy consuming fixtures maximize availability of natural light and make plans in conformance to the sun's path. In the operational phase, appropriate energy conservation measures and management plan will be adopted to minimize the consumptions of non-renewable fuel. The following measures are suggested to be adopted.

- All Buildings are spaced in such a way that sunlight, natural ventilation is not disturbed due to each other.
- Buildings will be designed to have least exposed surface of glass.
- Energy efficient compact fluorescent lamps to be used as these CFL gives same illumination with less wattage compared to GLS Lamps.
- Power factor of the complete electrical system will be maintained close to unity. This will reduce electrical power distribution losses in the installation.
- Occupancy Sensor based light system to be used for rooms which detect movement within a room and automatically turn lights on or off as needed.

CHAPTER-9

RECOMMENDATIONS AND CONCLUSIONS

CHAPTER 9- RECOMMENDATIONS AND CONCLUSIONS

9.1 Recommendations

The following are recommendations applicable to the project to ensure no significant impacts:

- Obtain all statutory clearances at the earliest time possible (CTE and Tree cutting permission at first) and ensure conditions/provisions are incorporated in the detailed design.
- Asbestos is not a part of debris disposal site as there is no generation of asbestos at the site.
- Include this ESIA in contract documents
- Commitment from contractors to protect the environment and the people from any impact during project implementation
- Update/revise this ESIA based on detailed design and/or if there are unanticipated impacts, change in scope, alignment, or location
- Conduct safeguards induction to the contractor before start of construction works
- Contractor to submit site specific Contractors Environment and Social Management Plan (C-ESMP) with final designs.
- Ensure contractor appoints qualified environment, health and safety (EHS) officer prior to start of works
- Timely disclosure of information and establishment of Grievance Redressal Management (GRM)
- Effective implementation of GRM
- Strictly supervise EMP implementation
- Continuous consultations with stakeholders and grievance redress; if any
- Documentation and reporting on a regular basis as indicated in the ESMP.

9.2 Conclusions

The ESIA-ESMP described in this document has detailed about the environmental and social impacts of the proposed construction of 100 bedded District Hospital under ASSIST at Narayanpur, Lakhimpur, Assam. All potential impacts have been identified in relation to pre-construction, construction, and operation phases and a mitigation plan along with its monitoring schedule has also been incorporated in the ESIA-ESMP. Planning principles and design considerations have been reviewed and incorporated into the site planning and design process wherever possible as per DPR.

During the construction phase, environmental and social impacts mainly arise from the construction dust; handling and storage of building materials; movement and noise of construction machineries and vehicles in an area surrounded by local residents, chemist shops, diagnostic centers, market areas and passersby of the adjacent roads.

The public participation (stakeholder consultation) was undertaken during project design ensured stakeholders are engaged during the preparation of the ESMP. The views and suggestions were taken into account in preparing the ESIA-ESMP. This will make the proposed project a success in providing essential and affordable health care services.

The Environmental and Social Management Plan (ESMP) proposed in the project includes mitigation measures for identified impacts, training and capacity building activities, an environment monitoring plan to ensure that the environmental standards are maintained throughout the project construction period and a reporting plan to ensure that the project is implemented as per environmentally sound engineering and construction practices. Social Impact Assessment also considered Gender Based Violence, Gender equality, equal wages, minimum wages (as per Government Norms), workers facilities etc. The budgetary provisions for mitigating the anticipated impacts were proposed for effective implementation of the ESMP.

The ESMP will assist the implementing agency, Architect and Contractor in mitigating the environmental and social impacts, and guide them in the environmentally sound execution of the proposed project. The ESMP will also ensure efficient lines of communication between AHIDMS, Implementing agency, architect and contractor. A copy of the ESIA-ESMP will be kept on-site during the construction period at all times. The ESIA-ESMP will make all sub-contractors operating on the site accountable, and will be included in the contractual clauses. Noncompliance with, or any deviation from, the conditions set out in this document shall constitute a failure in compliance.

The project will benefit the general public including local community, patients and health care workers with the initiation of the new District Hospital at Narayanpur. The potential adverse environmental and social impacts are mainly related to the construction period and operational period, which can be minimized by the mitigation measures and environmentally sound engineering and safe construction practices.

This report presents a comprehensive environmental and social impact assessment for the proposed project. The study proposed measures for mitigating the adverse impacts while enhancing the positive ones during the phases of construction, operation & maintenance. The proposed construction works of District Hospital will bring a series of benefits to the local people such as:

- Improved Health status;
- Employment Generation during construction and operational period;
- Increased Economic Opportunity after operation of facility starts (in terms of Diagnostics, chemist and other supporting services);
- Women Empowerment;
- Providing basic infrastructure, road connectivity, clean air through thick landscaping around site.
- Overall Quality of life increases

Based on the ESIA findings, it has been found that there are no significant adverse impacts of proposed project. The report's objectives are in line with World Bank Safeguard Policies and Governmental (India and Assam) regulatory requirements.

LIST OF ANNEXURES

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ANNEXURE-I
Construction and Demolition
Waste Management Plan

ANNEXURE-I

Construction and Demolition Waste

1.0 Introduction

As per the Construction and Demolition (C&D) Waste Rules 2016, “any waste comprising of building materials, debris and rubble resulting from construction, remodeling, repair and demolition of any civil structure” is classified as C&D waste.

Improper management of C&D waste impacts environment in the following ways:

- C&D waste is routinely dumped in open drains and water channels, clogging them and leading to urban flooding during rains.
- Dumping of C&D waste in wetlands, water channels and riverbeds disrupts the hydrology and destroys the aquatic ecosystem.
- Leachate and fine chemical particles from C&D waste degrade the soil, leading to land and groundwater pollution. Especially hazardous components include paints, oil and asbestos sheets.
- C&D waste is filling up existing landfills and dump-yards, resulting in the need for more landfills or alternative dumpsites.
- C&D waste usually gets mixed up with other municipal solid waste during the process of transfer or at the collection site. Once mixed, it makes composting and/or recycling of MSW highly difficult.
- C&D waste includes hazardous substances such as sharps, broken glass, boulders, broken wooden logs, rusted metal, broken ceramics, etc., which create a hazardous environment when dumped on unfenced open places.
- C&D waste dumped on streets and footpaths blocks traffic and pedestrians, frequently contributing to traffic congestion and even accidents.
- C&D waste is one of the primary sources of fugitive dust pollution.

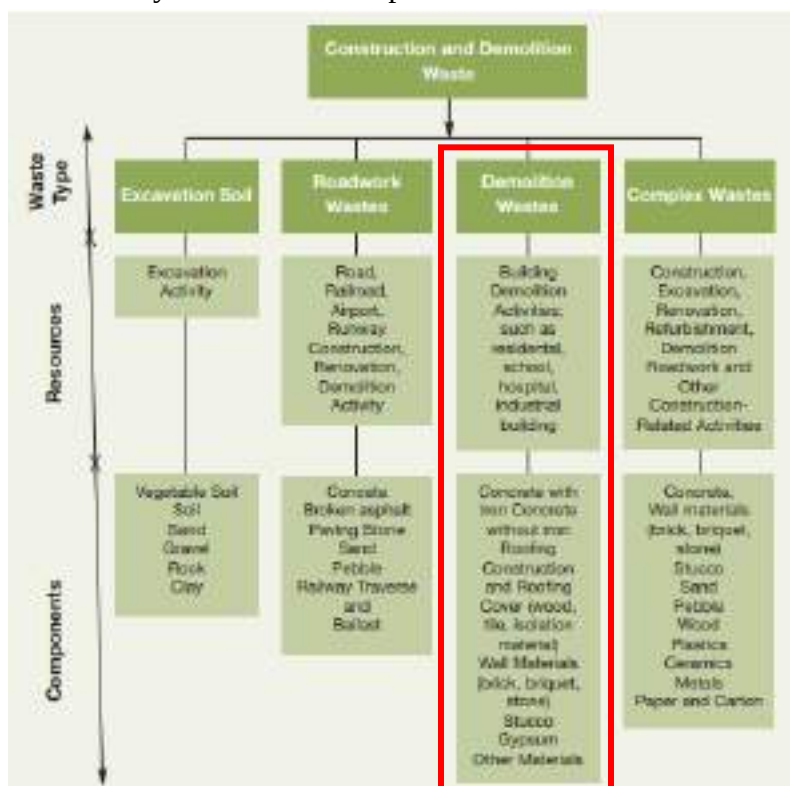
2.0 C&D Waste Management Rules, 2016

The Ministry of Environment, Forest and Climate Change (MoEFCC) notified the Construction and Demolition Management Rules in 2016.

Key highlights of the C&D Waste Management Rules, 2016:

- The Rules mandate use of recycled products in construction. Local bodies will have to utilize 10–20 per cent of material from C&D waste in municipal and government contracts for construction.
- The tipping fee for delivery of C&D waste to the recycling plant, and terms and conditions of civic body with the concessionaire may be designed to keep the price of C&D waste recycled products about 20 per cent lower than the corresponding conventional products.
- All large developers are accountable for collection and disposal of C&D waste
- Local authorities to give appropriate incentives to waste generators for salvaging, processing, and recycling, preferably in situ.

- Recycling facilities will have to be created at a safe distance from habitation with adequate buffer zone.
- Local authorities to establish a database and update it once in a year.
- All renovation projects involving demolition, even in the private sector, may be mandated to use at least 20 per cent of recycled C&D waste products.



3.0 Details regarding the Proposed Project

Presently there is a 30 bedded Model hospital (running) located in Narayanpur, P.O Dikrong, District Lakhimpur, Assam. Currently This Model hospital is catering the medical needs of the local villagers.

The Proposed Location of the 100 bedded District Hospital is in the plot of Narayanpur Model Hospital, the land is available separately for the new construction activities.

4.0 Details regarding the Existing Structures in Proposed Project

The proposed project involves demolition of brick wall i.e. demolition of old existing buildings present at the site area. The staff residing in the existing buildings will be temporarily relocated within 1 km radius. Site photographs of the existing structures is given below-





Figure- Site photographs of the existing structures

Lifting of Construction & Demolition Waste from Storage bins would be manual or mechanical through JCB, Loader and dumper. Following proposals regarding Construction and Demolition waste generated at the project site would be made-

- Whole Bricks received from segregation of C&D Waste will be kept separately for internal use.
- Recyclable waste construction materials will be sold to authorized recyclers and recycled into aggregates which are converted to Ready Mix Concrete (RMC), pavement blocks, kerb stones and concrete bricks.
- Recycled coarse aggregate will be used in construction of roads within the site.
- Wood will be chipped to make particle boards, pallets or to create mulch for the protection and improvement of soil.
- Unusable and excess Construction and Demolition debris will be disposed at designated places in tune with the local and national norms.No asbestos generation at site.
- C&D Waste mitigation measures shall be displayed prominently at the construction site for easy public viewing.

ANNEXURE-II
**List of Facilities -Proposed (100
Beds District Hospital)**

ANNEXURE-II

List of Facilities –Proposed (100 beds District Hospital)

1. Ground Floor

Emergency care Unit

- Emergency Entrance Lobby, Emergency Help Desk/ Reception
- Police Post
- Triage Room with 3 No. Yellow zone beds, 2 No. Paediatrics beds, 1 Isolation bed, Toilet, Nurse's station, Cu & DU.
- Plaster and Plaster Cutting room.
- Trolley wash area/ Decontamination area.
- 3 No. Red zone beds with Nurse's Station
- Examination /Treatment Room.
- Doctor's Room
- CCMO Room with attached toilet and Medico-Legal Case
- Duty Doctor Room
- 3 No. Pre &Post-Operative beds.
- Change rooms.
- Emergency OT Lobby, Patient Holding Area, Emergency TSSU, OT Pharmacy, Sterile store, DirtyUtility
- 1 No. Emergency Operation theatre
- AHU Room

Outpatient Department

- OPD & MCH Entrance Lobby (Double Height)
- OPD & MCH Registration (3 Counters)
- Pharmacy with 3 counters and Pharmacy store
- General Public toilet, Lift Lobby and Staircase
- **Radiology** with 1 X-ray, ECG, Mobile X-ray, Dark room Printing, Dental Room, USG with colorDoppler, Reporting Room and Radiology Waiting Area
- **Laboratory** with Sample collection Area, Clinical pathology Lab, Pathology lab, BSC Room, lab In-charge room with toilet.
- **OPD consultation rooms:** Ortho, Psychiatry, Wellness clinic, Family Medicine, Immunization/Cold chain room and patient waiting hall.
- **Support Services (Dietary):** Cold storage, dry store, washing area, toilet and cooking area.

** Services such as BMW Room, UGT, Gas manifold, STP and ETP (Liquid waste treatment of O.T/Blood Bank) are located on the ground floor in a separate block in the site plan.

2. FIRST FLOOR

Outpatient Department

- Waiting Area with Lift Lobby, public toilets, staircase
- **OPD consultation rooms:** Counselling room, NCD, Adolescent clinic, Dermatology, ENT, PAC Room, Surgery, Specialty clinics, Physiotherapy, Tele-consultation room, Wellness clinic, PFT/ECG Room.
- **District Early Intervention Centre:** Examination room, Nourishing nutrition, Psych, lang, Laboratory, RCG, Play Area, Hearing assessment room, soundproof audiometry, Dental examination room, Vision Assessment room, Early Interventional occupational therapy, Sensory Integration, Anthropometry.

Administrative unit

- Waiting area, Medical Superintendent Room with attached toilet, Nursing-in-charge room, Hospital manager room, Office Area with supervisors' cabins, meeting hall.

Ward Complex

- 6 beds Day care ward, Nutrition Rehabilitation Centre, Treatment room, Nurse's station, CU & DU.
- Dialysis Complex: change rooms with toilets, Dialysis ward with 4 beds and nurses 'station, Isolation room, Wash Area, RO Room, toilets.

3. SECOND FLOOR

Mother & Child Hospital

- MCH Triage 2 beds, change rooms, Doctor's room with toilet, Delivery complex reception and Lobby, MW Room, change rooms, MW LDR Complex-3 Nos with NBCC and toilet, Isolation LDR with NBCC and toilet, Minor OT, AHU Room.
- **Obstetrics Critical Care unit:** Air lock, patient changing area, Change room, Obstetrics HDU-6 Nos., Obstetrics ICU, Isolation Room, CU room, Linen room, Toilet, Critical Equipment room, Nurse-in-charge, Therapeutic diet prep.
- **OPD Consultation room:** Pediatrics 2 Nos., Child Play Area, OBS & Gynae-2 nos., USG Room, waiting area.
- **Mother's & new born Ward:** 12 bedded mothers & new born ward, Nurse's Lounge, Duty doctor with toilet, Nurse's Station, patient toilet.
- **SNCU & NICU:** Triage + Radiant warmer Area, Doctor's Lounge with toilet, dirty Linen & Sluice room, pantry, out born (06 beds), In born (06 beds), 04 beds ventilator NICU, Isolation-2 Nos., Nurses station, feeding room, Point of care, AHU Room.
- **Hospital Stores**

4. THIRD FLOOR

- Waiting area with public toilet, lift lobby and staircase.
- **Burn unit:** 04 beds ward, 2 beds Isolation, treatment room, Nurse's Station, Duty doctor, CU & DU, Toilet complex.
- **General ward complex:** 42 beds ward complex, Nurse's station, Treatment room, CU & DU, Duty doctor, toilets
- **Paying cain complex:** 18 rooms with attached toilet, almirah and attendant's sleeping couch, Doctor's Lounge, Nurse's Lounge, Pantry.

5. FOURTH FLOOR

- Waiting area with public toilet, lift lobby and staircase.
- **Blood bank:** Reception with waiting area, Testing & Counseling, Donor's room, refreshment area, laboratory, Doctor's room, Sterilization cum washing area, components separation room, blood storage room.
- **HDU Ward:** HDU Waiting, counseling room, patient change, change room with toilet, pediatrics HDU beds-2 Nos., general HDU beds-4 Nos., 1 No. isolation bed, duty doctor with attached toilet.
- **OT Complex:** Change rooms (Doctor's, nurse's and staff change), Trolley exchange area, 2 No. preoperative and post-Operative ward, Nurse's station, Toilet, Doctor's room, Nurse's room, Airlock, Sterile corridor, patient Holding area, Scrub Area, sterile store, Operation Theatre-2 Nos., TSSU, AHU rooms, Dirty Corridor.

List of Facilities (BMW Room)

- 3 categories of room for BMW

List of Facilities (Mortuary & Gas manifold Room)

- Waiting and reception.
- Body viewing area.
- Store
- Body cold storage area
- Change rooms, Post mortem room, Embalming room, Instrument room.
- X-ray room, Supervisor room, Toilets.

List of additional facilities:

- Provision of ramps, Handicap Washroom, Common public space and reserve parking space for Handicap
- Selection of local & indigenous plant species for greenbelt development
- Provision of Dual plumbing, Rain Water Harvesting and use of solar energy
- Adequate parking provision for smooth traffic movement

- Solid waste management through on site Organic Waste Converter
- Waste water treatment through on-site STP and ETP

ANNEXURE-III
**Area Statement of The Proposed
Project**

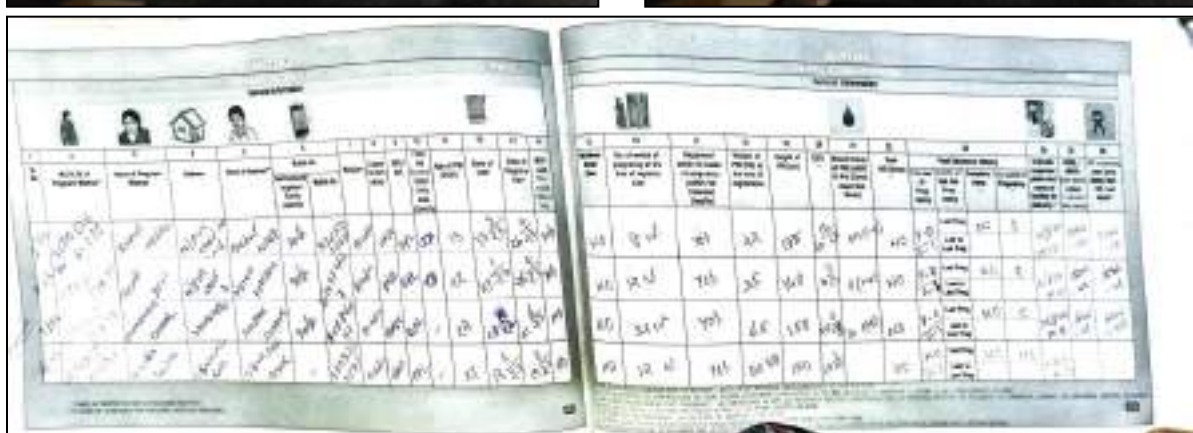
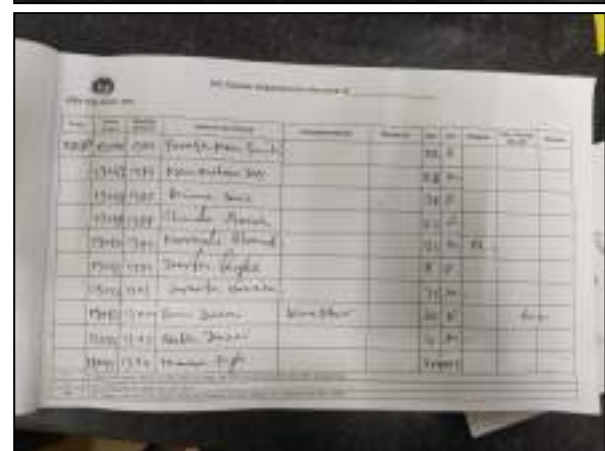
ANNEXURE III

Area Statement of the Proposed Project

	Main District Hospital (G+4)	Mortuary & Gas Manifold (G)	BMW (G) & Laundry Block	ESS Block (G)
Floor Height	4.05	3.9	3.6	5.10
Ground floor	2687.30	329.00	122.00	250.00
First floor	2479.40			
Second floor	2583.70			
Third floor	2521.40			
Fourth floor	2360.00			
Total	12631.80	329.00	122.00	250.00
Grand Total	13332.80			
Total Beds	100	Beds		
Total Campus area	30250.18	Sqm		
Less total ground coverage	-3388.30	Sqm		
Less area for future expansion	-7166.00	Sqm		
Actual Development Area	19695.88	Sqm		
Total Boundary wall length	838.47	Meter		
Floor to Floor Height (in meter)	4.05	3.90	3.60	5.10
Plinth Height (in meter)	0.60	0.60	0.60	0.60
Lifts	02 Nos (26 Pax Bed Lift)			
	02 Nos. Service Lift			

ANNEXURE-IV

Extracts of Patient Inflow Data Received From The Hospital

ANNEXURE-IV**Extracts of Patient Inflow Data Received From the Hospital**

ANNEXURE-V

List of Flora And Fauna found in the region

ANNEXURE-V
List of Flora and Fauna found in the region

1. List of Flora found in the region

S. No.	Scientific Name	Local Name
TREES		
1	<i>Acacia auriculiformis</i>	Akashmoni
2	<i>Acacia catechu</i>	Khair
3	<i>Acacia nilotica</i>	Babul
4	<i>Adina cordifolia</i>	Karam
5	<i>Aeglemarmelos</i>	Bel
6	<i>Albizzialebbek</i>	Siris
7	<i>Albizziaodoratissima</i>	Jung siris
8	<i>Albizziaprocera</i>	SafedSiris
9	<i>Anogeissuslatifolia</i>	-
10	<i>Areca catechu</i>	Supari
11	<i>ArtocarpusHitrophyllum</i>	Kathal
12	<i>Azadirachtaindica</i>	Neem
13	<i>Bauhinia variegata</i>	Kachnar
14	<i>Bischofiajavanica</i>	Uraim
15	<i>Bombaxceiba</i>	Semal
16	<i>Boswelliaserrata</i>	Salia
17	<i>Buchnanialanzan</i>	Piar
18	<i>Buteamonosperma</i>	Palas
19	<i>Cassia fistula</i>	Dharanj/Amaltash
20	<i>CocusNucifera</i>	Nariyal
21	<i>Cordiadihotma</i>	Bahuar
22	<i>Dalbergiasissoo</i>	Sheesham
23	<i>Delonixregia</i>	Gulmohar
24	<i>Eugenia jambolana</i>	Jamun
25	<i>Ficusbengalensis</i>	Bar
26	<i>Ficuselastica</i>	Ruber
27	<i>Ficusreligiosa</i>	Pipal
28	<i>Gmelinaarborea</i>	Gamhar
29	<i>Holopteleaintegrifolia</i>	Chilbil
30	<i>KydiacalycinaRoxb.</i>	Puda
31	<i>Lagerstoemiaparviflora</i>	Sida/Dauli
32	<i>Mangiferaindica.</i>	Aam
33	<i>Phoenix sylvestric</i>	Khajur

34	<i>Pongamiapinnata</i>	Kranj
35	<i>Pterocarpusmarsupium</i>	Piasal
36	<i>Schimawallichii</i>	Ghugra
37	<i>Shorearobusta</i>	Sal/ SaKhua
38	<i>Stereospermumprsonatum</i>	Paruli
39	<i>Tectonagrandis</i>	Saguan
40	<i>Terminaliaarjuna</i>	Arjun
41	<i>Terminaliabelirica</i>	Bahera
42	<i>Terminaliatomentosa</i>	Asan
43	<i>Toona ciliate</i>	Pooma
44	<i>Zizyphusmauritiana</i>	Ber
SHRUBS		
1	<i>Asparagus racemosus</i>	Satawar
2	<i>Agave americana</i>	Rambas
3	<i>Calotropisgigantea</i>	Akaon
4	<i>Carissa carandas</i>	Kanwar
5	<i>Cannabis sativa</i>	Bhang
6	<i>Casiaalata</i>	-
7	<i>Catharanthusroseus</i>	-
8	<i>Datura metal</i>	Dhatura
9	<i>Dichrostachyscinerea</i>	-
10	<i>Cyperusrotundus</i>	-
11	<i>FlacourtiaRamontchi</i>	Salpani
12	<i>Indigoferapulchela</i>	Jirhul
13	<i>Ipomoea carnea</i>	-
14	<i>Lantana camara</i>	Putus
15	<i>Phoenix acaulis</i>	Khejur
16	<i>Randiadumetorum</i>	Mowar
17	<i>Thespesia lampas</i>	Ban kapasi
18	<i>Vitexnegundo</i>	Sindwar
19	<i>Bougainvillea spectabilis</i>	Voganvila
20	<i>Zizyphusoenoplia</i>	-
21	<i>Ricinuscommunis</i>	Arandi
22	<i>Rosa rubiginosa</i>	Rosa
HERBS		
1	<i>Achyranthesaspera</i>	Chirchiri
2	<i>Aervalanata</i>	-
3	<i>Ageratum conyzoides</i>	-
4	<i>Alternantherasessilis</i>	-

5	<i>Boerhaviadiffusa</i>	-
6	<i>Cassia tora</i>	Chakor
7	<i>Elephantopus scaber</i>	-
8	<i>Euphorbia hirta</i>	-
9	<i>Hygrophilaspinoza</i>	-
10	<i>Justiciaproculbens.</i>	-
11	<i>Leonotis nepataifolia</i>	-
12	<i>Mimosa pudica</i>	-
13	<i>Parthenium hysterophorus.</i>	-
14	<i>Sida acuta</i> Burm.	-
15	<i>Sida rhombifolia</i>	-
16	<i>Solanum nigrum</i>	Makoi
17	<i>Solanum surattense</i>	-
18	<i>Sphaeranthus indicus</i>	-
19	<i>Tridax procumbens</i>	-
20	<i>Xanthium strumarium</i>	-
GRASSES AND CLIMBERS		
1	<i>Vetiveria zizanioides</i>	Khus-Khus
2	<i>Apludavaria</i>	Dudhiasauri
3	<i>Arundinella setosa</i>	Jharu/Motaminjhar
4	<i>Bambusa arundinaceae</i>	Bara bans
5	<i>Cymbopogon martini</i>	-
6	<i>Cynodon dactylon</i>	Dhoob
7	<i>Dendrocalamus strictus</i>	Bans/Bamboo
8	<i>Eulaliopsis binata</i>	-
9	<i>Heteropogon contortus</i>	Kher/Sauri
10	<i>Imperata cylindrical</i>	-
11	<i>Saccharum munja</i>	Munj
12	<i>Mukiamaderaspatana</i>	Bilari
13	<i>Abrus precatorius</i>	Karjani
14	<i>Acacia pinnata</i>	Arar
15	<i>Butea parviflora</i>	Cihut

2. List of Fauna found in the region

S. No.	Scientific Name	Local Name/Common Name
MAMMALS		
1	<i>Funambulus pennant</i>	Gilahri
2	<i>Bandicota bengalensis</i>	Chuha
3	<i>Herpestes edwardsi</i>	Nevala

4	<i>Vulpesbengalensis</i>	Lomdi
5	<i>Lepusnigricollis</i>	Khargosh
6	<i>Felischaus</i>	Jungle cat
7	<i>Presliptis entellus</i>	Langur
8	<i>Macaca mulatto</i>	Bandar
9	<i>Cynopterus sphinx</i>	Chamgadam
10	<i>Cannomysbadius</i>	Bay Bamboo Rat
11	<i>Rhizomyspruinosa</i>	Bamboo Rat
12	<i>Canis lupus familiaris</i>	Dog
13	<i>Ovis Aries</i>	Sheep
14	<i>Bostaurus</i>	Cow
AMPHIBIANS AND REPTILES		
1	<i>Ranatigrina</i>	Frog
2	<i>Najanaaja</i>	Binocellate cobra
3	<i>Bungaruscoeruleus</i>	Common Krait
4	<i>Ptyas mucosus</i>	Rat snake
5	<i>Calotesversicolor</i>	Forest Lizard
6	<i>Hoplobatrachustigerinus</i>	Indian bull frog
7	<i>Viperarussellii</i>	Russell's Viper
8	<i>Chameleon zeylanicus</i>	Indian chameleon
AVIFAUNA		
1	<i>Corvus splendens</i>	House Crow
2	<i>Dicrurus macrocerus</i>	Black Drongo
3	<i>Passer domesticus</i>	Sparrow
4	<i>Streptopelia chinensis</i>	Spotted Dove
5	<i>Centropus sinensis</i>	Greater Coucal
6	<i>Acridothera tristis</i>	Common Myna
7	<i>Saxicoloides fulicata</i>	Indian Robin
8	<i>Bubulcus ibis</i>	Cattle Egret
9	<i>Vanius indicus</i>	Lapwing
10	<i>Anas platyrhynchos</i>	Duck

ANNEXURE-VI
**Demographic Structure of The
Study Area**

ANNEXURE VI

Demographic Structure of the Study Area

(a) Demographic Structure of the Study Area

S. No.	Name	No_HH	TOT_P	TOT_M	TOT_F	Sex Ratio	P_06	M_06	F_06	Sex Ratio
1	Aunibori	58	422	216	206	954	85	43	42	977
2	BenganatiKhat	36	179	84	95	1131	25	16	9	563
3	Borchapori	66	357	177	180	1017	54	30	24	800
4	Bordeori	411	2659	1316	1343	1021	329	181	148	818
5	BoriGaon	119	543	282	261	926	55	32	23	719
6	Borkhamti	69	303	151	152	1007	27	12	15	1250
7	ChalokhoriPathar	27	103	58	45	776	5	4	1	250
8	Chamaguri	134	598	309	289	935	81	49	32	653
9	Charaidoloni	175	812	415	397	957	72	37	35	946
10	Chaudhapunia	221	1368	744	624	839	111	61	50	820
11	Dangia	111	507	259	248	958	38	21	17	810
12	DhangulaiPathar	10	44	23	21	913	3	2	1	500
13	DikrongMukh	35	222	105	117	1114	30	19	11	579
14	Gosainbari	119	512	246	266	1081	56	33	23	697
15	Halaguri	142	690	347	343	988	86	43	43	1000
16	HenguliaPathar	76	360	179	181	1011	35	15	20	1333
17	Jalbharla	106	488	246	242	984	69	37	32	865
18	Jaluk-Kata	307	1437	708	729	1030	172	92	80	870
19	JarabariGaon	187	860	415	445	1072	86	39	47	1205
20	KachariPathar	47	228	120	108	900	30	14	16	1143
21	Kamarbari	79	388	187	201	1075	39	18	21	1167
22	Kathajan	30	136	68	68	1000	17	9	8	889
23	Kina Pathar	100	589	294	295	1003	80	41	39	951
24	Majgaon	106	759	384	375	977	171	88	83	943
25	Makuwari	187	814	431	383	889	70	36	34	944

26	MazorChapori	129	744	361	383	1061	90	43	47	1093
27	Mirigaon	95	445	218	227	1041	73	36	37	1028
28	Na-Pamua	321	1523	754	769	1020	204	110	94	855
29	Narayanpur	94	418	229	189	825	35	23	12	522
30	No.1 Hurmutty	332	1462	741	721	973	166	81	85	1049
31	No.1 Jarabari Block	166	742	381	361	948	55	34	21	618
32	No.1 Mughnoa	71	300	143	157	1098	35	18	17	944
33	No.1 Notgaon	144	608	301	307	1020	48	22	26	1182
34	No.1 TengaPathar	157	788	393	395	1005	96	51	45	882
35	No.2 Hurmutty	169	718	364	354	973	72	40	32	800
36	No.2 Kinapathar	55	280	140	140	1000	42	21	21	1000
37	No.2 Notgaon	163	724	358	366	1022	75	39	36	923
38	No.2 Sarjan	37	175	87	88	1011	19	6	13	2167
39	No.2 Sonaribari	81	622	320	302	944	153	82	71	866
40	No.2 Tatibahar	261	1125	550	575	1045	146	67	79	1179
41	No.2 TengaPathar	42	184	88	96	1091	16	9	7	778
42	No.3 Sarjan	29	145	72	73	1014	17	11	6	545
43	No.3 Tatibahar	64	280	145	135	931	28	12	16	1333
44	No.4 Sarjan	111	519	253	266	1051	74	29	45	1552
45	No.4 Tatibahar	39	175	85	90	1059	14	7	7	1000
46	Panbari	285	1388	695	693	997	153	77	76	987
47	Raidangia	55	245	124	121	976	24	13	11	846
48	Sakrahi	58	315	151	164	1086	43	22	21	955
49	Sarjan NO.1	76	341	172	169	983	30	10	20	2000
50	Saukuchi	301	1399	692	707	1022	203	96	107	1115
51	SonariGaon	65	323	169	154	911	32	19	13	684
52	Sonaribari Grazing	0	0	0	0	0	0	0	0	0
53	Sribhuyan	73	354	186	168	903	44	23	21	913
		1540	7415	3702	3713	1003	977	477	500	1048

(b) Demographic Structure of the Study Area

S. No.	Name	P_SC	M_SC	F_SC	P_ST	M_ST	F_ST	P_LIT	M_LIT	F_LIT	P_ILL	M_ILL	F_ILL
1	Aunibori	0	0	0	422	216	206	229	147	82	193	69	124
2	BenganatiKhat	130	61	69	0	0	0	122	58	64	57	26	31
3	Borchapori	0	0	0	334	167	167	232	120	112	125	57	68
4	Bordeori	0	0	0	2565	1268	1297	1840	977	863	819	339	480
5	BoriGaon	0	0	0	49	31	18	433	236	197	110	46	64
6	Borkhamti	14	7	7	111	53	58	257	136	121	46	15	31
7	ChalokhoriPathar	0	0	0	23	11	12	88	52	36	15	6	9
8	Chamaguri	0	0	0	92	49	43	446	242	204	152	67	85
9	Charaidoloni	10	6	4	6	2	4	697	368	329	115	47	68
10	Chaudhapunia	61	35	26	207	134	73	1176	660	516	192	84	108
11	Dangia	0	0	0	0	0	0	453	237	216	54	22	32
12	DhangulaiPathar	4	3	1	0	0	0	34	21	13	10	2	8
13	DikrongMukh	0	0	0	221	104	117	156	78	78	66	27	39
14	Gosainbari	0	0	0	59	30	29	399	199	200	113	47	66
15	Halaguri	82	43	39	174	84	90	533	286	247	157	61	96
16	HenguliaPathar	0	0	0	284	146	138	292	158	134	68	21	47
17	Jalbharla	368	182	186	0	0	0	345	192	153	143	54	89
18	Jaluk-Kata	81	34	47	3	1	2	1131	580	551	306	128	178
19	JarabariGaon	5	2	3	140	68	72	728	366	362	132	49	83
20	KachariPathar	0	0	0	214	118	96	174	101	73	54	19	35
21	Kamarbari	0	0	0	0	0	0	314	155	159	74	32	42
22	Kathajan	0	0	0	47	26	21	86	46	40	50	22	28
23	Kina Pathar	0	0	0	570	283	287	434	234	200	155	60	95
24	Majgaon	0	0	0	759	384	375	397	232	165	362	152	210
25	Makuwari	192	95	97	0	0	0	661	360	301	153	71	82
26	MazorChapori	0	0	0	731	354	377	611	299	312	133	62	71
27	Mirigaon	0	0	0	203	97	106	276	152	124	169	66	103
28	Na-Pamua	461	227	234	68	35	33	1113	588	525	410	166	244

29	Narayanpur	0	0	0	0	0	0	357	201	156	61	28	33
30	No.1 Hurmutty	158	79	79	0	0	0	1135	612	523	327	129	198
31	No.1 Jarabari Block	4	2	2	1	1	0	644	335	309	98	46	52
32	No.1 Mughnoa	0	0	0	0	0	0	249	124	125	51	19	32
33	No.1 Notgaon	12	6	6	2	2	0	535	272	263	73	29	44
34	No.1 TengaPathar	0	0	0	141	69	72	628	327	301	160	66	94
35	No.2 Hurmutty	204	103	101	6	2	4	591	314	277	127	50	77
36	No.2 Kinapathar	0	0	0	230	116	114	204	108	96	76	32	44
37	No.2 Notgaon	23	9	14	0	0	0	612	308	304	112	50	62
38	No.2 Sarjan	0	0	0	40	21	19	142	77	65	33	10	23
39	No.2 Sonaribari	0	0	0	613	316	297	255	150	105	367	170	197
40	No.2 Tatibahar	16	8	8	58	27	31	886	448	438	239	102	137
41	No.2 TengaPathar	0	0	0	0	0	0	148	73	75	36	15	21
42	No.3 Sarjan	0	0	0	0	0	0	116	59	57	29	13	16
43	No.3 Tatibahar	0	0	0	0	0	0	214	119	95	66	26	40
44	No.4 Sarjan	0	0	0	256	123	133	367	196	171	152	57	95
45	No.4 Tatibahar	0	0	0	0	0	0	144	75	69	31	10	21
46	Panbari	91	44	47	483	240	243	1163	603	560	225	92	133
47	Raidangia	159	79	80	0	0	0	199	105	94	46	19	27
48	Sakrahi	0	0	0	306	148	158	224	110	114	91	41	50
49	Sarjan N0.1	0	0	0	0	0	0	278	152	126	63	20	43
50	Saukuchi	451	215	236	5	1	4	1009	529	480	390	163	227
51	SonariGaon	0	0	0	0	0	0	275	148	127	48	21	27
52	Sonaribari Grazing	0	0	0	0	0	0	0	0	0	0	0	0
53	Sribhuyan	0	0	0	306	159	147	252	149	103	102	37	65
Total		717	346	371	2027	1014	1013	5530	2916	2614	1885	786	1099

(Source: As per Census Data, 2011)

ANNEXURE-VII
**Occupational Pattern of the
Study Area**

Annexure VII Occupational Pattern of the Study Area

(a) Occupational Pattern of the Study Area

S. No.	Particulars	Number of workers in the study area				
		Total	Male	Male %	Female	Female %
1	Total Workers	3354	2101	62.64	1253	37.36
2	Non-Workers	4061	1601	39.42	2460	60.58
3	Main Workers	1928	1682	87.24	246	12.76
4	Marginal Workers	1426	419	29.38	1007	70.62

(Source: As Per Census Data, 2011)

(b) Occupation Structure of Each Village in The Study Area

S. No.	Name	Total Workers			Main workers			Marginal Workers			Non-Workers		
		Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
1	Aunibori	218	110	108	60	55	5	158	55	103	204	106	98
2	BenganatiKhat	107	51	56	54	49	5	53	2	51	72	33	39
3	Borchapori	93	89	4	93	89	4	0	0	0	264	88	176
4	Bordeori	1326	647	679	580	533	47	746	114	632	1333	669	664
5	BoriGaon	179	157	22	169	151	18	10	6	4	364	125	239
6	Borkhamti	182	90	92	159	83	76	23	7	16	121	61	60
7	ChalokhoriPathar	25	19	6	25	19	6	0	0	0	78	39	39
8	Chamaguri	291	168	123	109	96	13	182	72	110	307	141	166
9	Charaidoloni	471	245	226	136	115	21	335	130	205	341	170	171
10	Chaudhapunia	368	274	94	265	232	33	103	42	61	1000	470	530
11	Dangia	201	131	70	132	107	25	69	24	45	306	128	178
12	DhangulaiPathar	13	12	1	13	12	1	0	0	0	31	11	20

13	DikrongMukh	156	69	87	156	69	87	0	0	0	66	36	30
14	Gosainbari	414	197	217	211	129	82	203	68	135	98	49	49
15	Halaguri	397	214	183	157	140	17	240	74	166	293	133	160
16	HenguliaPathar	101	76	25	81	63	18	20	13	7	259	103	156
17	Jalbhararia	259	139	120	168	129	39	91	10	81	229	107	122
18	Jaluk-Kata	929	485	444	386	340	46	543	145	398	508	223	285
19	JarabariGaon	365	238	127	174	133	41	191	105	86	495	177	318
20	KachariPathar	125	77	48	81	69	12	44	8	36	103	43	60
21	Kamarbari	202	106	96	79	72	7	123	34	89	186	81	105
22	Kathajan	55	38	17	48	34	14	7	4	3	81	30	51
23	Kina Pathar	122	100	22	115	98	17	7	2	5	467	194	273
24	Majgaon	351	173	178	149	138	11	202	35	167	408	211	197
25	Makuwari	471	241	230	174	144	30	297	97	200	343	190	153
26	MazorChapori	315	194	121	315	194	121	0	0	0	429	167	262
27	Mirigaon	205	129	76	138	117	21	67	12	55	240	89	151
28	Na-Pamua	753	482	271	336	284	52	417	198	219	770	272	498
29	Narayanpur	272	143	129	135	119	16	137	24	113	146	86	60
30	No.1 Hurmutty	457	368	89	237	190	47	220	178	42	1005	373	632
31	No.1 Jarabari Block	254	226	28	228	202	26	26	24	2	488	155	333
32	No.1 Mughnoa	86	82	4	61	57	4	25	25	0	214	61	153
33	No.1 Notgaon	342	187	155	214	182	32	128	5	123	266	114	152
34	No.1 TengaPathar	439	245	194	200	176	24	239	69	170	349	148	201
35	No.2 Hurmutty	284	199	85	116	106	10	168	93	75	434	165	269
36	No.2 Kinapathar	159	80	79	131	70	61	28	10	18	121	60	61
37	No.2 Notgaon	376	185	191	191	166	25	185	19	166	348	173	175
38	No.2 Sarjan	94	50	44	42	38	4	52	12	40	81	37	44

39	No.2 Sonaribari	290	149	141	156	126	30	134	23	111	332	171	161
40	No.2 Tatibahar	475	338	137	340	304	36	135	34	101	650	212	438
41	No.2 TengaPathar	110	58	52	57	50	7	53	8	45	74	30	44
42	No.3 Sarjan	105	54	51	32	27	5	73	27	46	40	18	22
43	No.3 Tatibahar	78	76	2	49	47	2	29	29	0	202	69	133
44	No.4 Sarjan	156	148	8	139	135	4	17	13	4	363	105	258
45	No.4 Tatibahar	68	49	19	51	45	6	17	4	13	107	36	71
46	Panbari	634	376	258	322	272	50	312	104	208	754	319	435
47	Raidangia	141	68	73	75	68	7	66	0	66	104	56	48
48	Sakrahi	169	83	86	59	56	3	110	27	83	146	68	78
49	Sarjan No.1	109	99	10	97	90	7	12	9	3	232	73	159
50	Saukuchi	714	399	315	394	321	73	320	78	242	685	293	392
51	SonariGaon	114	102	12	74	72	2	40	30	10	209	67	142
52	Sonaribari Grazing	0	0	0	0	0	0	0	0	0	0	0	0
53	Sribhuyan	191	102	89	83	69	14	108	33	75	163	84	79
Total		3354	2101	1253	1928	1682	246	1426	419	1007	4061	1601	2460

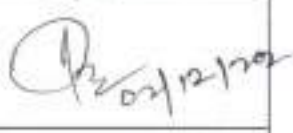
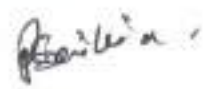
(Source: Census Data, 2011)

ANNEXURE-VIII
**Stakeholder Consultation-
Attendance Sheet & NOCs**

Stakeholder Consultation Meeting (attendance sheet)

Proposed District Hospital, Narayanpur (Lakhimpur), Assam

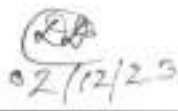
[Date: 02/12/2022]

S.No	Name of Person	Designation	Signature
1	Dr S. Kakati	SDM & Hd cum Dy. SdM	
2	Dr Hemanta Borth	Sr. M & HD	
3	Mr. Bisul Deoni	pharmacist	
4	Smti Jyoti Deuli	LHS	
5	Miss Bandana Saikia-Jharkhandapuri	Local	
6	Nileman Barman	Pharmacist	
7	Bhabesh Tayum Pambasi	Patient	
8	Dikakor Samra	pharmacist	
9	Ranjee Saikia	Lab (C)	
10	Pujanbora Baishya	Lab. Tech	

Stakeholder Consultation Meeting (attendance sheet)

Proposed District Hospital, Narayanpur (Lakhimpur), Assam

[Date: 2/12/2023]

S.No	Name of Person	Designation	Signature
11	Dipti Doley	ANM	
12	ইলু গণি দেউৰী	বিশ্বদূৰ্গা গাওঁ	
13	Nantu Deb Na	Patient	
14	Shri Brofen Marang	Temungauzi gao	Burong
15	Ms. Monali Moray	Amernauzi gao	Monali
16	Bani Kanfa Bani	Local Patient	Bf
17	Andicetin	Local	
18	Mamark Borak	Patient	
19	Monale Devra	Local	Mdla
20	Mrs Greetuli Borak Saikia	Local	Greetuli

21 ^{1st} Tedumoni Saikia Sarjen (24) Md. Hasem AL

22 Mitul Borak Nurampur

23 Miss Prashanti Borak - Tindiborh

Stakeholder Consultation Meeting (attendance sheet)
Proposed District Hospital Narayanpur (Lakhimpur), Assam

[Date: 02/12/2023]

[illegible]

STOCKHOLDER CONSULTANT FORM

Name of the project: Proposed District Hospital, Narayanpur Lachimpur, Assam

Location of the project: Narayanpur Lachimpur, Assam

Date of Meeting: 02/12/2023

S. No	Stakeholders	Represented by	Roles/responsibility	Social Impact and tasks	Commitment checklist	Commitments/remarks	Environmental impact and Tasks	Commitment checklist	Commitments/remarks
1	Medical in charge	Dr. S. K. Choudhary	Post construction	Governance and oversee activities of Healthcare facility	1.	O.K, we will abide by the norms	Safe disposal of BMW	Measures to contain BMW	O.K, we will abide by the norms.

Dr. S. K. Choudhary
02/12/2023
District Hospital, Lachimpur, Assam

STOCKHOLDER CONSULTANT FORM

Name of the project: Proposed District Hospital, Narayanpur Lakimpur, Assam.

Location of the project: Narayanpur Lakimpur, Assam.

Date of Meeting: 02/12/2023

S. No	Stakeholders	Represented by	Roles/ responsibility	Social Impact and tasks	Commitment checklist	Commitments/remarks	Environmental impact and Tasks	Commitment checklist	Commitments/remarks
5	Common biomedical waste treatment facilities (CBWTF)	Dr. S. Kakati	During post construction phase	Reduction of waste	Waste Reduction Use of disposal		Safe disposal of BMW	100 % BMW disposal through CBMWTF	we will try to make an agreement with CBMWTF within 15 km of the project in operational phase. Dr. S. Kakati

Dr. S. Kakati
Signature
Date: 02/12/2023
Place: Lakimpur, Assam.

STOCKHOLDER CONSULTANT FORM

Name of the project: Proposed District Hospital, Nayanpur, Lakhimpur, Assam.

Location of the project: Nayanpur (North Lakhimpur), Assam.

Date of Meeting: 02.12.2023

S. No	Stakeholders	Represented by	Roles/responsibility	Social Impact and tasks	Commitment checklist	Commitments/remarks	Environmental impact and Tasks	Commitment checklist	Commitments/remarks
3	Locality within 100 m from the hospital building	Ranjana Hazarika	During Pre and post construction phase	1. Easy accessibility and affordability of the medical facility 2. Employment generation	1. Hospital at doorstep 2. Opening of hospital supportive activities 3. Preference will be given to locals for employment	Vijaya Baroj No problem	1. Greenbelt development 2. Clean environment 3. Disposal of waste	1. Local & indigenous plant species 2. Energy Conservation 3. Waste reduction 4. Deploy electricity vehicle for hospital use	R. Hazarika PH
		Piyanka deoti			3. Sourcing of local, organic and sustainable grown food	Vill-Kimvathar No problem			



Govt. of Assam

PANBARI GAON PANCHAYAT

Panbari, Narayanpur, Pin : 784164

72

:: NO OBJECTION CERTIFICATE ::

Book No. 1

(Counter File) No. P.G.P./N.O.C./2023

For the Year/ half year ending 2023 - 2024 Period from 1-7-2023 to 31-3-2024

The Gaon Panchayat of hereby grants unto District Hospital Narayanpur

Son of _____ residing at Narayanpur

Vill Panbari Mouza Narayanpur

This NOC will be valid within the jurisdiction of _____

Gaon Panchayat Panbari, Narayanpur for the under mentioned
purpose Building Construction.

The 14.12.2023

Signature of the Officer

B. P. Secretary

B. P. Secretary
Panbari G. P.

ANNEXURE-IX
Waste Management Plan

ANNEXURE IX

Waste Management Plan

(During construction and post construction phase)

1.0 SOLID WASTE GENERATION

Solid waste will be generated both during construction and post construction phase.

2.0 WASTE GENERATION DURING CONSTRUCTION PHASE

The expected to be generated during the construction phase will comprise of excavated materials, used bags, bricks, concrete, MS rods, tiles, wood etc. The following steps are proposed to be taken for proper management of solid waste:

- Construction yards are proposed for storage of construction materials.
- The excavated materials such as topsoil and stones will be stacked in a safe place for reuse during later stages of construction.
- Excavated top soil will be stored in temporary constructed soil bank and will be reused for landscaping.
- Remaining soil will be utilized for refilling, road construction and rising of site level at various locations or selling to outside agency for their use.

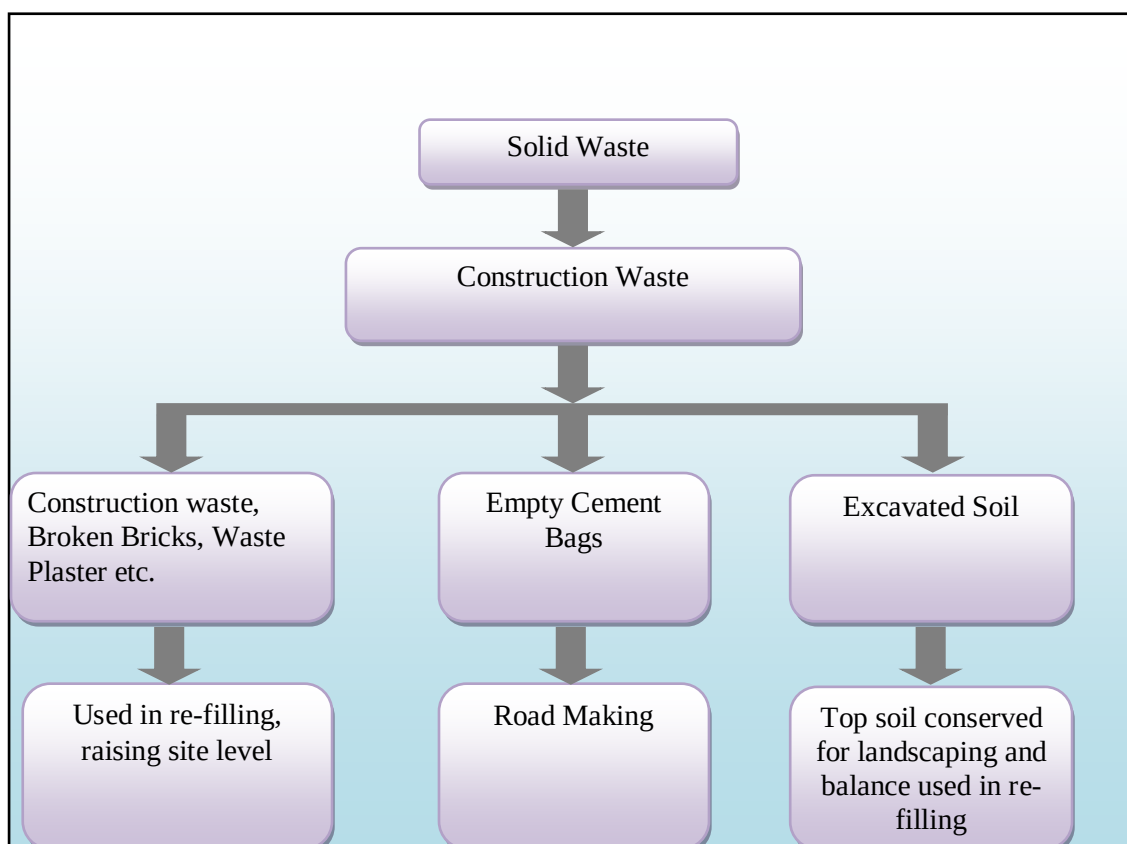


Figure 1: Solid Waste Management Scheme (Construction Phase)

2.1 Types of Construction Waste

Based on the type of material, construction waste can be classified into the following types:

Concrete, Bricks, Tiles, and Ceramics

Concrete, Bricks Tiles & Ceramics and Concrete, bricks, tiles and ceramics in mixtures, containing no hazardous substances (Non-Hazardous Waste)

Concrete, Bricks, Tiles & Ceramics (alone or in mixtures containing hazardous substances) – Hazardous Waste

Wood, Glass & Plastic

Untreated Wood, Waste, Uncontaminated Glass, Plastic (Excluding Packaging Plastic):

Non-Hazardous Waste

Treated Wood (Alone or in Mixtures Containing Hazardous Substances), Treated Glass (Alone or in Mixtures Containing Hazardous Substances) and Treated Plastic (Alone or in Mixtures Containing Hazardous Substances) – Hazardous Waste

Metallic Waste (Includes Electrical Wires and Cable)

Copper, Brass, Bronze, Lead, Iron, Steel, Tin, Mixed Metals- Non Hazardous

Metals Containing Hazardous Substances, Cables containing Oil & Cables containing Coal Tar – Hazardous Waste

Soil, Contaminated Soil, Stones & Dredging Spoil

Soil containing hazardous substances, Stones containing hazardous substances and Dredging Spoil containing hazardous substances – Hazardous Waste

Other Soil and Other Stones and Other Dredging Spoil – Non-Hazardous Waste

Gypsum

Gypsum Materials – Non-Hazardous Waste

Other Gypsum Materials containing hazardous substances- Hazardous Waste

Insulation, Fiber Glass & Asbestos

Insulation Containing Asbestos, Fiberglass, FRP and Other Construction Materials – Hazardous Waste

Other Insulation Containing Hazardous Substances and Other Insulation Materials – Non Hazardous Waste

** Disposal is planned through handing over such waste to HW-recycler registered with State Pollution Control Board, Assam.

Cement

Unused Cement and Unset Cement – Hazardous Waste

Paints & Varnishes

Paint Cans Paint Remover Varnish Remover Organic Solvents and Other Hazardous Substances

– Hazardous Waste

** Disposal is planned through handing over such waste to HW-recycler registered with State Pollution Control Board, Assam.

Adhesives & Sealants

Adhesive Containers and Sealant Containers – Hazardous Waste

** Disposal is planned through handing over such waste to HW-recycler registered with State Pollution Control Board, Assam.

3.0 WASTE GENERATION IN OPERATION PHASE

3.1 Type of Waste

- Bio-Degradable waste
- Non-Bio-Degradable waste

3.2 Collection and Segregation

1. The local vendors will be hired to provide separate-colored bins for dry recyclables and Bio-Degradable waste.
2. For waste collection, adequate number of colored bins (Green, Blue, and dark grey bins separately for Bio-degradable and non-Bio-degradable) are proposed to be provided at strategic locations of the area.
3. Litter bins will also be provided in open areas like parks etc.

3.3 Treatment of waste

- Bio-Degradable wastes
 1. Bio-degradable waste will be subjected to Organic Waste Converter and 20% of the subjected waste will be used as manure.
 2. STP sludge is proposed to be used for horticultural purposes as manure.
 3. Horticultural Waste is proposed to be composted and will be used for gardening purposes.
- Recyclable wastes
 - i. The cropped grasses will be spread on the green area. It will act as manure after decomposition. Recyclable wastes like paper, plastic, metals etc. will be sold to recyclers.

3.4 DISPOSAL OF RECYCLABLE AND NON-RECYCLABLE WASTES

Recyclable and non-recyclable wastes will be disposed through Govt. approved agency. Hence, the Municipal Solid Waste Management will be conducted as per the guidelines of Municipal Solid Wastes (Management and Handling) Rules, 2000. A Solid waste management Scheme is depicted in the following figure for the proposed Project.

- The Hazardous waste Management

The Hazardous waste will be managed/ disposed according to ***Hazardous and Other Wastes (Management and Tran boundary Movement) Rules, 2016.***

For the management of hazardous and other wastes, an occupier shall follow the following steps, namely:-

- (a) Prevention;
- (b) Minimization;
- (c) Reuse,
- (d) Recycling;
- (e) Recovery, utilization including co-processing;
- (f) Safe disposal according to waste generation (category wise) as per rules in accordance with norms of State Pollution Control Board, Assam.

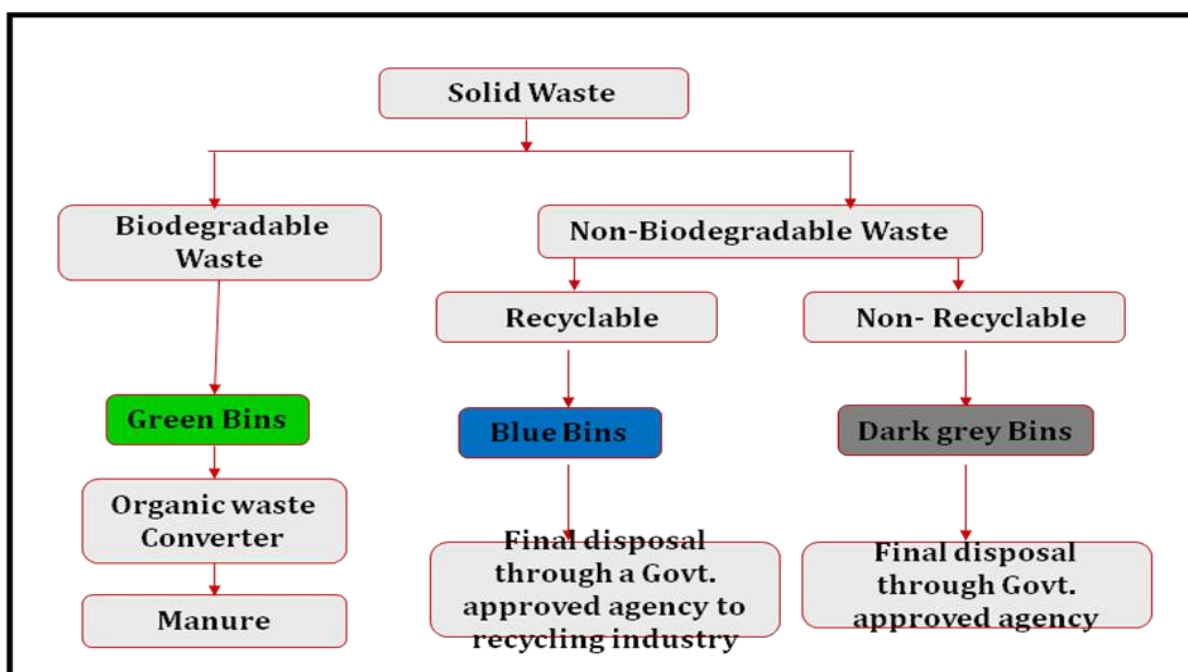


Figure 2: Solid Waste Management Scheme (Operational Phase)

4.0 BIOMEDICAL WASTE MANAGEMENT

4.1 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. This plan is being prepared for Narayanpur District Hospital (proposed) which is being upgraded from Model Hospital under Lakhimpur district.

4.2 Project specific waste generation details

For calculating biomedical waste generated from the proposed district hospital first we have to calculate solid waste, which is summarized as follows in below table:

Table 1: Calculation of Solid Waste Generation

S. No.	Category	Kg per capita per day	Waste generated (kg/day)
1	Patients	100 @ 1.5 kg/day	150
2	Staff	50 @ 0.25 kg / day	12.5
3	Visitor +OPD	1500 @ 0.025 kg /day	37.5
5.	Landscape waste (4537.5 m ²)	1.12 @ 0.2 kg/acres	0.224
Total Solid Waste Generated			200.22 KG/Day or Say 200 KG/Day

Total Waste generated per day: 200.0 kg/day

S. No	Waste	Quantity Kg/day	Percentage
1	Biomedical waste	37.5	**Estimated generation of total waste @1.5 kg/bed : 100* 1.5 = 150 kg/day Estimated generation of bio-medical waste @ 25% of the total waste generated : 37.5 kg/day
Rest remaining MSW 162.5 kg/day			
2	Bio degradable waste	81.25	50
3	Non-bio degradable	65.0	40
4	Recyclable waste	16.25	10

****Source:** CPHEEO Manual Ministry of Urban Development (MoUD), Government of India (May 2000) on municipal solid waste management 2000 under **Chapter VII- Biomedical waste (Page -34)**

- Following arrangements will be made at the site in accordance to Municipal Solid Wastes (Management and Handling) Rules, 2000
- Total Bio medical waste is 25% of total solid waste generated from hospital block i.e. **37.5 kg/day**.

Category	Type of Waste	Estimated Generated Quantity	
		%	kg/day
Yellow	(a) Human Anatomical Waste	75.0	28.125
	(b) Animal Anatomical Waste		

	(c) Soiled Waste		
	(d) Expired or Discarded Medicines		
	(e) Chemical Solid Waste		
	(f) Chemical Liquid Waste		
	(g) Discarded linen, mattresses, beddings contaminated with blood or body fluid.		
	(h) Microbiology, Biotechnology and other clinical laboratory waste		
Red	Contaminated Waste (Recyclable)	10.0	3.75
White (Translucent)	Waste sharps including Metals	8.0	3.0
Blue	Glassware	7.0	2.625
	Metallic Body Implants		
Total			37.5

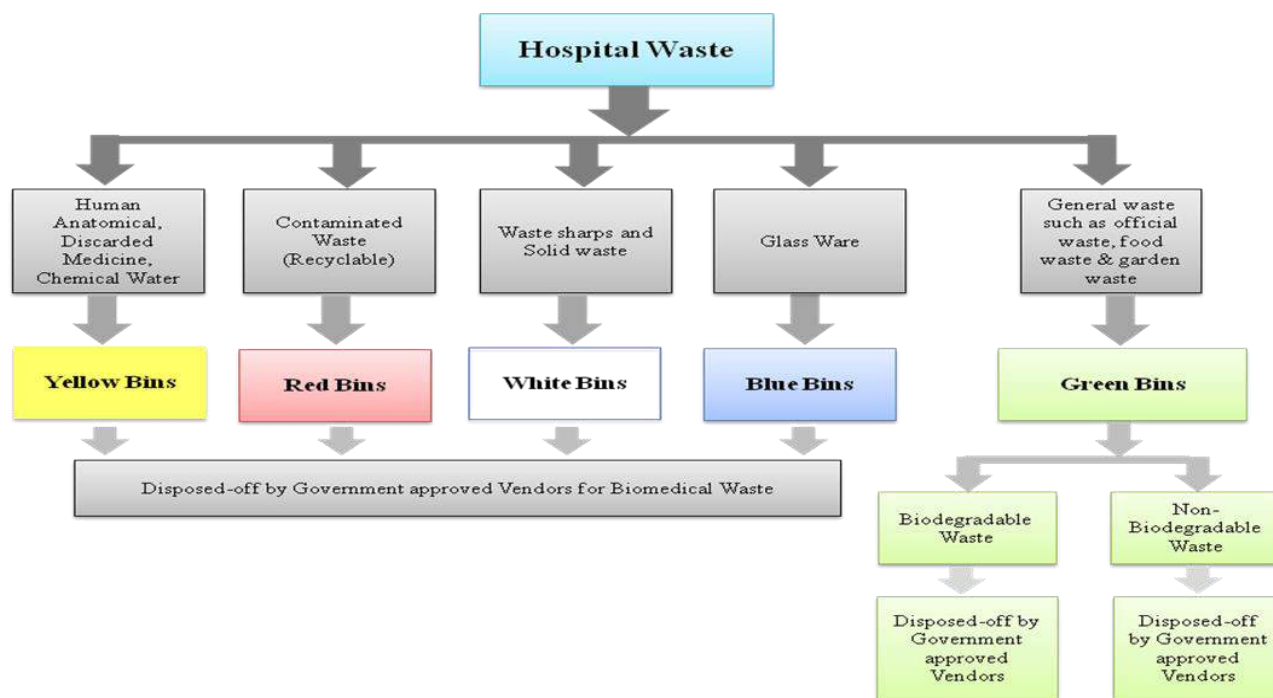


Figure 3: BMW Waste Management Scheme (Operation Phase)

4.3 Organization arrangement at Facility level for Biomedical waste Management and disposal

A Bio Medical Waste Management Committee will be formed in the proposed facility. The indicative composition of such committee is given below:

- ❖ SMO/ CMO/ Medical Superintendent (Chairperson)
 - ❖ District Quality Consultant/ District BMW Officer (Invitee Members)
 - ❖ Quality Manager
 - ❖ Hospital Infection Control Nurse/ Officer
 - ❖ Nursing in-charge
 - ❖ Medical Officer (Surgery)
 - ❖ Medical Officer (Emergency)
 - ❖ Medical Officer (Gynae & Obs) Microbiologist/ Pathologist
 - ❖ OT Nurse / Technician/ Assistant
 - ❖ Lab Technician
 - ❖ Blood Bank/Storage Unit Technician
 - ❖ Housekeeping in-charge
 - ❖ Pharmacist
- ✓ The Committee shall meet once in every six months and the record of the minutes of the meetings of this committee shall be submitted along with the annual report to the Pollution Control Board
 - ✓ The function of such committee is to ensure that bio-medical wastes shall be segregated at source, and disposed of safely, legally, and in compliance with all applicable regulations by the Assam Pollution Control Board
 - ✓ HCFs should submit the annual report
 - ✓ To maintain all record for operation of incineration, hydro or autoclaving etc., for a period of five years;
 - ✓ HCFs may have a dedicated budget for BMW as a part of annual budget of the health care facilities. Such budget must include recurring and non- recurring costs expected to be incurred by HCFs, related to Bio Medical Waste Management

4.4 Training and capacity building

Based on the identified needs, training plan for awareness and training on BMW management covering district health facilities will take place. The training sessions will be designed for specific groups of workers.

4.5 Implementation of waste management in health facilities

Waste management 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 according to BMW rules:

- 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

Presently at exiting Model Hospital, Narayanpur there is deep burial pit and sharp pit facility which exists at site for Yellow (a), (b) and (c) wastes namely human anatomical, animal anatomical and soiled Waste and sharps (white). This is being treated as per norms.

In operation phase, for safe disposal of biomedical waste at proposed District Hospital, an agreement with CBWTF in Jorhat district will be done (a private land has been identified for the same, land acquisition yet to be initiated). Further authorization for BMW will be taken from ASPCB before the start of such activity.

4.6 Treatment and Disposal of BMW as per rules as follows:

Type of Waste	Type of Bag or Container to be used	Treatment and Disposal options
Human or Animal anatomical waste	Yellow colored non-chlorinated plastic bags	Incineration or Plasma Pyrolysis or deep burial
Soiled Waste		Incineration or Plasma Pyrolysis or deep burial* In absence of above facilities, autoclaving or micro-waving/hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for energy Recovery.
Expired or Discarded Medicines (Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.)	Yellow colored non-chlorinated plastic bags	Expired cytotoxic drugs and items contaminated with cytotoxic drugs to be returned back to the manufacturer or supplier for incineration at temperature >1200 °C or to common bio-medical waste treatment facility or hazardous waste treatment, storage and disposal facility for incineration at >12000°C Or Encapsulation or Plasma Pyrolysis at >12000°C. All other discarded medicines shall be either sent back to manufacturer or disposed by

		incineration.
Chemical Waste (Chemicals used in production of biological and used or discarded disinfectants)	Yellow colored non-chlorinated plastic bags	Disposed of by incineration or Plasma Pyrolysis or Encapsulation in hazardous waste treatment, storage, and disposal facility.
Chemical Liquid Waste : Liquid waste generated due to use of chemicals in production of biological and used or discarded disinfectants, Silver X-ray film developing liquid, discarded Formalin, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities etc.	Separate collection system leading to effluent treatment system	After resource recovery, the chemical liquid waste shall be pre-treated before mixing with other wastewater. The combined discharge shall conform to the discharge norms given in Schedule III.
Discarded linen, mattresses, beddings contaminated with blood or body fluid, routine mask and gown	Non-chlorinated yellow plastic bags or suitable packing material	Non- chlorinated chemical disinfection followed by incineration or Plasma Pyrolysis or for energy recovery. In absence of above facilities, shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for energy recovery or incineration or Plasma Pyrolysis.

Microbiology, Biotechnology and other clinical laboratory waste (Blood bags, Laboratory cultures, stocks or specimens of micro-organisms, live or attenuated vaccines, human and animal cell cultures used in research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures)	Autoclave or Microwave Hydroclave plastic bags or containers	or Pre-treat to sterilize with non-chlorinated chemicals on-site as per World Health Organization (WHO) guidelines on Safe management of wastes from health care activities and WHO Blue Book, 2014 and then sent for Incineration.
Contaminated Waste (Recyclable) (a) Wastes generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and fixed needle syringes and vaccutainers with their needles cut) and gloves.	Red coloured non-chlorinated plastic bags or containers	Autoclaving or micro-waving/ hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent to registered or authorized recyclers or for energy recovery or plastics to diesel or fuel oil or for road making, whichever is possible. Plastic waste should not be sent to landfill sites.
Waste sharps including Metals (Needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades, or any other contaminated sharp object that may cause puncture and cuts. This includes both used, discarded and contaminated metal sharps)	Puncture proof, Leak proof, tamper proof containers	Autoclaving or Dry Heat Sterilization followed by shredding or mutilation or encapsulation in metal container or cement concrete; combination of shredding cum autoclaving; and sent for final disposal to iron foundries (having consent to operate from the State Pollution Control Boards or Pollution Control Committees) or sanitary landfill or designated concrete waste sharp pit.

Glassware: Broken or discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes.	Puncture proof and leak proof boxes or containers with blue colored marking	Disinfection (by soaking the washed glass waste after cleaning with detergent and Sodium Hypochlorite treatment) or through autoclaving or microwaving or hydroclaving and then sent for recycling.
Metallic Body Implants	Puncture proof and leak proof boxes or containers with blue colored marking	

4.7 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, necessary occupational safeguards will be taken into account for waste collection bags, trolleys, needle cutters, personal protective equipment, disinfectants etc.

4.8 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, SARS-CoV2, 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.

4.9 Supervision of BMW implementation by Nodal officer (qualified medical practitioner) / members of Waste Management Committee are 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.

4.10 Monitoring and evaluation mechanism

Monitoring and evaluation mechanisms with role and responsibilities and resources available for carrying out activities will be developed for the proposed project. The monitoring activities and organization will be aligned to the Quality Assurance activities for patient safety.

ANNEXURE-X

Traffic survey

Traffic Survey for Proposed Project
District Hospital at Narayanpur, Lakhimpur, Assam
Classified Traffic Volume Count Survey

Road: SH 43
Location: near site
Direction From: SH-43
Weather: Fine

to Hospital (Survey Point 01)

Name of Examiner: Navneet
Sheet No. 1
Date & Day: 02.12.2023 Saturday
Sheet No. 1

[illegible]

Checked by _____

These

Traffic Survey for Proposed Project
District Hospital at Narayanpur, Lakhimpur, Assam
Classified Traffic Volume Count Survey

Road: **SH-43**
 Location: **Near site**
 Direction From: **SH-43**
 Weather: **fine**

To: **Hospital (Survey point 03)**

Name of Enumerator: **Naracet**
 Shift No: **1**
 Date & Day: **02.12.2023 Saturday**
 Sheet No: **1**

Time Period	Motorised Vehicles																Non-Motorised Vehicles			
	Car/Jeeep/ Van (other than taxi)	Taxi	Auto Rickshaw (3W)	Two Wheeler	Tata Nano/ Shared Auto	Bus					Goods Vehicle					Agri. Tractor		Animal Hood Drawn	Cycle	Others
						Mini Bus	GSRTC Bus	Govt. Inter City Bus	Private Bus	School Bus	Mini LCV	LCV	2-Axis (Truck)	3-Axis (Truck)	MAV (Truck/Trailer)	Tractor	Tractor & Trailer			
12:00 to 1:00						1				1							1			
1:00 to 2:00							1										1			
2:00 to 3:00						1														
3:00 to 4:00						1		1	1	1										
Total	193	45	80	139	65	3	3	5	11	6	72	72	24	29	3	0	2	0	41	0

Checked by:

Time:

Traffic Survey for Proposed Project
District Hospital at Narayanpur, Lakhimpur, Assam
Classified Traffic Volume Count Survey

Road: SH-43
 Location: Near Site
 Direction From: SH-43
 Weather: Fine

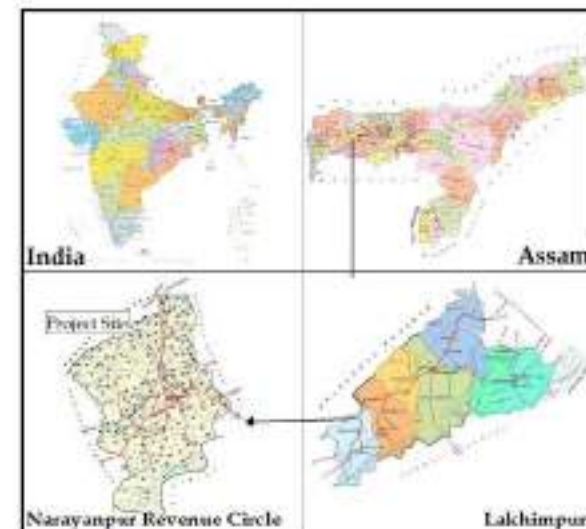
To: Hospital (Survey point 05)

Name of Enumerator: Navneet
 SAK No: 1
 Date & Day: 02.12.2023 Saturday
 Sheet No: 1

Time Period	Motorised Vehicles																	Non-Motorised Vehicles			
	Car/Jeep/Van (other than taxi)	Taxi	Auto Rickshaw (3W)	Two Wheeler	Tata Nano/Shared Auto	Buses					Goods Vehicle					Agri. Tractor		Animal/Bullock/Donkey	Cycle	Others	
						Mini Bus	DSRTC Bus	Govt. Inter City Bus	Private Bus	School Bus	Mini LCV	LCV	3-Axle (Truck)	5-Axle (Truck)	MAV (Tractor/Trailer)	Tractor	Tractor & Trailer				
4.00 PM - 5.00 PM						-			-	-						-		-			
5.00 PM - 6.00 PM									-						-						
6.00 PM - 7.00 PM																					
7.00 PM - 8.00 PM							-														
Total	177	49	52	104	64	1	5	2	2	1	60	48	21	17	5	5	0	1	36	0	

Checked by

Time



Legend

-  Road
-  Project Site

CONSTRUCTION OF 100 BEDED DISTRICT
HOSPITAL UNDER ASSIST
AT NARAYANPUR (LAKHIMPUR), ASSAM

TRAFFIC STUDY MAP

Prepared by
Gaheli Center of Research and
Development Pvt. Ltd.

Road: SH-43		Name of Enumerator: Navneet		District Hospital at Nanyangpur, Lakhimpur, Assam																									
Location: Near S&P		Shift No: 1																											
Direction from: From SH-43 towards Hospital (Survey Point 01)		Date & Day: 02.12.2023 Saturday																											
Weather: Fine		Sheet No: 1																											
Time Period:	Motorised Vehicles																			Non-Motorised Vehicles									
	Car/Jeep/ Van (other than taxi)	Taxi	Auto Rickshaw (3W)	Two Wheeler	Tata Magic/ Shared Auto	Bus						Goods Vehicle				Agri Tractor		Animal/ Hand Drawn	Cycle		Others								
						Mini Bus	AETC Bus	Govt. Inter City Bus	Private Bus	School Bus	Mini LCV	LCV	2- Axle (Truck)	3- Axle (Truck)	MAV (Truck/Trolley)	Tractor	Tractor & Trailer												
Time Period:																													
Total 8:00:00 AM to 08:00:00 PM	563	138	182	402	210	10	15	23	25	14	188	169	79	81	18	5	6	3	124			2255							
PCU Conversion	1	1	1	0.5	1.5	3	3	3	3	3	1.5	1.5	3	4.5	4.5	3	4.5	4	0.5	2	0								
Sectoral PCU	563	138	182	201	315	30	45	69	75	42	282	253.5	237	364.5	81	15	27	12	62	0	0	2994							
Total PCU	2994	Based on IRC 64 - 1990																											
08:00:00 AM to 09:00:00 AM	55	12	17	42	21	2	1	6	5	3	18	16	8	9	5	1	2	1	13	0	0								
09:00:00 AM to 10:00:00 AM	52	13	11	46	25	1	2	5	5	2	14	11	10	11	3	2	1	1	14	0	0								
10:00:00 AM to 11:00:00 AM	45	9	13	39	19	1	1	5	2	2	13	14	7	8	0	1	1	0	11	0	0								
11:00:00 AM to 12:00:00 PM	41	10	9	32	16	2	3	0	0	0	11	8	9	7	2	0	0	0	9	0	0								
12:00:00 PM to 1:00:00 PM	51	7	18	34	14	1	0	2	3	1	16	14	6	8	0	0	1	0	7	0	0								
1:00:00 PM to 2:00:00 PM	53	11	23	31	19	0	1	2	4	2	17	20	5	8	2	0	1	0	14	0	0								
2:00:00 PM to 3:00:00 PM	47	15	21	36	17	1	2	0	3	2	19	21	6	6	1	0	0	0	11	0	0								
3:00:00 PM to 4:00:00 PM	42	12	18	38	15	1	0	1	1	1	20	17	7	7	0	0	0	0	9	0	0								
4:00:00 PM to 5:00:00 PM	52	16	19	31	21	1	2	0	1	1	19	19	9	4	2	1	0	1	8	0	0								
5:00:00 PM to 6:00:00 PM	44	13	14	23	18	0	0	2	1	0	17	13	5	5	1	0	0	0	10	0	0								
6:00:00 PM to 7:00:00 PM	40	11	10	21	14	0	2	0	0	0	13	9	4	4	0	0	0	0	9	0	0								
7:00:00 PM to 8:00:00 PM	41	9	9	29	11	0	1	0	0	0	11	7	3	4	2	0	0	0	9	0	0								
Total:	563	138	182	402	210	10	15	23	25	14	188	169	79	81	18	5	6	3	124	0	0	2255							

Traffic Study

Vehicular Traffic Density

Traffic study was carried out as primary data to know the existing traffic density. Traffic survey forms are attached as **Annexure**.

Incremental pollution load as per IRC 64 has been calculated to estimate the level of services (LOS). Traffic study was conducted at following survey points:

1. SH- 43 near site (Survey Point 01)

Then depending on the capacity of the road, the number of vehicles that will be added to the present scenario will be compared to the carrying capacity as recommended by Indian Road Congress (IRC). The existing volume of traffic and, the Level of Service are given below:

Traffic data was collected from the following points.

1. SH- 43 near site (2255-Vehicle Count)

The road is undivided 2 lane (SH- 43) with RoW = 6.5 Meters.



Traffic Survey Photographs

Survey hours: 8.00 am to 8.00 pm

Vehicle Count in PCU = 2994

1: Intersection of SH- 43 near site (2994-PCU)

Total accommodative capacity of the SH- 43, IRC: 64 – 1990 is 15,000 PCU.

Carrying capacity, SH- 43 = Volume /Capacity = 2994/ 15,000 = 0.19 (LOS – A – Excellent)

Additional Traffic load added due to proposed project:

Number of Cars: 83 PCU

Modified V/C Ratio SH- 43

= Existing PCU + Additional PCU load of project /15,000

=2994+83/15,000 = 0.20

Inference: New V/C ratio near SH- 43 is 0.20 (LOS – A – Excellent).

Even if the entire load of project of 83 PCU (worst case scenario) is added upon, the level of service will have minimal impact and correspond to LOS – A – Excellent near SH- 43.

ANNEXURE-XI

Dust Mitigation measures

ANNEXURE-XI**DUST MITIGATION PLAN**

Introduction: In the building Construction projects, dust mitigation is one of the primary concern and which needs to be addressed properly to minimize its impacts. In the proposed project, dust mitigation measures have been proposed for different stages of the project. The proposed project is 100 bedded district hospital located at Narayanpur, Lakhimpur. The site is within the existing Mahatma Gandhi Model Hospital site plot. The Total Plot Area is 30250.18 Sqm (7.48 Acre, 22 Bigha 3 Katha 1.18 Lessa).

Dust Mitigation measures proposed for the project is given below:

S. No	Project Stage	Dust generation Source	Mitigation Measures
1.	Pre-construction Stage	1. Demolition waste 2. Site Preparation 3. Vehicle Movement	1. Tarpaulin or green net should be there around the boundary of the construction site. 2. The vehicle carrying the demolition waste should be fully covered with tarpaulin sheet. 3. All vehicles including carrying construction debris of any kind should be cleaned and wheels washed. 4. All construction debris and construction material of any kind should be stored on the site and not dumped on public roads or pavements. 5. No loose soil or sand or Construction & Demolition Waste or any other construction material that causes dust shall be left uncovered.

			6. Every worker working on construction site and involved in loading, unloading and carriage of construction material and construction debris should be provided with dust-mask to prevent inhalation of dust particle. 7. Vehicle with PUC certificate will be allowed in construction site. 8. Construction and demolition waste should be recycled on-site or transported to authorized recycling facility and due record of the same should be maintained.
2.	Construction phase	1. Construction activities 2. Vehicle Movement	1. Tarpaulin or green net should be there around the boundary of the construction site. 2. The vehicle carrying the construction and demolition waste, construction materials should be fully covered with tarpaulin sheet. 3. All vehicles including carrying construction debris of any kind and construction material should be cleaned and wheels washed. 4. All construction debris and construction material of any kind should be stored on the site and not dumped on public roads or pavements. 5. No loose soil or sand or Construction & Demolition Waste or any other construction material that causes dust

			shall be left uncovered. 6. Every worker working on construction site and involved in loading, unloading and carriage of construction material and construction debris should be provided with dust-mask to prevent inhalation of dust particle. 7. Vehicle with PUC certificate will be allowed in construction site. 8. No grinding and cutting of building materials in open area. Wet jet should be used in grinding and stone cutting. 9. Unpaved surfaces, if any and areas with loose soil should be adequately sprinkled with water to suppress dust. 10. Dust mitigation measures shall be displayed prominently at the construction site for easy public viewing.
3.	Operational phase	Vehicular movement	Water sprinkling will be done twice a week.

ANNEXURE-XII
Environment Monitoring Reports



Gaheli Environmental Laboratory

(A unit of Gaheli Center of Research and Development Pvt. Ltd.)

(ISO 9001:2015, 14001:2015, OHSAS 18001:2007 Certified Company)

Circuit House Road, Near Parvati Orthopaedic Hospital, New Paradise Fountain Circle,

Porbandar - 360574, Gujarat, E-mail - contact@gordindia.com, website - www.gordindia.com

Tel.: 0286-2253630, Mobile: +91-9990416608, GSTIN: 24AHCPA6690R1ZV



TEST REPORT

Report Code: GEL/A/2023/12/04-001

Issue Date : 04.12.2023

Issued to: Project in charge- Construction of proposed 100 Beds District Hospital under ASSIST at Narayanpur, North Lakhimpur, Assam

Date of Sampling : 02.12.2023

RESULTS

(Ambient Air Quality Analysis)

SAMPLING DETAILS

Sample Collected by : GEL STAFF
Sampling Protocol : Portable air detector (AQM-02)
Weather Condition : Clear Sky

S.No	Location of monitoring	Parameters					
		PM10 µg/m ³	PM2.5 µg/m ³	PM1 µg/m ³	SO ₂ µg/m ³	NO ₂ µg/m ³	Temperature °C
1.	Project site	09	08	06	4.2	5.1	28
2.	Near Project site	08	07	05	4.1	4.3	28
3.	Budhisi Temple	10	09	06	5.1	6.3	28
4.	L.P School	16	14	10	4.3	4.1	28
5.	Narayanpur	09	08	07	5.2	6.1	28
NAAQS		100	60	--	80	80	--

****End of Report****



Authorized Signatory

Varsha Pandey
(Managing Director)

Serial No.: 8998



Dispatch Date: 04.12.2023

Dispatch No.: 8998



Gaheli Environmental Laboratory
(A unit of Gaheli Center of Research and Development Pvt. Ltd.)
ISO 9001:2015, 14001:2015, ENISO 18001:2007 Certified Company

Circuit House Road, Near Parvati Orthopaedic Hospital, New Paradise Fountain Circle,
Porbandar - 360575, Gujarat, E-mail - contact@gaheliindia.com, website - www.gaheliindia.com
Tel: 0286-2253630, Mobile: +91-9990416608, GSTIN: 24ABCPA6690B1ZV



TEST REPORT

Sample Description: Ambient Noise

Report Code: GEL/N/2023/12/04-001
Issued to: Project in charge- Construction of
proposed 100 Beds District Hospital under
ASSIST at Narayanpur, North Lakhimpur, Assam

Issue Date: 04.12.2023
Date of Sampling: 02.12.2023
Sample Collected by: GEL STAFF

RESULTS

(Ambient Noise Quality Analysis)

S. No.	Date	Location	Zone	Limit for As Per EPA, 1986; Leq, dB (A)		Observed Value Leq, dB (A)	
				Day Time*	Night Time**	Day Time*	Night Time**
1.	02.12.2023	Project site	Silence zone	50	40	48.4	38.5
2.	02.12.2023	Near Project site	Residential area	55	45	53.4	44.7
3.	02.12.2023	Buddhist Temple	Silence zone	50	40	47.4	38.1
4.	02.12.2023	L.P School	Silence zone	50	40	48.9	39.2
5.	02.12.2023	Narayanpur	Residential area	55	45	54.6	41.5
* Day Time			6.00 a.m. to 10.00 p.m.				
**Night Time			10.00 p.m. to 6.00 a.m.				

****End of Report****



Authorized Signatory
Varsha Pandey
Varsha Pandey
(Managing Director)

Serial No.: 8999



Dispatch Date: 04.12.2023

Dispatch No.: 8999



Gaheli Environmental Laboratory

(A unit of Gaheli Center of Research and Development Pvt. Ltd.)

(ISO 9001:2015, 14001:2015, OHSAS 18001:2007 Certified Company)

Circuit House Road, Near Parvati Orthopaedic Hospital, New Paradise Fountain Circle,
Porbandar - 360575, Gujarat, E-mail - contact@gordindia.com, website - www.gordindia.com
Tel. 0286-2253630, Mobile. -91-9990416608, GSTIN: 24AHCP46690B1ZV



TEST REPORT

Report Code: GEL/S/2023/12/04-001
Issued to: Project in charge- Construction of
proposed 100 Beds District Hospital under
ASSIST at Narayanpur, North Lakhimpur, Assam

Issue Date : 04.12.2023
Sample Collected by : Anrit Kr
Sample Collected on : 02.12.2023
Sampling Protocol : GEL/LAB/SOP/SOIL/01
Sample Quantity : 1 kg
Sample Packing : Zip Polybag

Sample Description: Soil (Project Site) and Narayanpur village

RESULTS

(Soil Quality Analysis- Project Site, near village-Narayanpur)

S. No.	Parameters	Units	Test Method	SQ1 Project Site	SQ2 Narayanpur Village
1	Texture	-	GEL/LAB/SOP/SOIL/22	Sandy Loam	Sandy Loam
	Sand	%		63	62
	Silt	%		32	32
	Clay	%		05	06
2	*Color	-	GEL/LAB/SOP/SOIL/07	Light Brownish to grey	Light Brownish to grey
3	pH (1:2 Suspension)	-	IS 2720 (P-26): 1987, RA 2011	6.76	6.72
4	Specific Conductivity	$\mu\text{mhos/cm}$	IS 14767: 2000, RA 2016	502	514
5	Moisture	%	IS 2720(Part-2): 1973, RA 2015	23.2	24.1
6	Exchangeable Potassium	mg/kg	GEL/LAB/SOP/SOIL/07	8.2	7.1
7	Exchangeable Sodium	mg/kg	GEL/LAB/SOP/SOIL/06	20.7	21.5
8	Exchangeable Calcium	mg/kg	GEL/LAB/SOP/SOIL/08	301	299
9	Exchangeable Magnesium	mg/kg	GEL/LAB/SOP/SOIL/08	81.2	82.0
10	Porosity	%	GEL/LAB/SOP/SOIL/20	34.5	33.9
11	Organic Matter	%	IS 2720 (P-22): 1972, RA 2010	0.60	0.63



Authorized Signatory
Varsha Pandey
Varsha Pandey
(Managing Director)

Serial No.: 9000



Dispatch Date: 04.12.2023

Dispatch No.: 9000



Gaheli Environmental Laboratory

(A unit of Gaheli Center of Research and Development Pvt. Ltd.)

(ISO 9001:2015, 14001:2015, OHSAS 18001:2007 Certified Company)

Circuit House Road, Near Parwani Orthopaedic Hospital, New Paradise Fountain Circle,
Porbandar - 360575, Gujarat, E-mail - contact@gelindia.com, website - www.gelindia.com
Tel.: 0286-2253630, Mobile: +91-9990416608, GSTIN: 24AHCPA6690BIZV

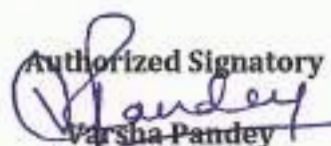


TEST REPORT

12	Phosphorous	mg/kg	GEL/LAB/SOP/SOIL/10	12.8	11.6
13	*Nitrogen	mg/kg	GEL/LAB/SOP/SOIL/09	76	75
14	Chloride	mg/kg	GEL/LAB/SOP/SOIL/14	63	61
15	Bulk Density	gm/cc	IS 2720 (P-2R) 1974, RA 2010	1.9	1.9

****End of Report****



Authorized Signatory

Varsha Pandey
(Managing Director)

Serial No.: 9001



Dispatch Date: 04.12.2023

Dispatch No.: 9001

118

TEST REPORT

Test Report No.	DIBIDLL/2023-24/1397(C)	Issue Date	15/12/2023
Issued to	GAHELI ENVIROMENTAL, LABORATORY, DELHI	Sample Received Date	5/12/2023
Block/Habitation	Naryanpur, North Lakhimpur	Sample Location	Naryanpur, Dikrong River
Sample Type	Surface Water	Quantity	1 Liter
Sample Collected By	GAHELI ENVIROMENTAL, LABORATORY, DELHI	Sample Collected On	5/12/2023
Date of Analysis Started	5/12/2023	Date of Analysis Completed	7/12/2023

RESULTS

Sl. No.	Parameter	Protocol Used	Results	IS: 10500:2012(Second Revision)		Unit
				Desirable limit	Max. Permissible limit (in absence better alternate source)	
1	pH	IS: 3025: Part 11	6.84	6.5 - 8.5	No relaxation	pH Units
2	TDS	IS: 3025: Part 16	32	500	2000	mg/L
3	Turbidity	IS: 3025: Part 10	<0.5	1	5	NTU
4	Chloride	IS: 3025: Part 32	22.68	250	1000	mg/L
5	Total Hardness	IS: 3025: Part 21	24	200	600	mg/L
6	Total Alkalinity	IS: 3025: Part 23	15	200	600	mg/L
7	Colour	IS: 3025: Part 4	<5	5	15	Hazen
8	Residual Chlorine	FTK	0	0.2	1	mg/L
9	Taste	IS: 3025: Part 8	—	Agreeable	Agreeable	
10	Calcium	IS: 3025: Part 40	9.60	75	200	mg/L
11	Magnesium	APHA 3500- Mg B	<5	30	100	mg/L
12	Iron	APHA 3500- Fe B	<0.05	1	No Relaxation	mg/L
13	Nitrate	APHA 3500- Fe B	4.23	45	No Relaxation	mg/L
14	Fluoride	APHA 4500 NO ₃ B	1.01	1	1.5	mg/L
15	Sulphate	APHA 4500 SO ₄ E	6.43	200	400	mg/L
16	Arsenic	IS: 3025: Part 37	<0.009	No Relaxation	0.01	mg/L
17	Bacteria	H ₂ S Vial	Absent	0	No Relaxation	

Remark-

[Signature]
Asst. Chemist (DLL)
PHE, Dibrugarh
Asst. Chemist (DLL)
PHE, Dibrugarh

*****END OF THE REPORT*****

TEST REPORT

Test Report No.	DIB/DLL/2023-24/1397(B)	Issue Date	15/12/2023
Issued to	GAHELI ENVIROMENTAL LABORATORY, DELHI	Sample Received Date	5/12/2023
Block/Habitation	Naryanpur, North Lakhimpur	Sample Location	Naryanpur, Model Hospital Project Side
Sample Type	Ground Water	Quantity	1 Liter
Sample Collected By	GAHELI ENVIROMENTAL LABORATORY, DELHI	Sample Collected On	5/12/2023
Date of Analysis Started	5/12/2023	Date of Analysis Completed	7/12/2023

RESULTS

Sl. No.	Parameter	Protocol Used	Results	IS: 10500:2012(Second Revision)		Unit
				Desirable limit	Max. Permissible limit (in absence better alternate source)	
1	pH	IS: 3025: Part 11	6.25	6.5 - 8.5	No relaxation	pH Units
2	TDS	IS: 3025: Part 16	72	500	2000	mg/L
3	Turbidity	IS: 3025: Part 10	0.8	1	5	NTU
4	Chloride	IS: 3025: Part 32	19.85	250	1000	mg/L
5	Total Hardness	IS: 3025: Part 21	64	200	600	mg/L
6	Total Alkalinity	IS: 3025: Part 23	44	200	600	mg/L
7	Colour	IS: 3025: Part 4	<5	5	15	Hazen
8	Residual Chlorine	FTK	0	0.2	1	mg/L
9	Taste	IS: 3025: Part 5	—	Agreeable	Agreeable	
10	Calcium	IS: 3025: Part 40	21.62	75	200	mg/L
11	Magnesium	APHA 3500- Mg B	<5	30	100	mg/L
12	Iron	APHA 3500- Fe B	<0.05	1	No Relaxation	mg/L
13	Nitrate	APHA 3500- Fe B	5.11	45	No Relaxation	mg/L
14	Fluoride	APHA 4500 NO ₃ B	1.01	1	1.5	mg/L
15	Sulphate	APHA 4500 SO ₄ E	5.08	200	400	mg/L
16	Arsenic	IS: 3025: Part 37	<0.009	No Relaxation	0.01	mg/L
17	Bacteria	H ₂ S Vial	Absent	0	No Relaxation	

Remark- Water is Acidic

Asst. Chemist (DLL)

— PHE, Dibrugarh

Asst. Chemist (DLL)
PHE, Dibrugarh

*****END OF THE REPORT*****

TEST REPORT

Test Report No.	DIB/DLL/2023-24/1397(A)	Issue Date	15/12/2023
Issued to	GAHELI ENVIROMENTAL, LABORATORY, DELHI	Sample Received Date	5/12/2023
Block/Habitation	Naryanpur, North Lakhimpur	Sample Location	Naryanpur, North Lakhimpur
Sample Type	Ground Water	Quantity	1 Liter
Sample Collected By	GAHELI ENVIROMENTAL, LABORATORY, DELHI	Sample Collected On	5/12/2023
Date of Analysis Started	5/12/2023	Date of Analysis Completed	7/12/2023

RESULTS

Sl. No.	Parameter	Protocol Used	Results	IS: 10500:2012 (Second Revision)		Unit
				Desirable limit	Max. Permissible limit (in absence better alternate source)	
1	pH	IS: 3025: Part 11	5.82	6.5 - 8.5	No relaxation	pH Units
2	TDS	IS: 3025: Part 16	138	500	2000	mg/L
3	Turbidity	IS: 3025: Part 10	0.8	1	5	NTU
4	Chloride	IS: 3025: Part 32	17.72	250	1000	mg/L
5	Total Hardness	IS: 3025: Part 21	90	200	600	mg/L
6	Total Alkalinity	IS: 3025: Part 23	55	200	600	mg/L
7	Colour	IS: 3025: Part 4	<5	5	15	Hazen
8	Residual Chlorine	FTK	0	0.2	1	mg/L
9	Taste	IS: 3025: Part 8	—	Agreeable	Agreeable	—
10	Calcium	IS: 3025: Part 40	25.62	75	200	mg/L
11	Magnesium	APHA 3500- Mg B	7.29	30	100	mg/L
12	Iron	APHA 3500- Fe B	<0.05	1	No Relaxation	mg/L
13	Nitrate	APHA 3500- Fe B	5.67	45	No Relaxation	mg/L
14	Fluoride	APHA 4500 NO ₃ B	1.06	1	1.5	mg/L
15	Sulphate	APHA 4500 SO ₄ E	4.98	200	400	mg/L
16	Arsenic	IS: 3025: Part 37	<0.009	No Relaxation	0.01	mg/L
17	Bacteria	H ₂ S Vial	Absent	0	No Relaxation	—

Remark- Water is Acidic

Asst. Chemist (DLL)
PHE, Dibrugarh

Asst. Chemist (DLL)
PHE, Dibrugarh

*****END OF THE REPORT*****

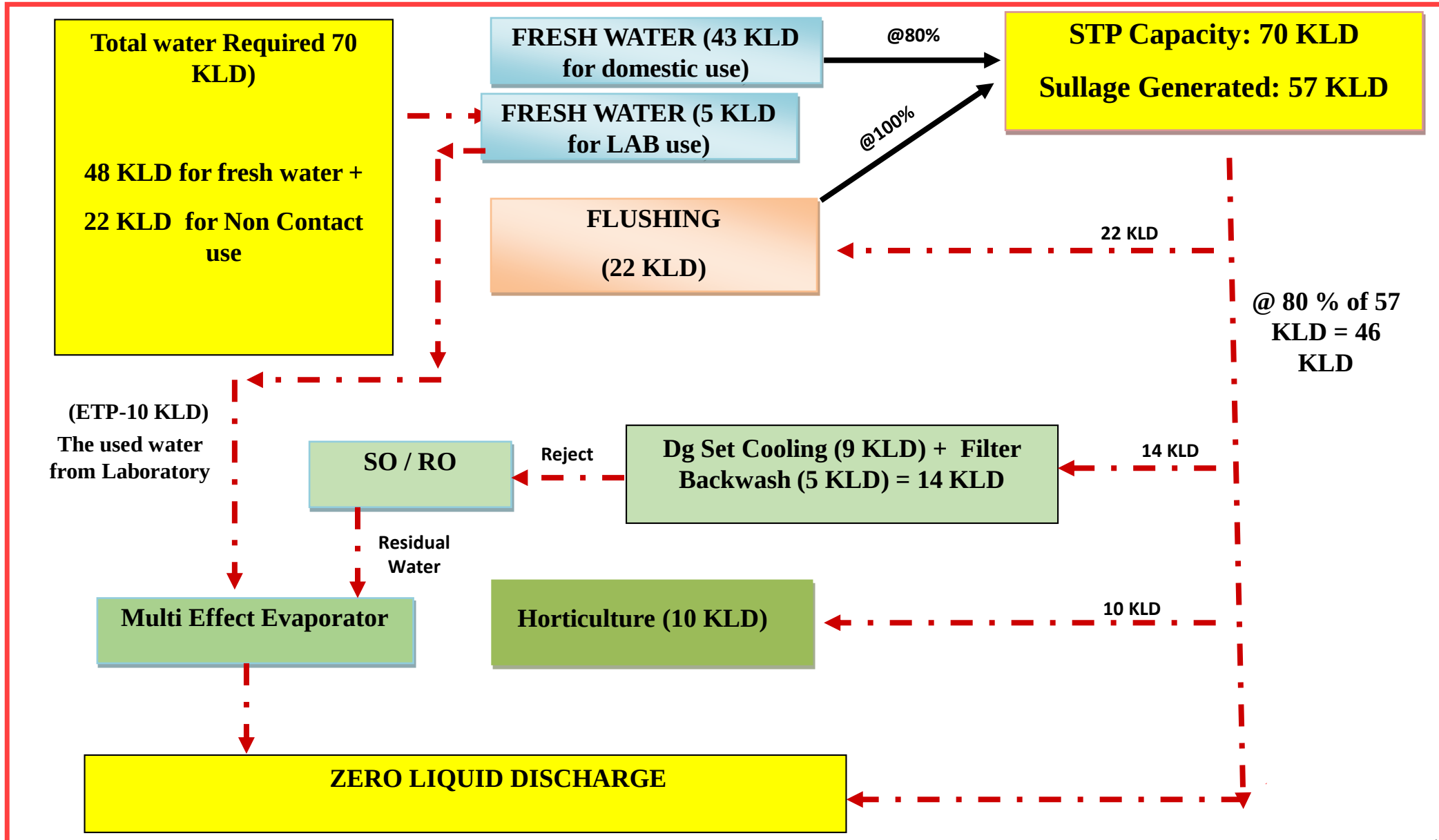
ANNEXURE-XIII

Water requirement

WATER REQUIREMENT CALCULATION

S. No	Description	No of Occupancy	Consumption Litres per Head/ day NBC, 2016 -BIS	Total /Litres per Head/ day /KLD	Fresh water (KLD)	Non contact use (KLD)
1.	Number of beds	100	450 LPH/D (300 fresh + 150 Non contact water)	45000 LPH/D or 45.0 KLD	30.0	15.0
2.	OPD	1200	15 LPH/D (10 fresh + 5 Non contact water)	18000 LPH/D or 18.0 KLD	12.0	6.0
3.	Labs, Operation Theaters & Labour Rooms Etc.	--	5,000 LPH/D or 5 KLD	5 KLD	5.0	--
4.	Mortuary and Gas Manifold	32	45 (25 fresh + 20 Non contact water)	1440 LPH/D or 1.44 KLD	0.80	0.64
5.	DG Set	1250 KVA	0.9 *KVA * 8 HOURS	90000 LPH/D or 9.0 KLD	--	--
6.	Horticulture	2000 Sqm	5 sqm/litre	10.0 KLD	--	--
7.	Filter Backwash	--	--	5000 LPH/D or 5.0 KLD	--	--
Total Water (in KLD)					47.8 Say 48 KLD	21.64 Say 22 KLD

WATER BALANCE DIAGRAM



ANNEXURE-XIV
**Occupational Health and Safety
Plan**

Annexure XIV

Occupational Health and Safety Plan

1.0 Introduction: An Occupational Health and Safety (OHS) Plan is a comprehensive approach aimed at ensuring the safety and health of workers working at the site. The plan sets out processes and practices to help prevent injuries, illnesses, and fatalities on the job.

Its emphasis is on proactive measures to identify and manage workplace hazards, thereby reducing risks.

2.0 Purpose of an Occupational Health and Safety Plan: The purpose of an Occupational Health and Safety Plan is the prevention of workplace injuries, illnesses, and fatalities. Here are the main objectives and purposes of an OHS Plan:

Protection of Workers: At its core, the primary purpose of an OHS Plan is to protect employees and other individuals at the workplace from potential hazards that could harm them physically, mentally, or emotionally.

Compliance with Legislation: An OHS Plan helps ensure that the project is compliant with these regulatory requirements.

Identification of Hazards: The plan provides a systematic approach to identifying potential dangers in the workplace, from machinery operations during construction phase to health hazards exposure during operational phase.

Risk Management: Beyond identifying hazards, the plan outlines measures to assess, prioritise, and mitigate risks associated with these hazards.

Emergency Preparedness: The plan ensures that there are protocols in place to handle unexpected events, such as fires, chemical spills, or natural disasters, thereby reducing potential harm.

Promotion of a Safety Culture: A well-documented and communicated OHS Plan fosters a culture where safety is valued and prioritised, encouraging workers at all levels to participate actively in safety initiatives.

Reduction in Economic Costs: Injuries, illnesses, and accidents can be expensive in terms of medical costs, compensation, lost workdays, and reduced productivity. An OHS Plan helps reduce these economic impacts.

Continuous Improvement: The plan provides mechanisms for regular reviews, audits, and feedback, facilitating a process of ongoing improvement in safety standards and practices.

Training and Awareness: The OHS Plan ensures that employees are adequately trained and aware of potential workplace hazards and know how to protect themselves.

Clear Communication: It sets clear lines of communication regarding safety concerns, reporting mechanisms, and responsibilities, ensuring that everyone knows what's expected of them.

3. OHS Provisions for the proposed project: As the proposed project plans major infrastructure construction in the form of developing new district hospital and refurbishment of

the existing ones. So, comprehensive OHS provisions to protect health and safety of the labour workforce will be provided on construction site. These provisions shall incorporate in Construction Contracts by the construction agency and monitored by health facilities officials in a systematic manner.

3.1 Construction phase: ASSIST Project, AHIMDS will appoint the contractor and will abide by the norms. The contractor will manage construction related workplace occupational health and safety, community health and safety risks. Occupational health and safety measures as given below will be implemented:

- PPE will be provided to all workers along with provision of onsite toilet and washing facilities, potable drinking, waste and rest areas, Standard First -Aid box at site.
- Cordoning 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.
- Providing Safety signs that will allow management to warn and raise health and safety awareness for employees and visitors. Appropriately place them around the site where necessary.
- Workers will be made familiar with the construction site safety tips and different signs: prohibition signs, mandatory signs, warning signs, safe condition signs, and firefighting equipment signs.
- Often, accidents occur due to the misuse of a tool or equipment. Using makeshift tools will be avoided. Instead, the correct tool to get the job done quicker and safer will be used.
- Pre-checks on tools and equipment will be done before commencing work and it will be ensured that tools and equipment to be used are free of defect or damage.
- Training will be given to workers to report defects and near misses on site as soon as they notice them. The sooner issues get reported, the fewer chances of them worsening and causing accidents or further damage.
- Planning and implementing the awareness sessions for workers and community on health and safety hazards and risks and their role in their management including their responsibilities.
- Equal wages will be given without discrimination on the basis of gender, age and color
- Temporary labour camp will be provided with crèche for children

- To provide the basic facilities like safe drinking water, mobile toilets, fuel for cooking and mobile STP/septic tank
- Fencing of the project during construction phase
- Green net covering for loose building material will be done.

3.2 Operational Phase: Occupational Health and safety provisions like regular Immunizations, health screening, post exposure prophylaxis and use of personal protective devices etc. for health care providers will be provided to reduce occupational hazard during operational phase. Further details related to hospital infection and its prevention measures are provided separately under ***Annexure XIX Hospital Infection Prevention and Control Plan.***

4.0 Monitoring and evaluation:

Safety & Occupational Health issues will be periodically monitored during construction and operation phase and reviewed at all relevant levels, including the highest levels will be done. This will ensure continual improvement for District hospital which helps in minimize occupational health and safety issues.

ANNEXURE-XV
Worker Site Management Plan

ANNEXURE-XV

Worker Site Management Plan

1. Introduction

The Worker site Management Plan sets out the Program's approach to meeting national requirements as well as objectives of the World Bank's Environmental and Social Framework, specific objectives of Environmental and Social Standard 2: Labor and Working Conditions (ESS2) and Standard 4: Community Health and Safety (ESS4).

2. Assessment of Key Potential Labor Risks

The safety and health risks to which the workers and staff may be exposed from any project-related activities will be assessed. The ability to prevent or eliminate such risks or, if the risk cannot be controlled or eliminated, measures to protect workers and staff from exposure will be explored. Though, given the small-scale construction works, no major risks are envisaged.

Potential risks that may arise from the nature of activities to be undertaken include:

- a) Employment practice that are not compliant with either labor law or ESS 2. For example, not providing written documents of assignments, wages not proportionate with tasks performed, or industry standards, excess workload without provision of adequate rests and leisure, lack of hygiene facilities, discrimination towards women and labor with disability, unlawful termination, and withholding of benefit, etc.
- b) Lack of Occupational Health and Safety (OHS) practice and procedures during construction and operation resulting in unsafe work environment.
- c) Short and long-term effects on health due to over exposure to dust, noise levels, and exposure to chemicals /hazardous wastes.
- d) Absence or inadequate or non-responsive emergency response mechanism for rescue of workforce, during natural calamities like cloud bursts, landslides, disasters due to earthquake/floods/fire outbreak, etc.
- e) Lack of adequate sanitation and health facilities at the work sites.
- f) Community health and safety issues, especially, rise of communicable diseases, including Malaria and Cholera to the workforce and staff.
- g) The conduct of hazardous work, such as working at heights or in confined spaces, use of heavy machinery, or use of hazardous materials.
- h) Generation of solid, liquid and fecal wastes, especially around labor camps and toilet area.
- i) Increased competition over resources due to influx of labor; labor conflicts and work conditions.
- j) Other project related risk may include of child and forced labor and use of unscrupulous labor practice, and denial for workers' rights to form workers organizations, etc. (particularly for unskilled construction workers/labor), etc.

3. Mitigation and its Measures

1. There is a need to demarcate the risk zones. Proper signage for notifying the zones will be placed, and awareness regarding the same will be created among the most impacted workers and staff.

2. Procedure and guidelines will be defined as per best industry practices and legislative requirements applicable for task-specific hazard prevention and safety,
3. Provision of first aid room with necessary first aid items and on-call first aid providers/attendees.
4. Avoiding and minimizing the use and release of hazardous materials; for example, non-hazardous materials can substitute asbestos in building materials. Preventing uncontrolled releases of hazardous materials to the environment, e.g., paint, oils, etc.
5. Hazard communication and training programs to prepare workers to recognize and respond to workplace chemical hazards.
6. Provide appropriate Personal Protective Equipment (PPE) to workers.
7. Use of dust control methods such as covers, water suppression on loose materials and surfaces, or increased moisture content for open materials storage piles to reduce particulate matter and dust exposure.
8. Provisions will be made to provide a clean and hygiene eating place and safe drinking water at the workplace along with quarterly testing of drinking water. Similarly, an adequate provision will be made for clean and separate toilets for men and women with sewage treatment (Mobile STP).
9. Salary and other emoluments will conform to the Rules and Regulations issued by the Department of Personnel and Training (DoPT), GoI.
10. The Direct workers at the DHE will work as per State Government Rules, which will follow the relevant notification by the Department of Personnel and Training, GoI. The work hours for contracted workers will not be more than 48 hours per week and 9 hours per day. Any contract or community workers made to work over the same will be entitled to overtime pay per building and other construction workers act, 1996.

4. Worker's Code of Conduct

The Contractors are expected to prevent Gender-based Violence (GBV) and Sexual Abuse & Exploitation (SEA) emanating from the labors by developing Codes of Conduct for their workers. This needs to be continuously reinforced through positive action and trainings. The Code of Conduct will highlight the positive behavior to be demonstrated by their workers, including maintaining harmonious relations with the local communities. The CoCs will include all persons employed by the contractor, including sub-contractors and suppliers, to acceptable standards of behavior in its applicability. The CoCs will have sanctions for non-compliance, including non-compliance with specific policies related to gender-based violence, sexual exploitation, and sexual harassment (e.g., termination). The CoC will be written in plain language and signed by each worker. The Worker's Code of Conduct is detailed below:

Worker's Code of Conduct

*The **Codes of Conduct** are to prevent Gender-based Violence (GBV) and Sexual Abuse & Exploitation (SEA) of Children & Women.*

The Contractor needs to implement measures to address environmental and social risks related to the workers. The Contractor should provide an environment in which gender-based violence

(GBV) has no place, and are responsible in preventing potential risks of sexual exploitation and abuse and gender-based violence

Therefore, in order to ensure that all staff, labourers and other employees at the Works Site are aware of this commitment, and in order to prevent, identify, and respond to any allegations of GBV, the following Code of Conduct will apply to all the staff, labourers and other employees without exception.

This Code of Conduct identifies the behavior that is required for all personnel of Contractor.

REQUIRED CONDUCT

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 Contractor's Personnel and any other person;
3. maintain a safe working environment including by:
 - a. ensuring that workplaces, machinery, equipment and processes 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. no women shall be subjected to sexual harassment at any workplace
7. not engage in any form of sexual harassment including unwelcome sexual advances, requests for sexual favors, and other unwanted verbal or physical conduct of a sexual nature with other Contractor's or Employer's Personnel;
8. not engage in Sexual Exploitation, which means any actual or attempted abuse of 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. In Bank financed projects, sexual exploitation occurs when access to or benefit from Bank financed Goods, Works, Consulting or Non-consulting services is used to extract sexual gain;
9. not engage in circumstances of any act of behavior of sexual harassment which amounts to sexual harassment viz. (i) implied or explicit promise of preferential treatment in her employment, (ii) implied or explicit threat of detrimental treatment in her employment, (iii) implied or explicit threat about her present or future employment status, (iv) interference with her work or creating an intimidating or offensive or hostile work environment for her, (v) humiliating treatment likely to affect her health or safety
10. not engage in Sexual Abuse, which means sexual activity with another person who does not consent. It is a violation of bodily integrity and sexual autonomy and is broader than

narrower conceptions of “rape”, especially because (a) it may be committed by other means than force or violence, and (b) it does not necessarily entail penetration.

11. not engage in any form of sexual activity with individuals under the age of 18, except in case of pre-existing marriage;
12. complete relevant training courses that will be provided related to the environmental and social aspects of the Contract, including on health and safety matters, and Sexual Exploitation, and Abuse (SEA);
13. report violations of this Code of Conduct; and
14. not retaliate against any person who reports violations of this Code of Conduct, whether to us or the Employer, or who makes use of the [Project Grievance [Redress] Mechanism].

ANNEXURE-XVI

Grievance Redressal Mechanism

ANNEXURE-XVI

Grievance Redressal Mechanism

1.0 Introduction

Grievance Redressal Mechanism (GRM) shall be established to receive, assess and facilitate the resolution of affected persons' concerns, objections, and grievances about the social and environmental performance at project level. The main aim of GRM is to provide a time-bound and transparent mechanism to voice, influence and resolve social and environmental concerns related to the project. This system has been purely designed for stakeholders such as aggrieved parties, project affected people, employees, labor, contractor, workers etc. The GRM is anchored on the five principles to guide in facilitating and resolving concerns and grievances:

- **Transparency:** The GRM encourages comments and feedback (negative and positive) to improve the project. The community must be aware of all complaints, grievances and problems reported, must be involved in their solution and must be kept informed on progress made in resolving grievances.
- **Socially Inclusive:** The whole community is given the opportunity to raise concerns and the right to be accorded a response. The GRM provides an accessible, inclusive, gender-sensitive and culturally appropriate platform for receiving and facilitating resolution of affected persons' grievances related to the project.
- **Simple and Accessible:** Procedures to file complaints and seek solutions are to be kept simple and easy to understand by the affected people, most specially the non-literate, and their communities.
- **Anonymity and Security:** To remain accessible, open and trusted, the GRM must ensure that the identities of those filing complaints are kept confidential. This encourages people to openly participate.
- **Institutional Outreach:** Through the GRM, the project can strengthen channels of communication and mechanisms for grievance redressed or solution at the community/project area level.

2.0 Grievances under the Project

2.1 The possible grievances of the community as envisaged, and which could be addressed through this project include: **Grievances of workers**

- The workers at the construction site may have grievances due to non-receipt of basic facilities, PPE related, non- Receipt of dues, work place discrimination, excessive work load etc
- Potential conflict between migrant workforce and local may take place

2.2 Grievances of Community

- Tree felling for site clearance.
- Inconveniences caused to community by construction activities like dust, water source contamination, noise, water logging, etc
- Community health and safety concerns
- Community residing nearby site or passers-by may have grievances related to non-disclosure of project information
- Public resistance for the project anticipating negative impacts of the project like tree felling for site clearance
- Accessibility issues of public
- Land demarcation issues.

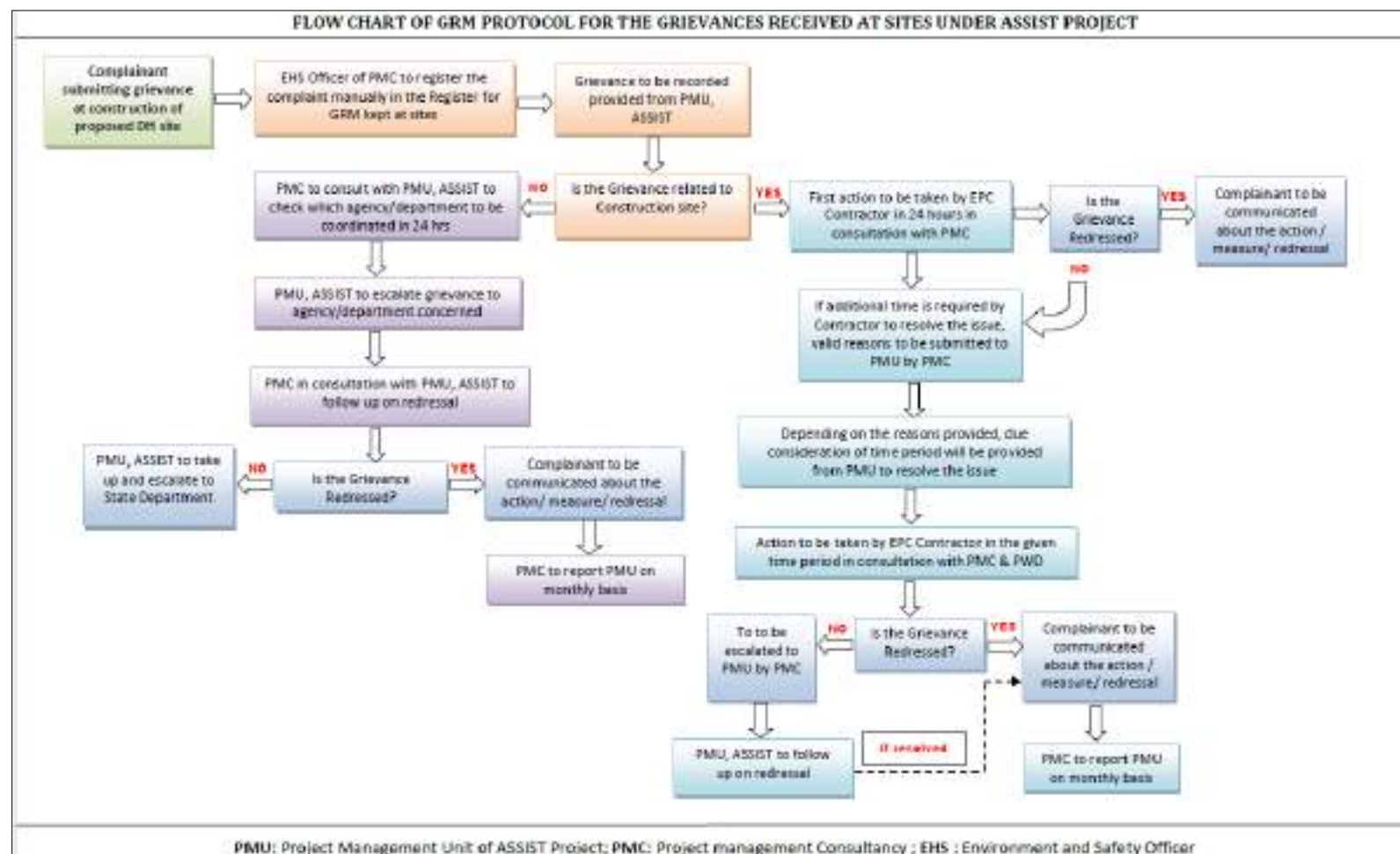
3.0 Functioning of GRM

All complaints and concerns will be addressed through a transparent, gender responsive, culturally appropriate process and will be readily available to the aggrieved party at no cost and without retribution. The following channels should be established to receive inquiries/comments and concerns /grievances:

- Toll free phone number
- Email, On-line form
- Regular post/mail
- Suggestion box/Walk-ins etc.

3.1 During Construction

The Contractor will be monitored by a Project Management Consultancy (PMC) and the Environment and Safety Officer of PMC will be responsible to register the grievances received from the community as well as workers of the site. The protocol for Grievance Redressal Management is shown with the help of the flow chart below:



4.0 Grievances Registration Format

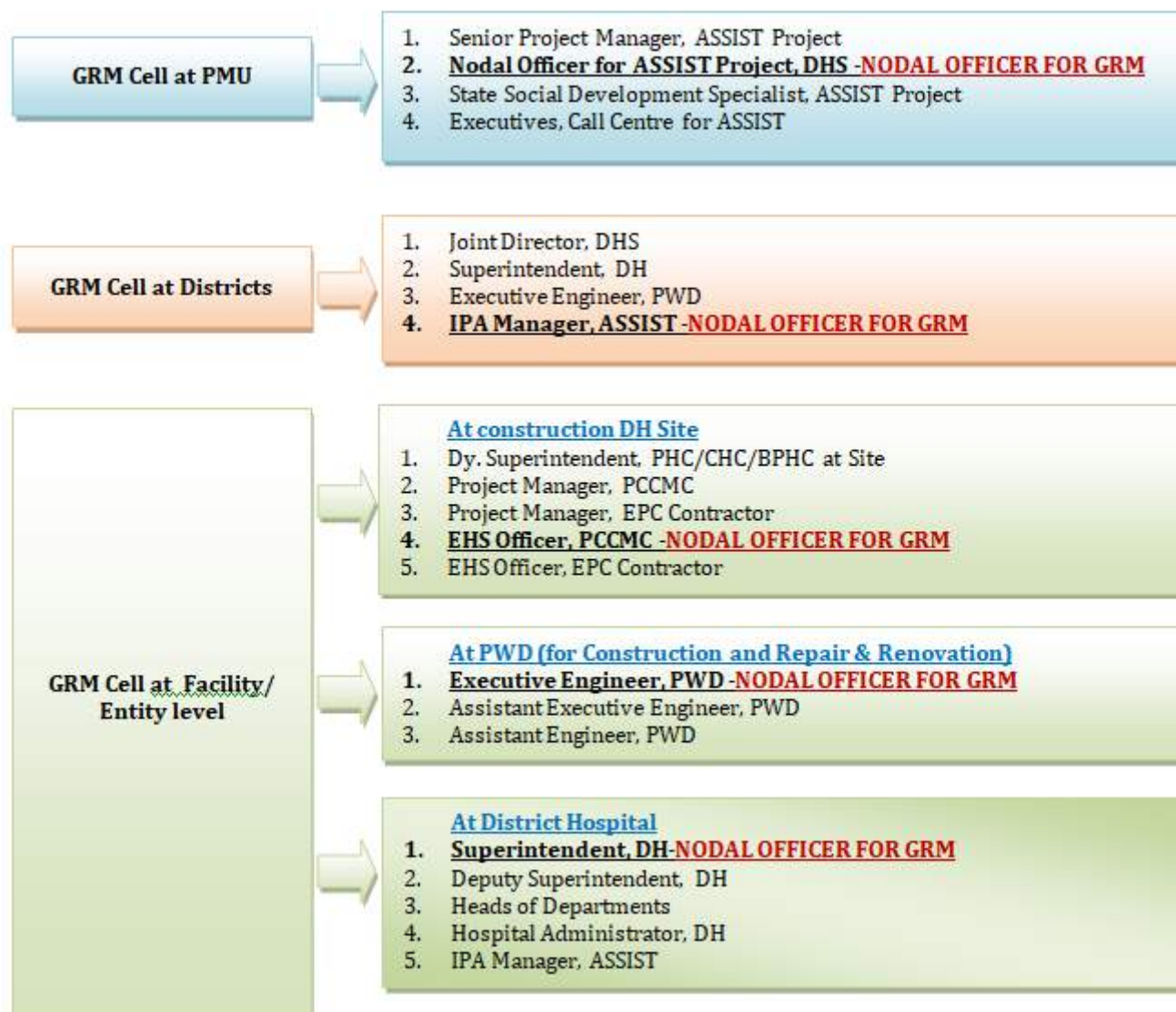
For registering complaints of Community

For registering complaints of Workers

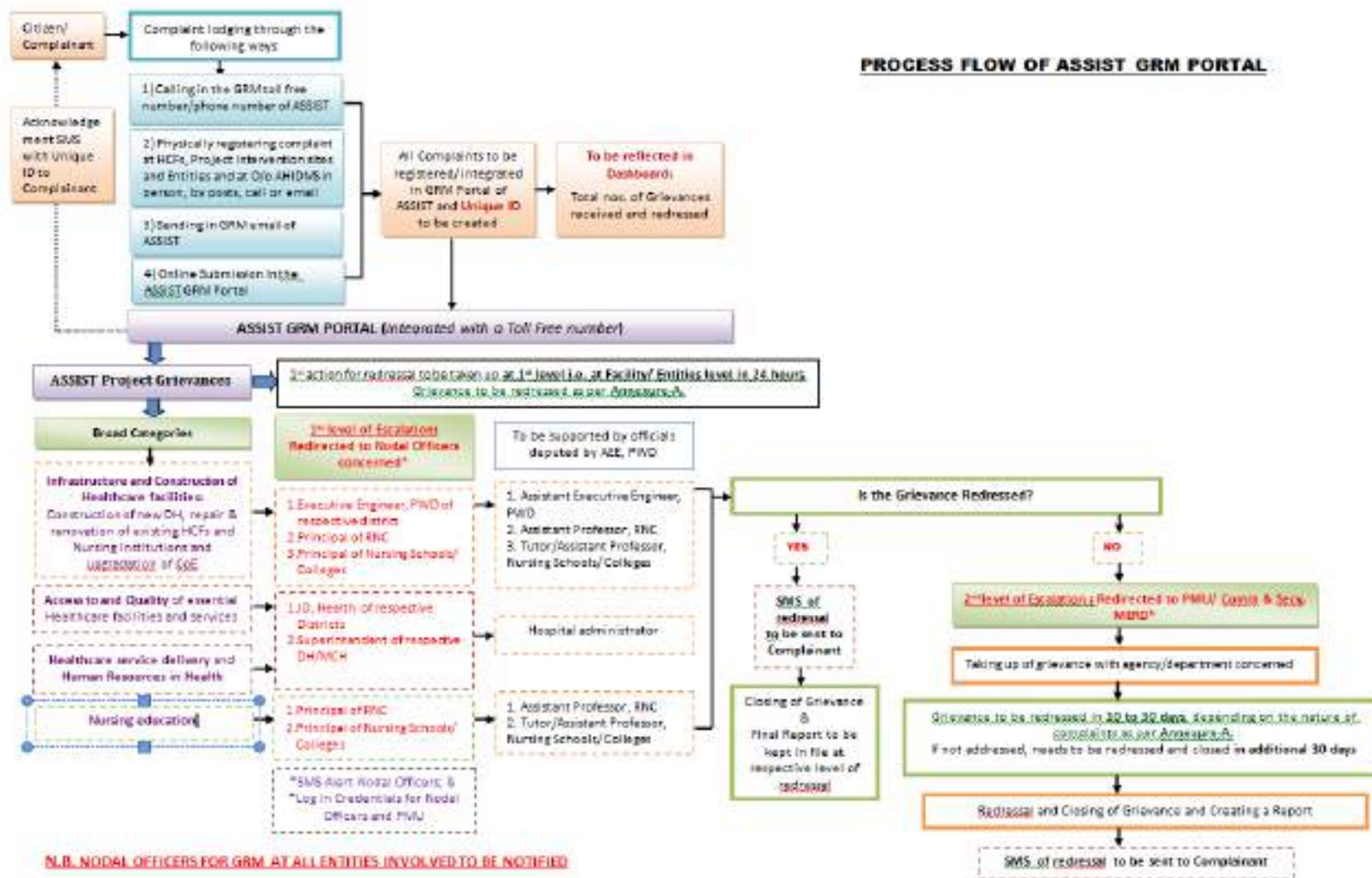
[illegible]

4.1 During Operation Period :

4.1.1 The Institutional Mechanism for GRM during Operation Period is shown with the help of the flow chart below:



4.1.2 The process flow of the Online GRM Portal during Operation Period which will be an comprehensive mechanism for the project is shown with the help of the flow chart below:



ANNEXURE-XVII
Monitoring Photographs

ANNEXURE XVII
Monitoring Photographs



(1) Project Site



(2) Narayanpur

Soil Monitoring Photographs



(1) Project Site



(2) Near ProjectSite (Residential)



(3) Buddhist Temple(Sensitive)



(4) LP School(Sensitive)



(5) Narayanpur (Residential)

Air Monitoring Photographs



(1) Project site



(2) Near Project Site (Residential)



(3) Buddhist Temple (Sensitive)



(4) LP School (Sensitive)



(5) Narayanpur (Residential)

Noise Monitoring Photographs



Project Site (GW-Tap Water)



L.P. School(GW-Tap Water)

Surface/Ground Water Monitoring Photographs

ANNEXURE-XVIII

Flood Data



Government of Assam
Assam State Disaster Management Authority
FLOOD REPORT



Flood Situation as on today i.e. 17th June, 2020 at 5:00 PM

PARTICULARS		Situation as on 17th June, 2020 (in last 24 Hours)					
Rivers flowing above Danger Level (as per CWC bulletin issued at 8 AM)		Brahmaputra at Neamatighat (Jorhat) & Jin Bhamli at NT Road Crossing (Sonitpur)					
No. of Districts Affected		02					
Name of Districts Affected		Dhemaji, Lakhimpur					
No. of Revenue Circles affected		02					
Names of Revenue Circles affected		Dhemaji	01	Dhemaji			
		Lakhimpur	01	Narayanpur			
		Total	02				
No. of Villages/ Localities affected		Dhemaji	17	17 (Dhemaji)			
		Lakhimpur	01	01 (Narayanpur)			
		Total	18				
Total Crop area affected (in Hect)		Dhemaji	850	850 (Dhemaji)			
		Lakhimpur	61	61 (Narayanpur)			
		Total	911				
Population affected		Dhemaji	4912	4912 (Dhemaji)			
		Lakhimpur	582	582 (Narayanpur)			
		Total	5,494				
Relief Camps/ Centres opened		Dist	Total	Relief Camp		Relief Distribution Centre	
		Dhemaji	05	02 (Dhemaji- 02)		03 (Dhemaji - 03)	
		Total	05	02		03	
Inmates in Relief Camps		Dist	Total	Revenue Circlewise		Male	Female
		Dhemaji	158	(Dhemaji - 158)		70	65
		Total	158			23	
Human Lives Lost (Dist. Wise)		Dist	-				
		Total	-				
Animals Affected		Dist		Big	Small	Poultry	
		Dhemaji		2173	1352		
		Total		2,173	1,352		
Animals Washed away		Dist		Big	Small	Poultry	
		Nil		-	-		
		Total		-	-		
Houses Damaged		Dist		Fully		Partially	
		Nil					
		Total					
Rescue Operation		Dist		Agency		Boat deployed	
		Dhemaji		NDRF		02	
		Total		NDRF		26	
Relief Distributed		Dist	Rice (in Q)	Dal (in Q)	Salt (in Q)	M. Oil (L)	Others
		Dhemaji	85.78	15.10	44.14	9.48	Candle - 10, Mosquito Coil - 5 pkts, Match Box - 3 pkts, Water Bottle - 950 ltrs, Soap - 158 pieces, Sanitizer - 5 Bottles (500 ml pkts)
		Total	85.78	15.10	44.14	9.48	
Infrastructure Damage	Embankment						
	Road	Dhemaji: • PWD Road- Jidhal Chariali to Tingharia Missing PWD Road was overtopped by flood water of River Jidhal as reported by DDMA. Cachar: Total 03 nos of roads damaged due to incessant rain as reported by DDMA.					
	Bridge/Culvert	Cachar: • Construction of retaining walls and protection works at Palarbond Bridge over Chiri On NH-53 to Lakhimpur via Tulengram road damage Due to incessant rain. • Construction of retaining walls and protection work of BR.No.1/1 over river chiri near Nehru College damage Due to incessant rain. • Construction of 6M Span slab Culvert on Dhupghat to Mazargram point via Sonitpur Nachgar (I) damage Due to incessant rain.					
	Other						
Urban Flood							
Animals Affected in National Parks & Wildlife Sanctuary							
Erosion							

- Morigaon: Only 109 Hect. Crop area affected in 9 villages under Morigaon R.C. as reported by DDMA.

Chief Executive Officer
 Assam State Disaster Management Authority
 Dispur, Guwahati-781001



Government of Assam
Assam State Disaster Management Authority
FLOOD REPORT



Flood Situation as on today i.e. 18th June, 2020 at 5:00 PM

PARTICULARS		Situation as on 18 th June, 2020 (in last 24 Hours)						
Rivers flowing above Danger Level (as per CWC bulletin issued at 8 AM)		Brahmaputra at Neamatighat (Jorhat) & Jia Bharali at NT Road Crossing (Sonitpur)						
No. of Districts Affected		02						
Name of Districts Affected		Dhemaji, Lakhimpur						
No. of Revenue Circles affected		03						
Names of Revenue Circles affected		Dhemaji	02	Dhemaji, Jonai				
		Lakhimpur	01	Narayanpur				
		Total	03					
No. of Villages/ Localities affected		Dhemaji	30	18 (Dhemaji), 12 (Jonai)				
		Lakhimpur	01	01 (Narayanpur)				
		Total	31					
Total Crop area affected (in Hect)		Dhemaji	1823	920 (Dhemaji), 903 (Jonai)				
		Lakhimpur	109	109 (Narayanpur)				
		Total	1,932					
Population affected		Dhemaji	7488	5305 (Dhemaji), 2183 (Jonai)				
		Lakhimpur	582	582 (Narayanpur)				
		Total	8,070					
Relief Camps/ Centres opened		Dist	Total	Relief Camp		Relief Distribution Centre		
		Dhemaji	05	02 (Dhemaji- 02)		03 (Dhemaji - 03)		
		Total	05	02		03		
Inmates in Relief Camps		Dist	Total	Revenue Circlewise		Male	Female	Children
		Dhemaji	158	(Dhemaji - 158)		70	65	23
		Total	158					
Human Lives Lost (Dist. Wise)		Dist	-					
		Total	-					
Animals Affected		Dist	Big		Small		Poultry	
		Dhemaji	2173		1352		578	
		Total	2,173		1,352		578	
Animals Washed away		Dist	Big		Small		Poultry	
		Nil	-		-		-	
		Total	-		-		-	
Houses Damaged		Dist	Fully			Partially		
		Nil	-			-		
		Total	-			-		
Rescue Operation		Dist	Agency		Boat deployed		Persons Evacuated	
		Nil	-		-		-	
		Total	-		-		-	
Relief Distributed		Dist	Rice (m Q)	Dal (m Q)	Salt (m Q)	M. Oil (L)	Others	
		Dhemaji	6.80	1.11	0.35	-	-	
		Total	6.80	1.11	0.35	-	-	
Infrastructure Damage	Embankment	Udalgori: Breach of Canal embankment of D2B1M at ch. 7500 m at village Gelagion and damaged of canal intel structure of about 7 to 10 m. as reported by DDMA.						
	Road	-						
	Bridge/Culvert	-						
	Other	-						
Urban Flood		-						
Animals Affected in National Parks & Wildlife Sanctuary		-						
Erosion		Sonitpur: Bharali at Garsingha Bihya Gaon is on the verge of being washed away due to ongoing crosion as reported by DDMA.						

- Morigaon: Only 131 Hect. Crop area affected in 12 villages under Morigaon R.C. as reported by DDMA.


 Chief Executive Officer
 Assam State Disaster Management Authority
 Dispur, Guwahati-06



Government of Assam
Assam State Disaster Management Authority
FLOOD REPORT



Flood Situation as on today i.e. 19th June, 2020 at 5:00 PM

PARTICULARS		Situation as on 19th June, 2020 (in last 24 Hours)					
Rivers flowing above Danger Level (as per CWC bulletin issued at 8 AM)		Brahmaputra at Ncamatighat (Jorhat); Dikhow at Sivsagar (Sivsagar); Disang at Nanglamuraghat (Sivsagar); Dhansiri(S) at Nimaligarh (Golaghat); Jia Bharali at NT Road Crossing (Sonitpur) & Beki at Road Bridge (Barpeta).					
No. of Districts Affected		05					
Name of Districts Affected		Dhemaji, Lakhimpur, Nalbari, Barpeta, Jorhat					
No. of Revenue Circles affected		06					
Names of Revenue Circles affected		Dhemaji	02	Dhemaji, Jonai			
		Lakhimpur	01	Narayanpur			
		Nalbari	01	Pachim Nalbari			
		Barpeta	01	Kalgachia			
		Jorhat	01	Teok			
		Total	06				
No. of Villages/ Localities affected		Dhemaji	26	14 (Dhemaji), 12 (Jonai)			
		Lakhimpur	01	01 (Narayanpur)			
		Nalbari	03	03 (Pachim Nalbari)			
		Barpeta	02	02 (Kalgachia)			
		Jorhat	06	06 (Teok)			
		Total	38				
Total Crop area affected (in Hect)		Dhemaji	1581	678 (Dhemaji), 903 (Jonai)			
		Lakhimpur	109	109 (Narayanpur)			
		Nalbari	14.5	14.5 (Pachim Nalbari)			
		Barpeta	20	20 (Kalgachia)			
		Jorhat	21	21 (Teok)			
		Total	1,745.50				
Population affected		Dhemaji	4743	2560 (Dhemaji), 2183 (Jonai)			
		Lakhimpur	582	582 (Narayanpur)			
		Nalbari	2150	2150 (Pachim Nalbari)			
		Barpeta	630	630 (Kalgachia)			
		Jorhat	1296	1296 (Teok)			
		Total	9,401				
Relief Camps/ Centres opened		Dist	Total	Relief Camp		Relief Distribution Centre	
		Dhemaji	01	01 (Dhemaji- 01)		Nil	
		Total	01	01		Nil	
Inmates in Relief Camps		Dist	Total	Revenue Circlewise		Male	Female
		Dhemaji	35	(Dhemaji - 35)		17	13
		Total	35			05	
Human Lives Lost (Dist. Wise)		Dist	-				
		Total	-				
Animals Affected		Dist	Big	Small	Poultry		
		Dhemaji	2173	1352	490		
		Lakhimpur	450	100	-		
		Total	2,623	1,452	490		
Animals Washed away		Dist	Big	Small	Poultry		
		Nil	-	-	-		
		Total	-	-	-		
Houses Damaged		Dist	Fully		Partially		
		Nil	-		-		
		Total	-		-		
Rescue Operation		Dist	Agency		Boat deployed		Persans Evacuated
		Nil	-		-		-
		Total	-		-		-
Relief Distributed		Dist	Rice (in Q)	Dal (in Q)	Salt (in Q)	M. Oil (L)	Others
		Nil	-	-	-	-	-
		Total	-	-	-	-	-
Infrastructure Damage	Embankment	Sivsagar: Damage/ Slum down of Dekhou left bank Embankment at Nazira R.C as reported by DDMA.					
	Road	-					
	Bridge/Culvert	Lakhimpur: One Bamboo Bridge Connecting to Kakoi Rajgarh Village washed away by Kakoi River due to ruin under Kodam R.C.					
	Other	Jorhat: Left side of Ringbandh of Pathinodi River is partially damaged at Tongani Gaon under Gakhirkhura Mouza, right side of Ringbandh of Puthinodi River is partially damaged in Chutia gaon under Holongapar mouza and right side of Ringbandh submerged of Modaijan River at Nauboiha Gaon under Teok R.C. as reported by DDMA.					
Urban Flood	-	-					
Animals Affected in National Parks & Wildlife Sanctuary	-	-					

Erosion	Biswanathi: Erosions going on at Ouguri area on R/B of river Sessa Under Gohpur R.C. as reported by DDMA. Baksa: Severe Erosion occurring at Bhalakmari and Ghilajar of Balti river under Tamulpur R.C. as reported by DDMA. Dibrugarh: Total 16 nos of population affected; 01 (one) relief camp opened with 16 inmates and erosion near spur no. 8 Mohanaghat, near Dibrugarh protection Dyke affected breach 50.0 M. under Dibrugarh East R.C.
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- **Morigaon:** Only 131 Hect. Crop area affected in 12 villages under Morigaon R.C. as reported by DDMA.


 Chief Executive Officer
 Assam State Disaster Management Authority
 Dispur, Guwahati-06

Assam Daily Flood Report as on 18-06-2022 at 4:00 PM			
Particulars	Situation as on 18-06-2022 (in last 24 hours)		
Rivers flowing above Danger Level (as per CWC bulletin issued at 8 AM)	Rivers flowing above danger level	Beki (Road Bridge), Manas (Nh Road Crossing), Pagladiya (Nt Road Crossing), Puthimari (Nh Road Crossing), Kopili (Dharamtul), Jia-Bharali (Nt Road Crossing), Brahmaputra (Dhubri; Tezpur; Neamatighat)	
	Rivers flowing above highest flood level	Kopili (Kampur)	
District Affected	No. of Districts Affected	Name of Flood Affected Districts	Name of Urban Flood Districts
	32	Bajali, Baksa, Barpeta, Biswanath, Bongaigaon, Cachar, Chirang, Darrang, Dhemaji, Dhubri, Dibrugarh, Dima-Hasao, Goalpara, Golaghat, Hojai, Kamrup, Kamrup (M), Karbi Anglong West, Karimganj, Kokrajhar, Lakhimpur, Majuli, Morigaon, Nagaon, Nalbari, Sivasagar, Sonitpur, South Salmara, Tamulpur, Tinsukia, Udalguri	Barpeta, Darrang, Goalpara, Hailakandi, Kamrup (M), Nalbari, Udalguri
No. Of Revenue Circles Affected	118		
Name Of Revenue Circles Affected	District	Total	Revenue Circle
	Bajali	2	Bajali, Sarupeta
	Baksa	5	Baska, Jalah, Baganpara, Barnagar RC part, Barama
	Barpeta	6	Baghbar, Kalgachia, Chenga, Barpeta, Barnagar, Sarthebari
	Biswanath	1	Halem
	Bongaigaon	5	Manikpur, Boitamari, Bongaigaon, Dangtol, Srijangram
	Cachar	5	Silchar, Katigorah, Udharbond, Lakhimpur, Sonai
	Chirang	3	Sidli, Bijni, Bengtal
	Darrang	4	Dalgaon, Patharighat, Mangaldoi, Sipajhar
	Dhemaji	4	Dhemaji, Gogamukh, Sissiborgaon, Jonai
	Dhubri	7	Dhubri, Gauripur, South Salmara Part, Bilasipara, Golakganj, Athani, Chapar
	Dibrugarh	3	Naharkatia, Chabua, Dibrugarh West
	Dima-Hasao	1	Haflong
	Goalpara	4	Matia, Balijana, Lakhimpur, Rongjuli
	Golaghat	1	Khumtai
	Hailakandi	1	Hailakandi
	Hojai	3	Lanka, Hojai, Doboka
	Kamrup	9	Rangia, Boko, Chaygaon, Kayan, Goroimari, Kamalpur, Palashbari, North Ghy, Hajo
	Kamrup (M)	3	Sonapur, Guwahati, Dispur
	Karbi Anglong West	1	Donkamokam
	Karimganj	5	Badarpur, Patherkandi, Karimganj, Nilambazar, RK Nagar
	Kokrajhar	5	Bhawraguri, Gossaiagaon, Dotma, Kokrajhar, Bagribari
	Lakhimpur	6	Subansiri, Bihpuria, Dhakuakhana, North Lakhimpur, Kadam, Nowboicha
	Majuli	2	Majuli, Ujani Majuli
	Morigaon	4	Bhuragaon, Mayong, Laharighat, Morigaon
	Nagaon	5	Kaliabor, Samaguri, Raha, Kampur, Nagaon
	Nalbari	7	Ghograpar, Tihu, Nalbari, Banekuchi, Barkhetri, Paschim Nalbari, Barbhag
	Sivasagar	2	Demow, Sivsagar
	Sonitpur	4	Thelamara, Chariduar, Dhekiajuli, Tezpur

	South Salmara	2	Mankachar, South Salmara					
	Tamulpur	2	Goreswar, Tamulpur					
	Tinsukia	1	Doomdooma					
	Udalguri	5	Khairabari, Udalguri, Mazbat, Kalaigaon, Harisinga					
	Total	118						
Villages Affected	District	Total	Revenue Circle					
	Bajali	173	(Bajali 95), (Sarupeta 78)					
	Baksa	67	(Baska 17), (Jalah 7), (Baganpara 7), (Barnagar RC part 20), (Barama 16)					
	Barpeta	584	(Baghbhar 121), (Kalgachia 99), (Chenga 50), (Barpeta 145), (Barnagar 34), (Sarthebari 135)					
	Biswanath	5	(Halem 5)					
	Bongaigaon	147	(Manikpur 72), (Boitamari 3), (Bongaigaon 4), (Dangtol 36), (Srijangram 32)					
	Cachar	90	(Silchar 11), (Katigorah 64), (Udharbond 4), (Lakhipur 5), (Sonai 6)					
	Chirang	29	(Sidli 5), (Bijni 17), (Bengtal 7)					
	Darrang	374	(Dalgaon 92), (Patharighat 59), (Mangaldoi 165), (Sipajhar 58)					
	Dhemaji	85	(Dhemaji 5), (Gogamukh 32), (Sissiborgaon 14), (Jonai 34)					
	Dhubri	439	(Dhubri 49), (Gauripur 44), (South Salmara Part 83), (Bilasipara 201), (Golakganj 8), (Athani 51), (Chapar 3)					
	Dibrugarh	7	(Naharkatia 2), (Chabua 4), (Dibrugarh West 1)					
	Dima-Hasao	11	(Haflong 11)					
	Goalpara	284	(Matia 77), (Balijana 99), (Lakhipur 94), (Rongjuli 14)					
	Golaghat	4	(Khumtai 4)					
	Hojai	97	(Lanka 15), (Hojai 58), (Doboka 24)					
	Kamrup	283	(Rangia 78), (Boko 17), (Chaygaon 5), (Kayan 28), (Goroimari 15), (Kamalpur 76), (Palashbari 3), (North Ghy 23), (Hajo 38)					
	Kamrup (M)	32	(Chandrapur 8), (Sonapur 5), (Guwahati 7), (Azara 3), (Dispur 9)					
	Karbi Anglong West	10	(Donkamokam 10)					
	Karimganj	152	(Badarpur 1), (Patherkandi 10), (Karimganj 3), (Nilambazar 60), (RK Nagar 78)					
	Kokrajhar	178	(Bhawraguri 27), (Gossaigaon 5), (Dotma 34), (Kokrajhar 6), (Bagribari 106)					
	Lakhimpur	166	(Subansiri 10), (Bihpuria 31), (Dhakuakhana 6), (Narayanpur 10), (North Lakhimpur 53), (Kadam 12), (Nowboicha 44)					
	Majuli	41	(Majuli 32), (Ujani Majuli 9)					
	Morigaon	108	(Bhuragaon 11), (Mayong 74), (Laharighat 2), (Morigaon 21)					
	Nagaon	150	(Kaliabor 2), (Samaguri 5), (Raha 29), (Kampur 102), (Nagaon 12)					
	Nalbari	364	(Ghograpar 71), (Tihu 26), (Nalbari 71), (Banekuchi 19), (Barkhetri 115), (Paschim Nalbari 25), (Barbhag 37)					
	Sivasagar	25	(Demow 6), (Sivsagar 19)					
	Sonitpur	118	(Thelamara 33), (Chariduar 30), (Dhekiajuli 26), (Tezpur 29)					
	South Salmara	55	(Mankachar 37), (South Salmara 18)					
	Tamulpur	46	(Goreswar 29), (Tamulpur 17)					
	Tinsukia	18	(Doomdooma 18)					
	Udalguri	149	(Khairabari 23), (Udalguri 38), (Mazbat 25), (Kalaigaon 49), (Harisinga 14)					
	Total	4291						
Population And Crop Area Affected	District	Male	Female	Children	Total Population	Population Details	Crop Area (in Hect.)	Crop Area Details
	Bajali	178500	139200	34850	352550	(Bajali 160000), (Sarupeta 192550)	520.00	(Bajali 0.00), (Sarupeta 520.00)
	Baksa	14001	11151	7658	32810	(Barnagar RC part 22064), (Baska 1140), (Jalah 3317), (Baganpara 4855), (Barama 1434)	748.07	(Barnagar RC part 498.00), (Baska 35.07), (Jalah 147.00), (Baganpara 43.00), (Barama 25.00)
	Barpeta	306120	267810	157114	731044	(Kalgachia 105700), (Chenga 121150), (Barpeta 105228), (Barnagar 9865), (	13771.33	(Kalgachia 1822.50), (Chenga 1256.00), (Barpeta 6230.00), (Barnagar 1757.50), (

						Sarthebari 335837), (Baghbar 53264)		Sarthebari 1860.33), (Baghbar 845.00)
	Biswanath	851	693	547	2091	(Halem 2091)	38.50	(Halem 38.50)
	Bongaigaon	45834	40938	26140	112912	(Manikpur 103609), (Bongaigaon 0), (Dangtol 0), (Srijangram 8718), (Boitamari 585)	2413.50	(Manikpur 1946.00), (Bongaigaon 196.50), (Dangtol 271.00), (Srijangram 0.00), (Boitamari 0.00)
	Cachar	9805	8759	4343	22907	(Silchar 4570), (Katigorah 17871), (Udharbond 96), (Lakhimpur 80), (Sonai 290)	0.00	(Silchar 0.00), (Katigorah 0.00), (Udharbond 0.00), (Lakhimpur 0.00), (Sonai 0.00)
	Chirang	5294	5328	4150	14772	(Bijni 9082), (Sidli 2808), (Bengtal 2882)	2871.50	(Bijni 2871.50), (Sidli 0.00), (Bengtal 0.00)
	Darrang	145525	126716	81971	354212	(Dalgaon 122440), (Patharighat 75294), (Mangaldoi 120007), (Sipajhar 36471)	7463.70	(Dalgaon 3795.50), (Patharighat 1181.20), (Mangaldoi 1572.00), (Sipajhar 915.00)
	Dhemaji	13454	12822	6558	32834	(Gogamukh 17117), (Sissiborgaon 7721), (Jonai 4462), (Dhemaji 3534)	4521.50	(Gogamukh 510.00), (Sissiborgaon 405.00), (Jonai 3565.50), (Dhemaji 41.00)
	Dhubri	7805	7970	4564	20339	(Dhubri 0), (Gauripur 0), (South Salmara Part 12655), (Bilasipara 6545), (Golakganj 66), (Athani 503), (Chapar 570)	4870.70	(Dhubri 478.00), (Gauripur 265.30), (South Salmara Part 2069.00), (Bilasipara 0.00), (Golakganj 0.00), (Athani 1040.20), (Chapar 1018.20)
	Dibrugarh	2883	2213	1593	6689	(Chabua 6667), (Dibrugarh West 22), (Naharkatia 0)	6.14	(Chabua 5.70), (Dibrugarh West 0.00), (Naharkatia 0.44)
	Goalpara	106795	78708	35472	220975	(Balijana 93322), (Lakhimpur 122317), (Matia 5336), (Rongjuli 0)	1400.50	(Balijana 762.50), (Lakhimpur 0.00), (Matia 614.00), (Rongjuli 24.00)
	Golaghat	0	0	0	0	(Khumtai 0)	26.00	(Khumtai 26.00)
	Hojai	63889	47920	13526	125335	(Lanka 12494), (Hojai 88148), (Doboka 24693)	3344.00	(Lanka 791.00), (Hojai 2227.00), (Doboka 326.00)
	Kamrup	87703	73221	57229	218153	(Rangia 50242), (Chaygaon 0), (Kayan 38122), (Boko 0), (Goroimari 0), (Kamalpur 26362), (Palashbari 0), (North Ghy 463), (Hajo 102964)	3737.85	(Rangia 594.00), (Chaygaon 144.00), (Kayan 358.00), (Boko 10.45), (Goroimari 165.50), (Kamalpur 492.90), (Palashbari 198.00), (North Ghy 58.00), (Hajo 1717.00)
	Kamrup (M)	8110	6095	358	14563	(Chandrapur 0), (Sonapur 0), (Guwahati 863), (Azara 0), (Dispur 13700)	219.00	(Chandrapur 0.00), (Sonapur 219.00), (Guwahati 0.00), (Azara 0.00), (Dispur 0.00)
	Karbi Anglong West	5285	5286	5736	16307	(Donkamokam 16307)	0.00	(Donkamokam 0.00)
	Karimganj	27491	18362	6401	52254	(RK Nagar 30425), (Badarpur 50), (Patherkandi 1335), (Karimganj 3151), (Nilambazar 17293)	200.00	(RK Nagar 200.00), (Badarpur 0.00), (Patherkandi 0.00), (Karimganj 0.00), (Nilambazar 0.00)
	Kokrajhar	24771	20763	9158	54692	(Bagribari 22829), (	717.79	(Bagribari 284.49), (

						Bhawraguri 5078), (Gossaigaon 987), (Dotma 23705), (Kokrajhar 2093)		Bhawraguri 101.80), (Gossaigaon 0.00), (Dotma 331.50), (Kokrajhar 0.00)
	Lakhimpur	54316	36830	22688	113834	(Narayanpur 0), (North Lakhimpur 51619), (Nowboicha 37898), (Subansiri 5257), (Bihpuria 17271), (Dhakuakhana 629), (Kadam 1160)	1232.95	(Narayanpur 0.00), (North Lakhimpur 161.00), (Nowboicha 313.30), (Subansiri 317.00), (Bihpuria 339.80), (Dhakuakhana 30.00), (Kadam 71.85)
	Majuli	0	0	0	0	(Majuli 0), (Ujani Majuli 0)	631.37	(Majuli 539.02), (Ujani Majuli 92.35)
	Morigaon	0	0	0	0	(Bhuragaon 0), (Mayong 0), (Morigaon 0), (Laharighat 0)	1707.00	(Bhuragaon 311.00), (Mayong 750.00), (Morigaon 545.00), (Laharighat 101.00)
	Nagaon	84443	75599	81149	241191	(Samaguri 380), (Raha 33863), (Kampur 205026), (Nagaon 1548), (Kaliabor 374)	5174.74	(Samaguri 88.00), (Raha 273.74), (Kampur 4730.00), (Nagaon 56.00), (Kaliabor 27.00)
	Nalbari	70124	60509	34773	165406	(Ghograpar 41171), (Tihu 14470), (Nalbari 12500), (Banekuchi 43820), (Paschim Nalbari 31329), (Barbhag 11500), (Barkhetri 10616)	6531.30	(Ghograpar 606.00), (Tihu 367.00), (Nalbari 338.10), (Banekuchi 165.00), (Paschim Nalbari 554.00), (Barbhag 83.50), (Barkhetri 4417.70)
	Sivasagar	46	51	21	118	(Sivsagar 118), (Demow 0)	148.50	(Sivsagar 80.00), (Demow 68.50)
	Sonitpur	23915	21389	24639	69943	(Thelamara 4954), (Chariduar 57261), (Dhekiajuli 7365), (Tezpur 363)	2773.80	(Thelamara 683.00), (Chariduar 435.00), (Dhekiajuli 1465.10), (Tezpur 190.70)
	South Salmara	2823	2689	1332	6844	(Mankachar 43), (South Salmara 6801)	405.00	(Mankachar 405.00), (South Salmara 0.00)
	Tamulpur	12329	10406	4230	26965	(Goreswar 20955), (Tamulpur 6010)	220.00	(Goreswar 0.00), (Tamulpur 220.00)
	Tinsukia	4455	3682	2641	10778	(Doomdooma 10778)	302.88	(Doomdooma 302.88)
	Udalguri	36452	25393	17399	79244	(Khairabari 5332), (Udalguri 11035), (Mazbat 9525), (Kalaigaon 49671), (Harisinga 3681)	458.20	(Khairabari 0.00), (Udalguri 0.00), (Mazbat 0.00), (Kalaigaon 458.20), (Harisinga 0.00)
	Total	1343019	1110503	646240	3099762		66455.82	
Relief Camps / Centres Opened	District	Total	Relief Camp			Relief Distribution Centres		
	Bajali	43	42(Bajali 33, Sarupeta 9)			1(Bajali 0, Sarupeta 1)		
	Baksa	17	11(Baska 6, Baganpara 1, Barama 4, Jalah 0)			6(Baska 0, Baganpara 1, Barama 1, Jalah 4)		
	Barpeta	63	57(Chenga 18, Barpeta 33, Sarthebari 6)			6(Chenga 3, Barpeta 0, Sarthebari 3)		
	Bongaigaon	29	24(Manikpur 3, Boitamari 3, Srijangram 18)			5(Manikpur 5, Boitamari 0, Srijangram 0)		
	Cachar	4	3(Silchar 2, Katigorah 1)			1(Silchar 1, Katigorah 0)		
	Chirang	20	13(Bijni 12, Bengtal 1, Sidli 0)			7(Bijni 4, Bengtal 0, Sidli 3)		
	Darrang	43	16(Dalgaon 1, Patharighat 3, Mangaldoi 9, Sipajhar 3)			27(Dalgaon 20, Patharighat 3, Mangaldoi 0, Sipajhar 4)		
	Dhemaji	23	0(Dhemaji 0, Gogamukh 0, Sissiborgaon 0, Jonai 0)			23(Dhemaji 2, Gogamukh 13, Sissiborgaon 4, Jonai 4)		
	Dhubri	42	42(Bilasipara 33, Golakganj 1, Athani 4, Chapar 4)			0(Bilasipara 0, Golakganj 0, Athani 0, Chapar 0)		
	Dima-	26	25(Haflong 25)			1(Haflong 1)		

Assam Daily Flood Report as on 14-06-2023 at 4:00 PM										
Particulars	Situation as on 14-06-2023 (in last 24 hours)									
Rivers flowing above Danger Level (as per CWC bulletin issued at 8 AM)	Rivers flowing above danger level						Nil			
	Rivers flowing above highest flood level						Nil			
District/Sub-division Affected	No. of Districts/Sub-divisions* Affected	Name of Flood Affected Districts/Sub-divisions*				Name of Urban Flood Districts/Sub-divisions*				
	4	Dhemaji, Lakhimpur				Cachar, Kamrup (M)				
No. Of Revenue Circles Affected	5									
Name Of Revenue Circles Affected	District/Sub-division*	Total	Revenue Circle							
	Cachar	1	Silchar							
	Dhemaji	1	Dhemaji							
	Kamrup (M)	1	Dispur							
	Lakhimpur	2	Narayanpur, Nowboicha							
	Total	5								
Villages Affected	District/Sub-division*	Total	Revenue Circle							
	Dhemaji	2	(Dhemaji 2)							
	Lakhimpur	17	(Narayanpur 5), (Nowboicha 12)							
	Total	19								
Population And Crop Area Affected	District/Sub-division*	Male	Female	Children	Total Population	Population Details	Crop Area (in Hect.)	Crop Area Details		
	Dhemaji	66	61	30	157	(Dhemaji 157)	9.00	(Dhemaji 9.00)		
	Lakhimpur	9698	8622	2448	20768	(Narayanpur 0), (Nowboicha 20768)	4.50	(Narayanpur 4.50), (Nowboicha 0.00)		
	Total	9764	8683	2478	20925		13.50			
Relief Camps / Centres Opened	Nil									
Inmates In Relief Camps	Nil									
Human Lives Lost - Confirmed	Nil									
Human Lives Lost Confirmed - Death Type	Nil									
Human Lives Lost - Missing	Nil									
Human Lives Lost Missing - Type	Nil									
Animals Affected	District/Sub-division*	Total	Big	Small	Poultry					
	Dhemaji	54	17	24	13					
	Lakhimpur	1733	1373	360	0					
	Total	1787	1390	384	13					
Animals Washed Away	Nil									
Houses Damaged	Nil									
Rescue Operation	District/Sub-division*	Agency			Boats Deployed	Person Evacuated By Boats	Animal Evacuated By Boats	Helicopters Deployed	Person Evacuated By Helicopters	Medical Team Deployed
	Lakhimpur	SDRF			2	2	0	0	0	0
	Total				2	2	0	0	0	0
Relief	Nil									

Distributed			
Relief Distributed Others	Nil		
Infrastructure Damaged - Embankment Breached	District/Sub-division*	Number	Details
	Lakhimpur	2	Nowboicha - Breached occurred at Singra River RB Embankment Chamua Gaon Breached occurred at Singra River Embankment (CH:1100 M of Chamuagaon area) for a length of 40 Mtr. On 14.06.2023 at 12:30 PM due to sudden slump down, heavy thrust and bank migration. Report received from water Resources Dept. (Long - 17.156999, Lat - 94.006159, Dept - Water Resource Deptt.), Singra River Side Bund Philbari Basti Singra River side bund breached at Fulbari Basti at around 60 Mtr. On 14.06.2023. Report received from Nowboicha Block Development Office (Long - 0.000000, Lat - 0.000000, Dept - P&RD)
	Total	2	
Infrastructure Damaged - Embankment Affected	District/Sub-division*	Number	Details
	Biswanath	3	Gohpur - Gupsarguri marginal embankment Mild erosion observed at R/Bank of river Sessa on 14/06/23 of length 120 mtr (Long - 93.716944, Lat - 26.979166, Dept - --Select Department--), Baligaon marginal embankment Mild erosion is observed on R/Bank of river sessa of Length 100 mtr (Long - 93.712256, Lat - 26.989844, Dept - Water Resource Deptt.), Mild erosion observed at ouguri area On R/Bank of River Sessa of length 30 mtr (Long - 93.737047, Lat - 26.952548, Dept - Water Resource Deptt.)
	Darrang	1	Mangaldoi - Noanadi RB extension Embankment. Udmari Village Due to rise of water level overtopping at various locations took place at the embankment. Dated 11/06/2023. (Long - 91.983382, Lat - 26.549430, Dept - Water Resource Deptt.)
	Dhemaji	1	Gogamukh - Na-Nadi Right Bank Embankment from NH-15 to Lakhpathar From Ch. 0m to 2235 m Due to incessant rainfall and rise in water level, river side slope has been Damaged by slump down and erosion at Na-Nadi Right Bank Embankment from NH-15 to Lakhpathar (Water Resource Deptt. embankment), Length-2235m approx, Dated: 14/06/2023 (Long - 94.380960, Lat - 27.415049, Dept - Water Resource Deptt.)
Infrastructure Damaged - Road	District/Sub-division*	Number	Details
	Dhemaji	2	Dhemaji - PWD Deptt. Road from Jiadhal chariali to Jiadhal college road Road from Jiadhal chariali to Jiadhal college road Today on 14/06/2023, Road Submergence occurred on Road from Jiadhal Chariali to Jiadhal Collage (Length-45m) (Long - 94.512166, Lat - 2.438776, Dept - PWD (Roads)), NH-15 Road near Jiadhal Chariali NH-15 Road near Jiadhal Chariali (Bhajugaon) Today on 14/06/2023, Road submergence occurred at KM-404 of NH-15(Ch.403.500 to km 403.700) total length 200m. (Long - 94.506993, Lat - 27.433456, Dept - PWD (NH Roads))
	Dima-Hasao	2	Haflong - NH-24 Near Rekho Village Date:14-06-2023 (Long - 0.000000, Lat - 0.000000, Dept - PWD (NH Roads)), Tlhanghoi Market Road (Kutch Road) In Between Tlhanghoi and Harangajao Date:14-06-2023 (Long - 0.000000, Lat - 0.000000, Dept - PWD (Roads))
	Lakhimpur	2	Nowboicha - Dolohat to Laluk Kachajuli PWD Road Dighpukhuri Erosion and over topped occurred at Dolohat Tiniali to Laluk Kachajuli PWD Road at CH:2100 M to 2700 M on 14.06.2023. Report received from PWD (Roads) (Long - 27.177800, Lat - 93.983400, Dept - PWD (Roads)), NH-15 to Mohghuli Barchala Road Solmorla Road from NH-15 to Mohghuli Borchala road is Submerged from Ch. 1600m to Ch. 3050.00m on 14.06.2023. Report received from PWD (Roads) (Long - 27.150300, Lat - 94.003100, Dept - PWD (Roads))
Infrastructure Damaged - Bridge	District/Sub-division*	Number	Details
	Dhemaji	1	Dhemaji - PWD Deptt. bridge connecting Jiadhal Hechulipam to Dighalgarah College road. The bridge connecting Jiadhal Hechulipam to Dighalgarah College road. Today on 14/06/2023, The bamboo footbridge connecting Jiadhal Hechulipam to Dighalgarah College road washed away at about 2:00 PM.(Lenght-65.00 m) (Long - 94.501351, Lat - 27.440190, Dept - PWD (Roads))
	Total	1	
Infrastructure Damaged - Wildlife	Nil		
Infrastructure Damaged - Others	District/Sub-division*	Other Details	
	Dibrugarh	Chabua - Anganwadi Centres Affected DODHIA TENGABARI AWC AFFECTED AS PER INFORMATION RECEIVED FROM SOCIAL WELFARE DEPT. ON 14/06/2023 Coordinates- Lat 27,610638 Long 95.237251	
	Lakhimpur	Bihpuria - Culvert Approach Road Damaged Wing wall of RCC Culvert broken at Santipur Majgaon Tiniali under Karunabari Development Block on 14th June 2023, Agri Bundh Damaged Agri Bundh at Gabharu river measuring 25 meters (approx) breached and about 55 meters (approx) eroded on 14th June 2023 under Karunabari Development Block , Culvert Approach Road Damaged RCC Culvert damaged including approach 10 meters at Denka Basti on 14th June 2023 under Karunabari Development Block , Kadam - Bamboo Foot Bridge Bamboo bridge connecting from NH-15 Seajuli Road to Kadam Bagan Gaon partially damaged due to increasing water level of the River Kakoi, Dated on 14/06/2023, Reported By Circle Officer, North Lakhimpur - Power Dept. Conductors Conductor 38.9 KM on Date 13-06-2023, Power Dept. Poles PSC 8.5 mtr 16 nos and PSC 7.5 mtr 36 nos on Date 13-06-2023, Power Dept. Transformers Transformer 2 nos on Date 13-06-2023	
Erosion	District/Sub-division*	Details	

	Biswanath	Naduar RC part - Kalakati Dated 14/06/2023, As per report submitted by Biswanath W.R. Sub-Division, active bank erosion is observed at Kalakati area in between 6th to 7th km of Biswanath- Panpur Dyke of river Brahmaputra. Lat 26.67441008 Long 93.09784163 0 (Long - 93.097955, Lat - 26.674689), Biswanath - 4 No. Kumalia (Forciati) continuous active bank erosion is observed at Forciati area in between Ch. 3rd to 4th Km of Biswanath-Panpur and 6th to 7th Km of Solmari Kalakati area of Biswanath - Panpur Dyke of river Brahmaputra. 0 (Long - 93.128236, Lat - 26.685182), Halem - Paken area , Hatijan 1) Mild erosion is observed by the river Brahmaputra at Paken area of B/Dyke from Jammu Guri to Kharoi outfall. Length-10.00m, : reported on 14/06/2023 2) Approx. (0.04 hac) of land under Hatijan village of Kalangpur Mouza eroded by the river Brahmaputra on 14/06/2023 as per concerned Lot Mandal report. 0 (Long - 93.627646, Lat - 26.800760), Gohpur - Erosion is observed at Dakhin Deonabari R/Bank embankment of river Solengi. of length 20 mtr on 14/06/23 0 (Long - 93.642885, Lat - 26.910851)
	Golaghat	Dergaon - Bhekeli & Charai Chapori area Bank erosion is going on at Bhekeli and Charai Chapori area on the left bank of river Brahmaputra approximately 300-400 M on dated 13-06-2023. 0 (Long - 93.919131, Lat - 26.761075)
	Lakhimpur	Kadam - NH15 to Kadam Gujihola Road Connecting road from NH15 to Kadam Gujihola eroded around 2 Km due to the increasing water level of the river Kakoi on 14/06/2023 reported by the concerned Lm 0 (Long - 0.000000, Lat - 0.000000), North Lakhimpur - No 3 Na Ali Kaibartta and Na Ali N.C. Bank migration is severe at just downstream of newly completed works at Ghanchari by Subansiri River on date 13-06-2023 report received from North Lakhimpur W.R. Division on . 4 Nos of family shifted their house to another location. 36 (Long - 27620.030000, Lat - 94913.840000)
Landslide	District/Sub-division*	Details
	Dima-Hasao	Haflong - 1.Choto Laisong 2. Laisong Bazar 1. Under Assessment Long- 93.301934 & Lat - 25.207814 approx -5mtr 2. Under Assessment Long- 93.30223 & Lat - 25.208429 dated 14/06/2.23 approx -7mtr 4 (Long - 0.000000, Lat - 0.000000)
Urban Flood	District/Sub-division*	Details
	Cachar	Silchar - National Highway, Link Road, Ambicapatty, N.S. AVENUE, Sonai Road, Flash Flood due to heavy rain fall on dated 14.06.2023, As reported by C.O Silchar Sadar Revenue Circle. 0 (Long - 0.000000, Lat - 0.000000)
	Kamrup (M)	Dispur - hatigaon, sijubari, wireless, baghorbari, rukmini gaon, sarumotoria, kalitakuchi water logging due to hevay rain dated -14/06/2023 0 (Long - 0.000000, Lat - 0.000000)
*Bajali, Biswanath, Hojai and Tamulpur are sub-divisions (Independent)		

Assam Daily Flood Report as on 17-06-2023 at 4:00 PM								
Particulars	Situation as on 17-06-2023 (in last 24 hours)							
Rivers flowing above Danger Level (as per CWC bulletin issued at 8 AM)	Rivers flowing above danger level					Puthimari (Nh Road Crossing), Kopili (Kampur), Brahmaputra (Neamatighat)		
	Rivers flowing above highest flood level					Nil		
District/Sub-division Affected	No. of Districts/Sub-divisions* Affected	Name of Flood Affected Districts/Sub-divisions*				Name of Urban Flood Districts/Sub-divisions*		
	13	Biswanath, Darrang, Dhemaji, Dibrugarh, Hojai, Lakhimpur, Nagaon, Sonitpur, Tinsukia, Udalguri				Cachar, Kamrup (M), Nalbari		
No. Of Revenue Circles Affected	23							
Name Of Revenue Circles Affected	District/Sub-division*	Total	Revenue Circle					
	Biswanath	2	Gohpur, Halem					
	Cachar	1	Silchar					
	Darrang	2	Mangaldoi, Dalgaon					
	Dhemaji	1	Dhemaji					
	Dibrugarh	2	Chabua, Dibrugarh West					
	Hojai	3	Doboka, Lanka, Hojai					
	Kamrup (M)	2	Azara, Dispur					
	Lakhimpur	2	Nowboicha, Narayanpur					
	Nagaon	1	Raha					
	Nalbari	1	Nalbari					
	Sonitpur	3	Dhekiajuli, Tezpur, Chariduar					
	Tinsukia	1	Tinsukia					
	Udalguri	2	Harisinga, Kalaigaon					
	Total	23						
Villages Affected	District/Sub-division*	Total	Revenue Circle					
	Biswanath	28	(Gohpur 5), (Halem 23)					
	Darrang	19	(Mangaldoi 2), (Dalgaon 17)					
	Dhemaji	4	(Dhemaji 4)					
	Dibrugarh	7	(Chabua 1), (Dibrugarh West 6)					
	Hojai	17	(Doboka 3), (Lanka 3), (Hojai 11)					
	Lakhimpur	24	(Nowboicha 13), (Narayanpur 11)					
	Nagaon	9	(Raha 9)					
	Sonitpur	24	(Dhekiajuli 1), (Tezpur 14), (Chariduar 9)					
	Tinsukia	3	(Tinsukia 3)					
	Udalguri	11	(Harisinga 3), (Kalaigaon 8)					
	Total	146						
Population And Crop Area Affected	District/Sub-division*	Male	Female	Children	Total Population	Population Details	Crop Area (in Hect.)	Crop Area Details
	Biswanath	1652	1366	613	3631	(Gohpur 1400), (Halem 2231)	40.00	(Gohpur 23.50), (Halem 16.50)
	Darrang	432	362	277	1071	(Mangaldoi 178), (Dalgaon 893)	70.00	(Mangaldoi 0.00), (Dalgaon 70.00)
	Dhemaji	156	152	52	360	(Dhemaji 360)	15.00	(Dhemaji 15.00)
	Dibrugarh	1567	1240	1050	3857	(Chabua 3857), (	170.50	(Chabua 116.50), (

						Dibrugarh West 0)			Dibrugarh West 54.00)	
	Hojai	0	0	0	0	(Doboka 0), (Hojai 0), (Lanka 0)		322.75	(Doboka 37.00), (Hojai 260.19), (Lanka 25.56)	
	Lakhimpur	12221	12094	960	25275	(Nowboicha 25097), (Narayanpur 178)		29.63	(Nowboicha 0.00), (Narayanpur 29.63)	
	Nagaon	0	0	0	0	(Raha 0)		490.87	(Raha 490.87)	
	Sonitpur	29	23	0	52	(Dhekiajuli 52), (Chariduar 0), (Tezpur 0)		24.90	(Dhekiajuli 0.00), (Chariduar 15.00), (Tezpur 9.90)	
	Tinsukia	985	848	833	2666	(Tinsukia 2666)		238.00	(Tinsukia 238.00)	
	Udalguri	312	228	83	623	(Harisinga 365), (Kalaigaon 258)		8.00	(Harisinga 0.00), (Kalaigaon 8.00)	
	Total	17354	16313	3868	37535			1409.65		
Relief Camps / Centres Opened	District/Sub-division*	Total	Relief Camp				Relief Distribution Centres			
	Biswanath	4	0(Gohpur 0, Halem 0)				4(Gohpur 2, Halem 2)			
	Dibrugarh	1	0(Chabua 0)				1(Chabua 1)			
	Lakhimpur	10	0(Nowboicha 0)				10(Nowboicha 10)			
	Tinsukia	1	0(Tinsukia 0)				1(Tinsukia 1)			
	Udalguri	3	2(Kalaigaon 2)				1(Kalaigaon 1)			
	Total	19	2				17			
Inmates In Relief Camps	District/Sub-division*	Total	Revenue Circlewise			Male	Female	Children	Pregnant / Lactating Mother	Person with Disability
	Udalguri	9	(Harisinga 0), (Kalaigaon 9)			4	4	0	1	0
	Total	9				4	4	0	1	0
Human Lives Lost - Confirmed	District/Sub-division*	Total	Male	Female	Children	Revenue Circlewise				
	Kamrup (M)	1	1	0	0	(Azara 0), (Guwahati 1)				
	Total	1	1	0	0					
Human Lives Lost Confirmed - Death Type	District/Sub-division*	Total	Flood Death	General Drowning (Non Flood)	Landslide					
	Kamrup (M)	1	0	0	1					
	Total	1	0	0	1					
Human Lives Lost - Missing	Nil									
Human Lives Lost Missing - Type	Nil									
Animals Affected	District/Sub-division*	Total	Big	Small	Poultry					
	Biswanath	35390	25500	9890	0					
	Dibrugarh	5368	4418	950	0					
	Lakhimpur	4305	3301	1004	0					
	Sonitpur	180	125	55	0					
	Udalguri	249	56	81	112					
	Total	45492	33400	11980	112					
Animals Washed Away	Nil									
Houses Damaged	Nil									
Rescue Operation	District/Sub-division*	Agency			Boats Deployed	Person Evacuated By Boats	Animal Evacuated By Boats	Helicopters Deployed	Person Evacuated By Helicopters	Medical Team Deployed
	Lakhimpur				0	0	0	0	0	3
	Sonitpur	SDRF			1	0	0	0	0	0

	Total				1	0	0	0	0	3
Relief Distributed	District/Sub -division*	Rice (in Q)	Dal (in Q)	Salt (in Q)	M. Oil (in L)	Cattle Feed - Green Fooder (in Q)	Cattle Feed - Wheat Bran (in Q)	Cattle Feed - Rice Bran (in Q)		
	Biswanath	49.10	8.66	0.00	0.00	0.00	222.00	0.00		
	Dibrugarh	63.13	11.57	3.47	186.00	0.00	0.00	0.00		
	Lakhimpur	363.63	67.41	20.22	2022.00	0.00	0.00	303.00		
	Sonitpur	0.77	0.16	0.05	0.00	0.00	0.00	0.00		
	Tinsukia	42.99	7.99	2.39	239.94	0.00	0.00	0.00		
	Udalguri	4.55	0.81	0.24	24.20	0.00	0.00	0.00		
	Total	524.17	96.60	26.37	2472.14	0.00	222.00	303.00		
Relief Distributed Others	District/Sub -division*	Baby Food Liquid		Baby Food Solid		Others				
	Biswanath	0.00-Q		0.00-Q						
	Dibrugarh	0.00-Q		0.00-Q		0-0.00-Q				
	Lakhimpur	0.00-Q		680.00-Pkt		Tarpaulin -2414.00-Pieces				
	Sonitpur	0.00-Q		0.00-Q						
	Tinsukia	0.00-Q		0.00-Q						
	Udalguri	0.00-Pkt		0.00-Q		0-0.00-Q				
Infrastructure Damaged - Embankment Breached	District/Sub -division*	Number	Details							
	Darrang	2	Mangaldoi - Approach Road in Noanadi Kachia Bund FIS At village Choto Athiabari Due to rise of water level breach occurred at approach Road in Noanadi Kachia Bund FIS and approx. length of breach is 15 mt. as reported by the irrigation department. Dated 17/06/2023. (Long - 91.995900, Lat - 26.443300, Dept - Irrigation), Kamarpara Embankment. At village Kamarpara Due to rise of water level breach occurred at PNRD Embankment at Kamarpara Village and approx. length of breach is 11 mt. . Dated 17/06/2023. (Long - 91.992800, Lat - 26.419400, Dept - P&RD)							
	Nagaon	1	Kampur - Premajaan Embankment at Saibuk Gaon Saibuk Gaon The premajaan Embankment of P&RD Department breached 5 metres at Saibuk Gaon on dated 17.06.2023 at 7.30 am under Kampur Revenue Circle. (Long - 26.106437, Lat - 92.717367, Dept - P&RD)							
	Sonitpur	1	Chariduar - 1 no embankment breached on DTD 17/06/2023 at Bahbari Deka chuburi(Dekargaon) village which was constructed under MGNREGA scheme Dekargaon (Long - 92.710210, Lat - 26.717130, Dept - P&RD)							
	Udalguri	1	Kalaigaon - Embankment at Majarchuba in the L/B of river Noa Majarchuba Breached on 17/06/2023. Length 20 meters Breadth 4 meters. Due to overtopping of river Noa (Long - 91.998531, Lat - 26.598621, Dept - P&RD)							
	Total	5								
	Infrastructure Damaged - Embankment Affected	District/Sub -division*	Number	Details						
Biswanath		4	Gohpur - Mild Erosion observed at R/Bank embankment of river Sessa at Auguri area of length 30 mtr on 17/06/23 (Long - 93.737047, Lat - 26.952548, Dept - Water Resources Deptt.), Mild bank Erosion is observed on R/Bank of river Sessa At Baligaon Marginal Embankment in Gosarguri area of length 100 mtr on 17/06/23 (Long - 93.712256, Lat - 26.989844, Dept - Water Resource Deptt.), Mild bank erosion is observed on R/Bank of river Sessa at Gopsarguri marginal embankment Of length 120 mtr on 17/06/23 (Long - 93.716944, Lat - 26.979766, Dept - Water Resource Deptt.), Erosion is observed on R/Bank embankment of river Solengi at Dakhin Deonabari of length 20 mtr on 17/06/23 (Long - 93.643767, Lat - 26.913720, Dept - Water Resource Deptt.)							
Darrang		1	Mangaldoi - Left Bank Embankment At Bishnupur At Village Bishnupur Due to flood water overtopping at some portions of PNRD Bund at Bishnupur Village, breach like situation occurred in the embankment thus eroding away a portion of land of the bund as reported by water Resource Department. Dated 16/06/2023 (Long - 91.986900, Lat - 26.543900, Dept - Irrigation)							
Dhemaji		1	Jonai - Water Resource Deptt. river side and Country side Dual bund Between Shadhughat to Borong Due to incessant rain and raise in water level of river Brahmaputra, River side and Country side Duel bund in between Sadhughat to Borong got 75.00 meter slumped down and eroded on 16/06/2023. (Long - 95.090000, Lat - 27.170000, Dept - Water Resource Deptt.)							
Goalpara		1	Lakhipur - Kharmuza to Nichinpur Near Nichinpur As per report of WR Division Goalpara, Due to heavy rainfall Newly 21 nos larged size raincuts have been occurred at B/dyke (Kharmuza to Nichinpur) within Ch. 34.00KM to Ch. 37.50 KM damage point from lat-26.045284, long-90.190283 to ended point lat- 26.035931, long-90.174836 on 14.06.2023 to till date on 17.06.2023. (Long - 0.000000, Lat - 0.000000, Dept - Water Resource Deptt.)							
Karimganj		1	Patherkandi - Right bank of river Longai at Tapadarpara. Tapadarpara A slump down around 10M Length occurred on right bank of river Longai at Tapadarpa on 17/06/2023 due to heavy rainfall. (Long - 24.614148, Lat - 92.320768, Dept - Water Resource Deptt.)							

	Total	8	
Infrastructure Damaged - Road	District/Sub-division*	Number	Details
	Darrang	1	Dalgaon - Surface of the road damaged due to raincut at Ch.4100m and Ch.4700m Rangagarah pathar to Ghiladhari Road As per report received from PWD(R) due to flood & incessant rainfall the single HP Culvert washed away at Ch.6100m (approx length-15m) and surface of the road damaged due to raincut at Ch.4100m and 4700m on rangagara pathar to ghiladhari road(PMGSY Pkg No.As-16-149). dated 16.06.2023 Immediate restoration is required. (Long - 26.598606, Lat - 92.315520, Dept - P&RD)
	Goalpara	3	Balijana - PANCHARATNA TO KHARMUJA ROAD PANCHARATNA - KHARMUJA DAMAGED REPORTED BY PWRD, GOALPARA WEST & JALESWAR TERRITORIAL ROAD DIVISION, LAKHIPUR ON 16/06/2023 VIA WHATSAPP TEXT. The Length is 100 Metre (Long - 90.482242, Lat - 26.146440, Dept - PWD (Roads)), KUMRI BAZAR TO DARI DURI BAZAR ROAD (PMGSY PACKAGE NO. AS.-07-305) KUMRI BAZAR TO DARI DURI BAZAR ROAD DAMAGED REPORTED BY PWRD, GOALPARA WEST & JALESWAR TERRITORIAL ROAD DIVISION, LAKHIPUR ON 16/06/2023 VIA WHATSAPP TEXT. The Length is 15 Metre. (Long - 90.539875, Lat - 26.178553, Dept - PWD (Roads)), Lakhipur - Kharubhaj to Fetengapara via Takimari Tiniali Bazar PMGSY Road. Near Takimari Bazar As per report of PWD Road Department, Due to incessant rainfall for last 7 days, Kharubhaj to Fetengapara via Takimari Tiniali Bazar PMGSY Road Package No. AS-07-259 from CH.2350 M to CH. 2360M & from CH. 2420 to CH. 2425 M affected length 15 meter from 15.06.2023 to till date on 17.06.2023. (Long - 90.299667, Lat - 26.047658, Dept - PWD (Roads))
	Kamrup	3	Palashbari - 1. Jaramukhuria to Khokhapara Road under Palashbari Territorial Road Div. Mirza 1. Jaramukhuria to Khokhapara About 30-50 mtrs. Dated. 16/06/2023 (Long - 25.891405, Lat - 91.428910, Dept - PWD (Roads)), 2. Palashbari-mirza to Chandubi Road under Palashbari Territorial Road Div. Mirza Palashbari-Mirza-Chandubi About 30-50 mtrs. Dated. 16/06/2023 (Long - 25.913121, Lat - 91.469841, Dept - PWD (Roads)), Rangia - Chepti-Bihdia Road Moranjana, Rangia, Assam Due to heavy rain showers from 13/06/2023 to 16/06/2023 the both side approaches to RCC Bridge no 2/1 on Chepti- Bihdia road has been eroded. (Approximately 200 m) (Long - 91.652126, Lat - 26.415723, Dept - PWD (Roads))
	Tamulpur	1	Tamulpur - Due to heavy rain & flash flood Ananda Bazar to Jamuguri via Borkajuli, Package no : AS -24- 247 have been damaged on 16 June 2023. Ananda Bazar to Jamuguri via Borkajuli(GARUGHUTU) (Long - 91.544316, Lat - 26.664059, Dept - PWD (Roads))
	Total	8	
Infrastructure Damaged - Bridge	District/Sub-division*	Number	Details
	Sonitpur	1	Chariduar - New Ghogra T.E playground to Ganesh Mandir Road New Ghogra T.E road, Dated - 17/06/2023 Hume pipe culvert at ch.500 m. (Long - 92.729307, Lat - 26.743575, Dept - PWD (Roads))
	Total	1	
Infrastructure Damaged - Wildlife	Nil		
Infrastructure Damaged - Others	District/Sub-division*	Other Details	
	Biswanath	Gohpur - Elementary Schools Damaged SESSA ANIRUDHA LPS Submerged Fully on 17/06/23, Elementary Schools Damaged PUB BILOTIA LPS submerged partially on 17/06/23, Elementary Schools Damaged NOBIL LPS submerged Partially on 17/06/23, Elementary Schools Damaged NO. 2 BORFOLONG LPS Submerged Fully on 17/06/23, Elementary Schools Damaged KHAGESWAR TALUKDAR LPS submerged Partially on 17/06/23, Elementary Schools Damaged KAKILA GURI LPS Submerged Fully on 17/06/23, Elementary Schools Damaged SONAJULI LPSSubmerged Fully on 17/06/23	
	Darrang	Mangaldoi - Power Dept. Conductors As reported by APDCL Kalaigaon HT & LT Conductors snapped at Samala, Bhuragarh, Balipota, Garubandha, Balipota,Kaithpara. dated 17.06.2023, Power Dept. Poles As reported by APDCL Kalaigaon HT poles were damaged at Balipota , Bhuragarh and Samala. Approx. 4 poles damaged. dated 17.06.2023	
	Dibrugarh	Chabua - Anganwadi Centres Affected Kottock line AWC affected as per information received from Social Welfare department on 17-06-2023 coordinates Lat 27.531478 Long 95.21476, Anganwadi Centres Affected Tengabari AWC affected as per information received from Social Welfare department on 17-06-2023 coordinates Lat 27.611502 Long 95.239086, Anganwadi Centres Affected Dadhia AWC affected as per information received from Social Welfare department on 17-06-2023 coordinates Lat 27.559956 Long 95.255222	
	Goalpara	Dudhnoi - Irrigation Canal/Scheme Damaged Earthen canal is broken upto 3.00m (approx) length at Aithan FIS on 17/06/2023 under Borpathar revenue village. Latitude: 25.948491,. Longitude: 90.724175	
	Karbi	Diphu - Culvert Approach Road Damaged Damage occurred to the Culvert no.1/2 on the road 51st km of	

	Anglong	DLHS road to Bagmari via On Bey gaon (Diphu Revenue Circle) under PMGSY package no.AS12281 on 15-06-2023 due to incessant heavy rainfall. Under Diphu PWD(R) Div. Coordinates Lat 25.820617 Long 93.408896
	Lakhimpur	Bihpuria - Agri Bundh Damaged Approximately 4.5 meters of an Earthen Bundh has been washed away at Nadika Mofiz Police Tiniali to Ahom gaon via Basar gaon under Yubanagar GP as reported by officials of Karunabari Development Block on 17/06/2023. (MGNREGA 21-22 ongoing scheme) , PWSS Damaged A pipeline damaged under Menehapar Chuburi PWSS (Nadika) as reported by AEE, PHED, Bihpuria Sub Division on 17/06/2023 , Narayanpur - PWSS Damaged Pipeline damaged at joyram chuburi at village no.2 rangati as reported by PHED dept. on 17/06/2023., Kadam - Bamboo Foot Bridge 3 Nos. of Temporary bamboo foot bridge has been damaged due to increasing water level of the River Kakoi at Gujihola on 16/06/2023, reported by the P&RD Dept. Boginadi
	Sonitpur	Dhekiajuli - Culvert Approach Road Damaged As per information received from Executive Engineer, PWD, Barchalla & Dhekiajuli Territorial Road Division on 16-06-2023 that Due to torrential rain in Arunachal Pradesh and Assam for last several days surging water of Mora Suti has damaged the Culvert NO. 3/1 on 15th June, 2023 on NH-15 to LAHABARI road Near at AMTOL Bhheragaon., Culvert Approach Road Damaged As per information received from Assistant Executive Engineer on 16-06-2023, PWD Barchalla Territorial Road that due to incessant rain since last few days flood water damaged " BARCHALLA TO TURIPAM ROAD(HUME PIPE CULVERT AT CH 1600.00 MTR) and "NEW GHOGRA T.E PLAYGROUND TO GANESH MANDIR ROAD (HUME PIPE CULVERT AT CH 500.00 MTR)
	Tamulpur	Goreswar - Irrigation Canal/Scheme Damaged As per information received from AEE Irrigation Protection work (boulder sausage) L/B of river Suklai about 350 m guide band got damaged at village Jabrangpar Mouza Defeli. Date 15/06/23. Lat:26. 65992 Lon: 91.717442
	Udalguri	Khairabari - Irrigation Canal/Scheme Damaged As reported by the department, due to continuous downpour of rainfall occurred since the 2nd week of June 2023, the canal embankment of BUDURA FIS was beached for length of 30M and 25M and breadth 4.5M at two numbers of chainages on 17.06.2023. Lat- 26.649960 Long- 91.787055 and Lat-26.6489833 Long-91.786935 , Irrigation Canal/Scheme Damaged As reported by the department, due to continuous downpour of rainfall occurred since the 2nd week of June 2023, the canal embankment of MAYAKHAT FIS was beached for length of 110M and breadth of 35M on 17.06.2023. Lat- 26.626434 Long-91.816857
Erosion	District/Sub-division*	Details
	Biswanath	Gohpur - At L/Bank of Chatrang river. Mild Erosion is observed at downstream of NH-15 of length 30 mtr on 17/06/2023 0 (Long - 93.616940, Lat - 26.602700), Halem - Paken,Jogibari 1.Brahmaputra river- Mild bank erosion continues at Paken area of B-dyke from Jamuguri to Kharoi outfall. Length =30m. (avg.width=0.10m).17/06/2023 2 BRAHMAJAN river- lat-26.86688 long- 93.505862 Due to sharp current of flood, the side slope on L/Bank embankment of river Brahmanjan eroded upto crest level for a reach length. of 30m at Ch 7200m near Jogi Bari area.Length=30m(Avg. width=2.15m). on 16/06/2023 report by W.R.divi. Gohpur . Date-17/06/2023 report by W.R.divi.Gohpur River Brahmanjan: 3) Due to Sharp current of flood, the side slope on L/Bank embankment of river Brahmanjan eaten upto two third of crest width for a reach length of 30m at Ch 7200m near Jogibari area. Palliative measures are taken in the form of launching of tree branches with 8G wire. Length 30m, Latitude: 26.86688, Longitude: 93.505862. 17/06/2023 4)Due to Sharp current of flood, the side slope on R/Bank embankment of river Brahmanjan washed away upto crest level for a reach length of 50m at Ch 8130m near Goroimari area. Palliative measures are taken in the form of launching of tree branches with 8G wire. Length = 50m, Latitude: 26.858833, Longitude: 93.508615 River Brahmaputra: 17/06/2023 5)Mild bank erosion continues at Paken area of B/Dyke from Jamuguri to Kharoi outfall. Length 30.00m, Latitude: 26.800677, Longitude: 93.626984. 17/06/2023 0 (Long - 93.627646, Lat - 26.800760)
	Dibrugarh	Moran - Bhoralibari Kalita Gaon Bank damage occurred at 2 No Bhoralibari kalita gaon for a length 900m as per report received from WRD on 17.06.2023 0 (Long - 95.002266, Lat - 27.372369), Naharkatia - Amguri Gaon As per report received from JE,WR department, Dibrugarh West as on 17-06-2023 Bank erosion observed at Amguri gaon for a length of 300m 0 (Long - 95.233370, Lat - 27.335340)
	Golaghat	Sarupathar - Koirigaon Erosion at koirigaon gaon date 16/06/2023 Reach length 380m 0 (Long - 93.828145, Lat - 26.126046)
	Morigaon	Laharighat - Kathani As per Water Resource Department, Morigaon River Brahmaputra erosion eroded 2 meter at a length of 500 meter at Kathani revenue village under Laharighat Revenue Circle from 16-06-2023 to 17-06-2023. 0 (Long - 92.312168, Lat - 26.434602), Bhuragaon - Balidunga Pam, Kupatimari As per Water Resource department, Morigaon, Bhrahmaputra river erosion eroded 10 meter at a length of 700 meter at Kupatimari and Balidunga Pam revenue village under Bhuragaon Rev. Circle from 16-06-2023 to 17-06-2023 0 (Long - 26.411003, Lat - 92.251558)
	Nalbari	Barkhetri - Kaplabori, Hanapa, Pubhanapara B/dyke on R/B of river Brahmaputra from Adabari to Kukarjan at Kaplabori. Length 400m. B/dyke on R/B of river Pahaldia from bijulighat to adabari at Hanapa, length 300m and at Pub Hanapara-length 500m as reported by AEE, WRD, Mukalmua. Dated 17/06/2023 0 (Long - 0.000000, Lat - 0.000000)
	Sivasagar	Amguri - Miri Chutia Gaon Slumped down on 15-06-2023 at Left Bank of Jhanji river near Miri Chutia gaon of Amguri Revenue Circle 0 (Long - 26.762973, Lat - 94.412092), Sivsagar - Lepai and Akhoiphutia Slum down on 16-06-2023 at left bank of river Desang at Akhoiphutia and Lepai under Sivasagar Revenue Circle. Report Received from Water Resources on 17-06-2023 0 (Long -

		94.580413, Lat - 27.068842)
	South Salmara	Mankachar - Fattapara AS per report received from I/C Control Room, Hatsingimari W.R Sub-Division, Hatsingimari, an erosion causing damaged of Agriculture land measuring length-150 M & Breadth-2 M, occurred at Revenue village Fattapara on 17-06-2023. AS per report received from Gaon Pradhan has been 2 (Two) nos house hold shifted to other place on 17-06-2023. 8 (Long - 25.757626, Lat - 89.890822)
	Udalguri	Udalguri - 1.Dhansiri Irrigation Project 2. Mora Chandana 1. Dhansiri Irrigation Project- a. Breached of earthen canal at ch. 2500.0M to ch. 2510.0M(10M) of D2B2M canal of Dhansiri Irrigation Project.(Lat- 26.710689, Long- 92.104027) b. Breached of Earthen Canal at ch. 2550.0M to ch. 2560M (10M) of D2B2M canal of Dhansiri Irrigation Project. (Lat- 26.711307 Long-92.103721 2. Mora Chandana a. CC lining damaged at B2M Canal from ch 10870 to 10920 (50m) of Dhansiri Irrigation Project. (Lat- 26.702584, Long- 92.012847) 0 (Long - 0.000000, Lat - 0.000000), Harisinga - 1. No.2 Sagunbahi Village 2. Naobandhagao 1. Erosion continuing at No.2 Sagunbahi village by Kalanadi river due to heavy rainfall on 17th June 2023. Approximate damage 10 meters. Long 91.8468 Long- 26.8532. 2. Erosion continuing at Naobandhagao village by Suklai river due to heavy rainfall on 17th June 2023. Approximate damage 100meters. Lat 26.7043 Long. 91.7570 215 (Long - 0.000000, Lat - 0.000000)
Landslide	District/Sub-division*	Details
	Dima-Hasao	Haflong - Damadi Hawar, Dihur Phonglo 1. Residence of Veronica Khersa of Damadi Hawar Village Lat:- 25.302221, Long:- 93.133824 dtd. 17-06-2023 2 Residence of Pramila Daulagupu of Dihur Phonglo Village dtd- 17-06-2023. 3. Lower Haflong Road damage. Dated:16-06-2023. 4. Samparidisa to Nobdi Daulagupu.Dated:16-06-2023. Latt:25.258679,Long:93.002024. 5. Dima-Hasao Angling Rood damage on 17-06-2023. Latt:25.428867,Long:92.998313. 6. Stone Stepping Stair Damage near Dibarai Lake on 17-06-2023. Latt:25.173527,Long:93.007339. 0 (Long - 0.000000, Lat - 0.000000)
	Kamrup (M)	Guwahati - Dhirenpara , Sonali path 1 (Long - 26.150124, Lat - 91.727915)
Urban Flood	District/Sub-division*	Details
	Cachar	Silchar - National Highway, Link Road, Ambicapatty, N.S. AVENUE, Sonai Road, Malinibeel, Bilpar, Nagatilla, Church Road, Flash Flood due to heavy rain on dated 17.06.2023. 20000 (Long - 0.000000, Lat - 0.000000)
	Kamrup (M)	Azara - Dharapur Flash flood and water logged in Dharapur Chariali on 17/06/2023 0 (Long - 26.081400, Lat - 91.373900), Dispur - Hatigaon, Wireless, Rukminigaon, Baghorbori, No.2 Japorigog Waterlogging at Sijubari, Wireless BSNL office's back side, Rukminigaon, Rukminagar side, Baghorbori, Kalitakuchi, Anil Nagar and Sorumotoria. 17/06/2023 0 (Long - 0.000000, Lat - 0.000000)
	Nalbari	Nalbari - commerce collage road, veterinary road, collage road, Nalbari-Hajo road, malikuchi road, debiram hs road, bhakatpara road, circuit house road, forest office road, debiram road, as per reported by LM under Nalbari Rev Circle. , these are submerged due to rain water on 17.06.2023 1500 (Long - 0.000000, Lat - 0.000000)
*Bajali, Biswanath, Hojai and Tamulpur are sub-divisions (Independent)		

Assam Daily Flood Report as on 18-06-2023 at 4:00 PM								
Particulars	Situation as on 18-06-2023 (in last 24 hours)							
Rivers flowing above Danger Level (as per CWC bulletin issued at 8 AM)	Rivers flowing above danger level		Puthimari (Nh Road Crossing), Kopili (Kampur), Brahmaputra (Neamatighat)					
	Rivers flowing above highest flood level		Nil					
District/Sub-division Affected	No. of Districts/Sub-divisions* Affected	Name of Flood Affected Districts/Sub-divisions*			Name of Urban Flood Districts/Sub-divisions*			
	14	Biswanath, Cachar, Darrang, Dhemaji, Dibrugarh, Golaghat, Hojai, Lakhimpur, Nagaon, Nalbari, Sonitpur, Tinsukia, Udalguri			Cachar, Kamrup (M), Nalbari			
No. Of Revenue Circles Affected	25							
Name Of Revenue Circles Affected	District/Sub-division*	Total	Revenue Circle					
	Biswanath	2	Gohpur, Halem					
	Cachar	1	Silchar					
	Darrang	3	Dalgaon, Patharighat, Mangaldoi					
	Dhemaji	1	Dhemaji					
	Dibrugarh	2	Dibrugarh West, Chabua					
	Golaghat	1	Bokakhat					
	Hojai	3	Doboka, Lanka, Hojai					
	Kamrup (M)	1	Dispur					
	Lakhimpur	2	Nowboicha, Narayanpur					
	Nagaon	1	Raha					
	Nalbari	2	Tihu, Nalbari					
	Sonitpur	3	Dhekiajuli, Tezpur, Chariduar					
	Tinsukia	1	Tinsukia					
	Udalguri	2	Harisinga, Kalaigaon					
	Total	25						
Villages Affected	District/Sub-division*	Total	Revenue Circle					
	Biswanath	23	(Gohpur 5), (Halem 18)					
	Cachar	2	(Silchar 2)					
	Darrang	16	(Dalgaon 10), (Patharighat 1), (Mangaldoi 5)					
	Dhemaji	3	(Dhemaji 3)					
	Dibrugarh	7	(Dibrugarh West 6), (Chabua 1)					
	Golaghat	4	(Bokakhat 4)					
	Hojai	20	(Doboka 3), (Lanka 4), (Hojai 13)					
	Lakhimpur	21	(Nowboicha 13), (Narayanpur 8)					
	Nagaon	11	(Raha 11)					
	Nalbari	1	(Tihu 1)					
	Sonitpur	28	(Dhekiajuli 1), (Tezpur 19), (Chariduar 8)					
	Tinsukia	3	(Tinsukia 3)					
	Udalguri	3	(Harisinga 2), (Kalaigaon 1)					
Total	142							
Population And Crop Area Affected	District/Sub-division*	Male	Female	Children	Total Population	Population Details	Crop Area (in Hect.)	Crop Area Details
	Biswanath	0	0	0	0	(Gohpur 0), (Halem	26.30	(Gohpur 16.30), (

						0)			Halem 10.00)	
	Cachar	250	225	90	565	(Silchar 565)		0.00	(Silchar 0.00)	
	Darrang	230	181	241	652	(Dalgaoon 272), (Patharighat 6), (Mangaldoi 374)		51.00	(Dalgaoon 51.00), (Patharighat 0.00), (Mangaldoi 0.00)	
	Dhemaji	45	43	13	101	(Dhemaji 101)		10.00	(Dhemaji 10.00)	
	Dibrugarh	1567	1240	1050	3857	(Dibrugarh West 0), (Chabua 3857)		170.50	(Dibrugarh West 54.00), (Chabua 116.50)	
	Golaghat	0	0	0	0	(Bokakhat 0)		38.00	(Bokakhat 38.00)	
	Hojai	0	0	0	0	(Hojai 0), (Doboka 0), (Lanka 0)		343.26	(Hojai 279.60), (Doboka 37.00), (Lanka 26.66)	
	Lakhimpur	12221	12094	960	25275	(Nowboicha 25097), (Narayanpur 178)		0.00	(Nowboicha 0.00), (Narayanpur 0.00)	
	Nagaon	0	0	0	0	(Raha 0)		585.72	(Raha 585.72)	
	Nalbari	7	5	8	20	(Tihu 20)		8.00	(Tihu 8.00)	
	Sonitpur	29	23	0	52	(Dhekiajuli 52), (Chariduar 0), (Tezpur 0)		31.20	(Dhekiajuli 0.00), (Chariduar 16.00), (Tezpur 15.20)	
	Tinsukia	985	848	833	2666	(Tinsukia 2666)		238.00	(Tinsukia 238.00)	
	Udalguri	112	92	20	224	(Udalguri 0), (Harisinga 215), (Kalaigaon 9)		9.00	(Udalguri 0.00), (Harisinga 0.00), (Kalaigaon 9.00)	
	Total	15446	14751	3215	33412			1510.98		
Relief Camps / Centres Opened	District/Sub-division*	Total	Relief Camp				Relief Distribution Centres			
	Biswanath	2	0(Gohpur 0)				2(Gohpur 2)			
	Lakhimpur	13	0(Nowboicha 0, Narayanpur 0)				13(Nowboicha 11, Narayanpur 2)			
	Udalguri	2	1(Kalaigaon 1, Harisinga 0)				1(Kalaigaon 0, Harisinga 1)			
	Total	17	1				16			
Inmates In Relief Camps	District/Sub-division*	Total	Revenue Circlewise			Male	Female	Children	Pregnant / Lactating Mother	Person with Disability
	Udalguri	9	(Harisinga 0), (Udalguri 0), (Kalaigaon 9)			4	4	0	1	0
	Total	9				4	4	0	1	0
Human Lives Lost - Confirmed	Nil									
Human Lives Lost Confirmed - Death Type	Nil									
Human Lives Lost - Missing	Nil									
Human Lives Lost Missing - Type	Nil									
Animals Affected	District/Sub-division*	Total	Big	Small	Poultry					
	Biswanath	2791	1945	846	0					
	Darrang	3563	1797	1307	459					
	Dibrugarh	5368	4418	950	0					
	Lakhimpur	8398	5185	3213	0					
	Udalguri	285	242	0	43					
	Total	20405	13587	6316	502					
Animals Washed Away	District/Sub-division*	Total	Big	Small	Poultry					
	Darrang	21	21	0	0					
	Total	21	21	0	0					
Houses Damaged	District/Sub-division*	Fully Kuccha	Fully Pukka	Fully Total	Partially Kuccha	Partially Pukka	Partially Total	Others Huts	Others Cattle Shed	Others Total

	Lakhimpur	0	0	0	5	0	5	0	0	0
	Total	0	0	0	5	0	5	0	0	0
Rescue Operation	District/Sub-division*	Agency			Boats Deployed	Person Evacuated By Boats	Animal Evacuated By Boats	Helicopters Deployed	Person Evacuated By Helicopters	Medical Team Deployed
	Biswanath				0	0	0	0	0	1
	Dibrugarh	NDRF, SDRF			5	7	0	0	0	0
	Lakhimpur				0	0	0	0	0	3
	Total				5	7	0	0	0	4
Relief Distributed	District/Sub-division*	Rice (in Q)	Dal (in Q)	Salt (in Q)	M. Oil (in L)	Cattle Feed - Green Fooder (in Q)	Cattle Feed - Wheat Bran (in Q)	Cattle Feed - Rice Bran (in Q)		
	Biswanath	0.00	0.00	0.00	0.00	0.00	0.00	600.00		
	Lakhimpur	409.96	75.82	22.75	2275.00	0.00	0.00	54.69		
	Udalguri	3.60	0.65	0.19	19.35	0.00	0.00	13.80		
	Total	413.56	76.47	22.94	2294.35	0.00	0.00	668.49		
Relief Distributed Others	District/Sub-division*	Baby Food Liquid		Baby Food Solid		Others				
	Biswanath	0.00-Q		0.00-Q						
	Lakhimpur	0.00-Q		432.00-Pkt, 0.00-Q						
	Udalguri	0.00-Q		0.00-Q		Sanitary Napkin-50.00-Pkt; Match box-5.00-Pkt; Candle - 45.00-Pkt; 0-0.00-Q				
Infrastructure Damaged - Embankment Breached	Nil									
Infrastructure Damaged - Embankment Affected	District/Sub-division*	Number	Details							
	Biswanath	3	Gohpur - Bank Erosion is observed R/Bank embankment of river Solengi. at Dakhin Deonabari of length 30 mtr on 18/06/23 (Long - 93.643767, Lat - 26.913720, Dept - --Select Department--), Mild bank erosion is observed on R/Bank of river Sessa. at Gopsarguri marginal embankment of length 120 mtr on 18/06/23 (Long - 93.716944, Lat - 26.979166, Dept - Water Resource Deptt.), Mild bank Erosion is observed on R/Bank of river Sessa at Baligaon mmginal embankment near Gopsarguri area of length 100 mtr on 18/06/23 (Long - 93.712256, Lat - 26.989844, Dept - Water Resource Deptt.)							
	Lakhimpur	1	Nowboicha - Pabha River Bund Mohghuli Borgola 10 Mtr. eroded on 17.06.2023 at Pabha River Bund from Shoniboria Bazar to Ruhul Chuburi MGNREGA 15-16 under BMP GP. Report received from Karunabari Block Dev. Office (Long - 27.063610, Lat - 94.039671, Dept - P&RD)							
	Total	4								
Infrastructure Damaged - Road	District/Sub-division*	Number	Details							
	Cachar	7	Silchar - Badri Bridge Approach Road Badripar Badri Bridge Approach Road have been submerged and damaged due to incessant rain for the last few days, as per report received from PWRD Silchar & Udharbond (T) Road Division, Dated 17.06.2023 (Long - 0.000000, Lat - 0.000000, Dept - PWD (Roads)), Udharbond - T-01 TO BHOLA PUNJEE BHOLA PUNJEE T-01 TO BHOLA PUNJEE AT CH. 500.00M. CH. 700.00M, CH. 4300.00M & CH.4500.00M (PKG. NO. AS-03-164) IN STRETCHES road have been submerged and damaged due to incessant rain for the last few days, as per report received from PWRD Silchar & Udharbond (T) Road Division, Dated 17.06.2023 (Long - 0.000000, Lat - 0.000000, Dept - PWD (Roads)), PAILAPOOL KUMARCHERRA NEC ROAD TO LANKAR PUNJI ROAD PAILAPOOL KUMARCHERRA PAILAPOOL KUMARCHERRA NEC ROAD TO LANKAR PUNJI ROAD (PKG. NO. AS-03-110) IN STRETCHES have been submerged and damaged due to incessant rain for the last few days, as per report received from PWRD Silchar & Udharbond (T) Road Division, Dated 17.06.2023 (Long - 0.000000, Lat - 0.000000, Dept - PWD (Roads)), S.K. ROAD TO KULICHERRA KULICHERRA S.K. ROAD TO KULICHERRA AT 4TH KM. have been submerged and damaged due to incessant rain for the last few days, as per report received from PWRD Silchar & Udharbond (T) Road Division, Dated 17.06.2023 (Long - 0.000000, Lat - 0.000000, Dept - PWD (Roads)), TIKALPAR ONGC POINT TO BAMDOO TE VIA KUMBHA AND ENDOGRAM TIKALPAR TIKALPAR ONGC POINT TO BAMDOO TE VIA KUMBHA AND ENDOGRAM AT CH. 500.00M. CH. 600.00M PKG. NO. AS-03-269 have been submerged and damaged due to incessant rain for the last few days, as per report received from PWRD Silchar & Udharbond (T) Road							

			Division, Dated 17.06.2023 (Long - 0.000000, Lat - 0.000000, Dept - PWD (Roads)), DUMURGHAT GUABARI ROAD DUMURGHAT GUABARI DUMURGHAT GUABARI ROAD (EROSION AT APPROACH TO BR. NO. 4/2) have been submerged and damaged due to incessant rain for the last few days, as per report received from PWRD Silchar & Udharbond (T) Road Division, Dated 17.06.2023 (Long - 0.000000, Lat - 0.000000, Dept - PWD (Roads)), GHUNGOORBOND PAKURPAR ROAD GHUNGOORBOND PAKURPAR GHUNGOORBOND PAKURPAR ROAD (EROSION AT APPROACH TO BR. NO. 2/3) have been submerged and damaged due to incessant rain for the last few days, as per report received from PWRD Silchar & Udharbond (T) Road Division, Dated 17.06.2023 (Long - 0.000000, Lat - 0.000000, Dept - PWD (Roads))
	Dhemaji	1	Jonai - PWRD, Territorial roads NH-515 to Seren Sonowal under SOPD-G. 100 meters damaged from Ch.1200.00M to Ch.1300.00M by Seren River on 16/6/2023. From Ch.1200.00M to Ch.1300.00M PWRD, Territorial roads NH-515 to Seren Sonowal under SOPD-G was partially damaged in a length of 100 meters from Ch.1200.00M to Ch.1300.00M by Seren River on 16/6/2023. (Long - 94.540000, Lat - 27.430000, Dept - PWD (Roads))
	Goalpara	1	Matia - Approach road of Jinari FIS Harimura Damaged from Ch. 130m to Ch.270 m on 17/06/2023 as reported by Dudhnoi-Goalpara East Division, Irrigation, Dudhnoi (Long - 90.653881, Lat - 26.089609, Dept - Irrigation)
	Lakhimpur	2	Nowboicha - NH-15 to Haripur Balitika Phukan Doloni Road from NH-15 at Raj Ali to Haripur Balitika submerged from CH:1650m to CH: 6700m and breached occurred at 3520m, depth of water average 0.60 on 17.06.2023. Report received from PWD (Roads) (Long - 27.132961, Lat - 94.001938, Dept - PWD (Roads)), Konwarpur to Raj Ali connecting Road Konwarpur Konwarpur to Raj Ali connecting Road water submerged at about 40 mtr, culvert approach damaged on 17.06.2023. Report received from Nowboicha Block Dev. Office (Long - 27.101067, Lat - 94.124534, Dept - P&RD)
	Nagaon	2	Kampur - Road from Garukhunda to Natun Garukhunda (PMGSY Pkg No. AS-19-549) Garukhunda to Natun Garukhunda On dated 17.06.2023 Road from Garukhunda to Natun Garukhunda (PMGSY Pkg No. AS-19-549): Affected Length approx. L=500.00m. The road belongs to Raha Territorial Road Sub-Division (Long - 0.000000, Lat - 0.000000, Dept - PWD (Roads)), Road from Paschim Kawoimari to Bishnupuri Than Paschim Kawoimari to Bishnupuri Than On dated 17.06.2023 Road from Paschim Kawoimari to Bishnupuri Than affected length approx. L=400.00 m under Kampur Revenue Circle. The road belongs to Raha Territorial Road Sub Division. (Long - 0.000000, Lat - 0.000000, Dept - PWD (Roads))
	Tamulpur	6	Goreswar - Goreswar Khoirabari Road Village Rangmahal As per report received from the AEE PWD Goreswar Rural road subdivision, at village Rangmahal road embankment with hardcrust got eroded approx length 4km dated 17/06/23. (Long - 91.747726, Lat - 26.548997, Dept - PWD (Roads)), Tamulpur - T01 to Hortola (Patkijuli paharpur Road) Paharpur Due to flash flood, roads from T01 to Hortola (Patkijuli paharpur Road) Package no. AS-24-189 (Culvert No 3/1, 4/1 got damaged on 17 June 2023 (Long - 91.466044, Lat - 26.783279, Dept - PWD (Roads)), Suhagpur Banguri road Ulubari Due to flash flood and heavy rainfall, roads from Suhagpur Banguri Road (Package no AS-24-103) RCC BR No. 3/1 Approach road got damaged on 17 June 2023 (Long - 91.577636, Lat - 26.250126, Dept - PWD (Roads)), Ikrabil Chowk to dr. Ambedkar Road Ikrabil Nagrijuli Due to flash flood and heavy rainfall, road got damaged from Ikrabil Chowk to dr. Ambedkar road on 17 June 2023 (Long - 91.655479, Lat - 26.739820, Dept - PWD (Roads)), HPC (4TW ROW) at Hastinapur via on UT Road to Bogamati SSB Camp road Hastinapur Nagrijuli Due to flash flood and heavy rainfall HPC (4TW ROW) at Hastinapur via on UT Road to Bogamati SSB Camp road got damaged on 17 June 2023 (Long - 91.679061, Lat - 26.766582, Dept - PWD (Roads)), Sapatal Hahkata Road Sapatal Due to heavy Rain and Flash flood Sapatal Hahkata Road (Package no AS-24-102) got damaged on 17 June 2023 (Long - 91.517350, Lat - 26.583612, Dept - PWD (Roads))
	Udalguri	1	Khairabari - MISHAHATKHOLA JALUKBARI ROAD Sukuliapara (Khoirabari-Goreswar road) Due to the rise in water of the Mora Suklai River, the water is overtopping the road surface, resulting erosion of the road embankment and road surface of length about 0.5KM (approx.), on 18.06.2023. (Long - 91.786862, Lat - 26.569380, Dept - PWD (Roads))
	Total	20	
Infrastructure Damaged - Bridge	District/Sub-division*	Number	Details
	Sonitpur	2	Naduar - Bridge No. 1/1, L0532-Hatinga to Hatinga Quarry road 18/6/2023 Hatinga (Long - 92.937357, Lat - 26.809005, Dept - PWD (Roads)), Chariduar - Dipota bridge to Ghogra chariali connecting box culvert at 1 no Ghogra req Grant on DTD 18.06.2023 1 no Ghogra req Grant (Long - 92.701960, Lat - 26.724590, Dept - P&RD)
	Total	2	
Infrastructure Damaged	Nil		

- Wildlife		
Infrastructure Damaged - Others	District/Sub-division*	Other Details
	Biswanath	Gohpur - Elementary Schools Damaged No.2 Upper Charaibari LPS is submerged fully on 18-06-2023
	Chirang	Bengtal - Bamboo Foot Bridge As reported by LM, Temporary bamboo foot bridge washed away, at Nangalbhangra due to river Nangalbhangra . Latitude-26.616555, Longitude-90.551045 L-8m, B-2.5, D-2m. date of occurrence- 17-06-2023, Sidli - Culvert Approach Road Damaged As reported by AE,PWD(Road),Chirang, Sundari to Basugaon via Khakraagaon road , RCC culvert approach damage of ch 1154.00m both approach Length- 8.00m and 9.00m, Breadth-8.40m and 4.80m, depth- 5.00 and 5.00m at Ghilaguri(Over Duramari River), Latitude-26.461331, Longitude-90.434467 date of occurrence 18-06-2023
	Dibrugarh	Chabua - Anganwadi Centres Affected Kottok line AWC affected as per information received from Social Welfare department on 18-06-2023 coordinates Lat 27.531478 Long 95.21476, Anganwadi Centres Affected Dodhia Kuligaon AWC affected as per information received from Social Welfare department on 18-06-2023 coordinates Lat 27.597042 Long 95.215409, Anganwadi Centres Affected Tengabari AWC affected as per information received from Social Welfare department on 18-06-2023 coordinates Lat 27.611502 Long 95.239086, Anganwadi Centres Affected Dadhia AWC affected as per information received from Social Welfare department on 18-06-2023 coordinates Lat 27.559956 Long 95.255222
	Goalpara	Lakhipur - Irrigation Canal/Scheme Damaged As per report submitted by Irrigation department, Ghagua FIS left side D/S guide bund erosion CH. 0 M to 30 M and width of erosion 0.25 meter at the revenue village Rakhalkilla from 16.06.2023 to till date i.e. 18.06.2023, Lat-25.96803 Long-90.199927
	Kamrup	Kamalpur - Irrigation Canal/Scheme Damaged Collapse of irrigation canal embankment at kharikata village under Bihdia Jajikona Dev. Block.. Reported by BDO, Bihdia Jajikona Dev. Block. Date- 17/06/2023. Co-ordinates- 26.399163, 91.761723
	Karbi Anglong	Silonijan - Road Breaches Damaged due to heavy rain and over flow of Koloyani River as on 18-06-2023, BBDC Road to Koliyoni Shyam Gaon Buddhist Monastery Road Length-2Km, B- 3.75 M under PWD(R) Barpathar division under Silonijan Revenue Circle . Coordinates Lat: 26.474956 Long: 93.778599
	Karimganj	Nilambazar - Secondary Schools Damaged Dated on 18/06/2023, due to incessant rain fall, two class room building of Eraligool Public High School at village- Eraligool under Bandarkuna GP got washed away and base of this school building is already eroded as because the school is located in hillock. (Lat- 24.672627, Long- 92.369295)
	Lakhimpur	Nowboicha - Fisheries/Pond 2355 Nos. Fishery (420 Hect.) over flow due to Singra River Flood water at Balitika, Haripur, Phukan Doloni, 1 No. Brochala village on 17.06.2023. Report received from Fishery Development Office, Lakhimpur, Dhakuakhana - Bamboo Foot Bridge Bridge no. 2/2 at Narayanpur Chapori to Ghilaguri road is damaged on 18/06/2023. Length: 60M. Report submitted by Dhakuakhana Territorial Road Division, Ghilamara., Bamboo Foot Bridge Bridge no. 3/1 over Charikaria river at Katharbari to Krishnapur via Ghilaguri road is washed away on 18/06/2023. Length: 140M. Report submitted by Dhakuakhana Territorial Road Division, Ghilamara., Narayanpur - Culvert Approach Road Damaged Today I.e 18/06/2023 a box cell culvert approached eroded and damaged at deotala Chariali to sribhuyan via jurhotia Gaon road located between chamoguri and purabil village as per report from PWD roads
	Sonitpur	Naduar - Culvert Approach Road Damaged As per report submitted by Asst. Executive Engineer, PWRD, Sootea Territorial Road Sub -Division on Dated 18/06/2023, Due to incessant heavy rainfall from last few days the approaches of culvert No. 3/1 eroded & settle down on 17/06/2023 and threat the road communication L053- Hatinga to Tengabasti road, PMGSY package no. AS-22-264 under Naduar Block. Lat 26.812406 Long 92.95778
	Udalguri	Mazbat - Irrigation Canal/Scheme Damaged damaged RCC canal lining at ch 800 m of right side main canal of siloni bundh FIS due to incessant rain on 18/6/2023.(Lat: 26.8333213, long: 92.33655) , Irrigation Canal/Scheme Damaged damaged RCC canal lining at ch 2500 m of right side main canal of Rowmari FIS due to incessant rain on 18/6/2023.(Lat: 26.843413, long: 92.265679) , Irrigation Canal/Scheme Damaged Erosion of afflux bundh and CC floor of Pagla FIS due to incessant rain on 18/6/2023.(Lat: 26.849105, long: 92.32368) , Irrigation Canal/Scheme Damaged Erosion of kukrakhaity bundh due to incessant rain on 18/6/2023.(Lat: 26.80115, long: 92.300256)) , Harisinga - Bamboo Foot Bridge Paneri TE MV link road bamboo foot bridge damage due to heavy rainfall on 17th June 2023. Lat 26.8532 Long 91.8368
Erosion	District/Sub-division*	Details
	Biswanath	Gohpur - at Auguri area Mild Erosion observed at R/Bank embankment of river Sessa on 18-06-2023 0 (Long - 93.737047, Lat - 26.952548), Halem - Paken area River Brahmaputra: 1) Mild hank erosion continues at Paken area of IV/Dyke from Jamugari to Kharot outfall. Length 30.00. on 18/06/2023 0 (Long - 93.626984, Lat - 26.800677)
	Bongaigaon	Srijangram - Tinkonia Part- II and Tinkonia Part-III Erosion is still prevailing in the above mentioned village.29 house have been dismantled in the fear of being affected by erosion. dated 17.06.023 5 (Long - 90.641348, Lat - 26.237802)
	Dibrugarh	Dibrugarh West - Bhogamur Block Gaon ring bund Due to the rising water level of river Buridehing to the

		DRDA ring bund at Bhogamur Block Gaon has been observed on 16-06-2023 as per information received from Dibrugarh East Water Resources Sub-division. The distance to the DRDA ring bund from damaged bank merely 20 m as on 18-06-2023, Lat:-27°16'36.41, Long:-94°50'3.88 0 (Long - 94.500000, Lat - 27.160000)
	Kokrajhar	Dotma - Vill- Khejurbari Date-18/06/2023 Erosion occurred at village Khejurbari by river Gongia. Around 100mtr(Approx.)has been eroded. 0 (Long - 0.000000, Lat - 0.000000)
	Lakhimpur	Bihpuria - 1)Pabha embankment at No. 2 Sonapur village , 2) At Shakupara (Pabha De Reserve village), 3) Erosion at Pabha river bank (Sonapur Block) 1)Active erosion observed near the embankment at No.2 Sonapur village. Approximately 5 meters eroded as reported by Lot Mandal & Gaon Pradhan on 18/06/2023. 2) Active erosion observed at Shakupara due to the effect of Meneha (Owah) river. About 30 meters of land has been eroded as reported by Lot Mandal & Gaon Pradhan on 18/06/2023 3)Active erosion observed at Pabha river bank near Arman Hazir chuburi of Sonapur Block, Tinthengia GP. About 1.5 km of land eroded as reported by officials of Karunabari Development Block on 18/06/2023 0 (Long - 0.000000, Lat - 0.000000)
	Majuli	Majuli - Kartik Chapori NC Erosion occurred on 17th June and one family have been shifted to a nearby safe place. Approximately 3 katha of land area has been eroded. 4 (Long - 94.164901, Lat - 26.841096)
	Morigaon	Bhuragaon - Balidunga Pam, Kupatimari As per Water Resource department, Morigaon, Bhrahmaputra river erosion eroded 5 meter at a length of 700 meter at Kupatimari and Balidunga Pamrevenue village under Bhuragaon Rev. Circle from 17-06-2023 to 18-06-2023. 15 (Long - 26.411003, Lat - 92.251558), Laharighat - Kathani As per Water Resource Department, Morigaon River Brahmaputra erosion eroded 6 meter at a length of 650 meter at Kathani revenue village under Laharighat Revenue Circle from 17-06-2023 to 18-06-2023 0 (Long - 92.312168, Lat - 26.434602)
	Nagaon	Kampur - Kampur to Jamunamukh Road On dated 17.06.2023 Road from Kampur to Jamunamukh erosion started at 3rd, 4th and 5th Km. Approx L= 600.00m. The road belongs to Raha Territorial Road Sub Division. 0 (Long - 0.000000, Lat - 0.000000)
	Sivasagar	Sivsagar - Kurulakatia Village Damages have been observed in the form of slump down on 16/06/2023 at Left bank of river Dikhow at Kurulakatia under Sivasagar Revenue Circle. 0 (Long - 94.395200, Lat - 26.582900)
	Sonitpur	Thelamara - Nabeel, Ghatua and Balijan Bongaligaon Date-18/06/2023, As reported by Tezpur Water Resource Division on 18/06/2023, Bank erosion is observed on the R/Bank of river Gabharu near Nabeel area.Length -80m, Latitude-26.64162 and Longitude-92.627171. Bank erosion observed at Ghatua area on the R/Bank of river Gabharu. Length-200m, Latitude-26.696956 and longitude-92.630724. Active bank erosion is observed at Balijan Bongaligaon area on the left bank of river Belsiri. Length -200m,Latitude-26.736022, Longitude-92.558699 0 (Long - 92.558699.000000, Lat - 26.736022)
	South Salmara	Mankachar - Fulerchar Pt-II (Kokradanga Ghat.) As per report received from I/C Control Room Hatsingimari, W.R Sub-Division, Hatsingimari an erosion due to river Brahmaputra at Fulerchar Pt-II (Kokradanga Ghat), land measuring Length-170 M & Breadth- 5 M on 18-06-2023 0 (Long - 25.721373, Lat - 89.867904)
	Udalguri	Harisinga - Anadhowapara (Panbari) Sonajuli FIS canal lining breaching on 17th June 2023 due to heavy rainfall. Approximate damage LENGTH 40M BREATH 4.5M. 0 (Long - 91.922900, Lat - 26.717400), Udalguri - Dhansiri Irrigation Project Erosion Protection at Ch 7200.00 M to 7250.00 M of D2B3M Canal of DIP on 17-06-2023 0 (Long - 92.067197, Lat - 26.667050)
Landslide	District/Sub-division*	Details
	Dima-Hasao	Haflong - Herakilo, New Boro Haflong, Sengya Tularam Raji, Lala Basti, Digrik, Boildura 1. Rani Gaidinliu Birth Centenary Memorial Stone on 17/06/2023 Lat:-25.151012, Long:-93.025352, 2. Herakilo Road on 17/06/2023 3. New Boro Haflong L.P School on 17/06/2023 4. Agriculture to LP School Approach Footpath Damage at Boildura Village on 18-06-2023 5. Lala Basti Village Approach Road Road Damaged on 18-06-2023 Lat:-25.177842 Long:-93.014106 0 (Long - 0.000000, Lat - 0.000000)
	Karimganj	Badarpur - Dharmanagar Basti, Badarpur Town Ward No- 11 and Baniargool Today morning at about 04:00 AM, a landslide incident took place at Dharmanagar Basti, Badarpur Town Ward No- 11 resulting a Kutcha House of Sajal Roy S/O Shanti Bhusan Roy got severely damaged. Measures being taken for shifting of the said family at a safer place. Also another landslide occurred yesterday on 17-06-2023 at 05:00 PM in the evening at Village Baniargool under Duttapur GP where a Pucca Housa of Chanchala Das, W/O Ranadhir Das got partially affected. The GPS Coordinates of the incident sites are Lat-24.858904, Long- 92.563748 and Lat-24.778484, Long-92.485639 respectively 7 (Long - 24.858904, Lat - 92.563748)
Urban Flood	District/Sub-division*	Details
	Cachar	Silchar - National Highway, Link Road, Ambicapatty, N.S. AVENUE, Sonai Road, Charch Road, Bilpar, Public School Road Due to heavy Rainfall & water logging Flash Flood have been occurred in different places of Silchar town, dated 18.06.2023 15000 (Long - 0.000000, Lat - 0.000000)
	Kamrup (M)	Dispur - Hatigaon, Rukminigaon, Baghorbori, Kalitakuchi and No2. Japorigog Revenue Village 18/06/2023 Waterlogging at Notboma- Sijubari, Hatigaon, Wireless, Rukminigaon, Rukmini Nagar, Baghorbori, Kalitakuchi, Anil Nagar. 0 (Long - 0.000000, Lat - 0.000000)
	Nalbari	Nalbari - Nalbari-hajo road, veterinary road, college road, circuit house road, commerce road, malikuchi road,debiram hs to balilesa road, bhakatpara road, forest office road, law college road, agriculture office road, Nalbari Bazar road, block office road, l.n.b road, palla road, alternative road, satra mv to premoda hotel road, bishnupur road As per the reported by LM under Nalbari RC, these roads are submerged due to rain water dtd 18.06.2023 1800 (Long - 0.000000, Lat - 0.000000)
*Bajali, Biswanath, Hojai and Tamulpur are sub-divisions (Independent)		

Assam Flood Report as on 18-06-2024							
Particulars	Assam Flood Report as on 18-06-2024						
Rivers flowing above	Rivers flowing above danger level					Kopili (Kampur)	
Danger Level (as per CWC bulletin issued at 8 AM)	Rivers flowing above highest flood level					Nil	
District Affected	No. of Distircts Affected	Name of Affected Districts					
	15	Biswanath, Lakhimpur, Hojai, Bongaigaon, Nalbari, Tamulpur, Udalguri, Darrang, Dhemaji, Hailakandi, Karimganj, Goalpara, Nagaon, Chirang, Kokrajhar					
No. Of Revenue Circles Affected	28						
Name Of Revenue Circle Affected	District	Total	Revenue Circle				
	Biswanath	2	Halem, Gohpur				
	Bongaigaon	3	Boitamari, Bongaigaon, Manikpur				
	Chirang	1	Sidli				
	Darrang	2	Patharighat, Mangaldoi				
	Dhemaji	1	Sissiborgaon				
	Goalpara	1	Lakhipur				
	Hailakandi	1	Hailakandi				
	Hojai	2	Doboka, Hojai				
	Karimganj	4	Nilambazar, RK Nagar, Karimganj, Badarpur				
	Kokrajhar	2	Bagribari, Kokrajhar				
	Lakhimpur	2	Bihpuria, Narayanpur				
	Nagaon	1	Kampur				
	Nalbari	3	Banekuchi, Paschim Nalbari, Tihu				
	Tamulpur	2	Tamulpur, Goreswar				
	Udalguri	1	Khairabari				
		Total	28				
Villages Affected	District	Total	Revenue Circle				
	Biswanath	32	(Halem 27), (Gohpur 5)				
	Lakhimpur	17	(Bihpuria 2), (Narayanpur 15)				
	Hojai	17	(Doboka 9), (Hojai 8)				
	Bongaigaon	53	(Boitamari 28), (Bongaigaon 5), (Manikpur 20)				
	Nalbari	18	(Banekuchi 2), (Paschim Nalbari 6), (Tihu 10)				
	Tamulpur	44	(Tamulpur 18), (Goreswar 26)				
	Udalguri	4	(Khairabari 4)				
	Darrang	4	(Patharighat 3), (Mangaldoi 1)				
	Dhemaji	2	(Sissiborgaon 2)				
	Hailakandi	4	(Hailakandi 4)				
	Karimganj	225	(Nilambazar 82), (RK Nagar 71), (Karimganj 50), (Badarpur 22)				
	Goalpara	10	(Lakhipur 10)				
	Nagaon	19	(Kampur 19)				
	Chirang	1	(Sidli 1)				
	Kokrajhar	20	(Bagribari 19), (Kokrajhar 1)				
		Total	470				
Population And Crop Area Affected	District	Male	Female	Children	Total Population	Total Crop Area	Population and Crop Area Details
	Biswanath	378	266	174	818	69.5	(Halem Population Affected: 818 Crop Area: 69.5), (Gohpur Population Affected: 0 Crop Area: 0)
	Bongaigaon	0	0	0	0	146.5	(Boitamari Population Affected: 0 Crop Area: 52), (Bongaigaon Population Affected: 0 Crop Area: 9.5), (Manikpur Population Affected: 0 Crop Area: 85)
	Chirang	0	0	0	0	0	(Sidli Population Affected: 0 Crop Area: 0)
	Darrang	273	250	17	540	12	(Patharighat Population Affected: 51 Crop Area: 0), (Mangaldoi Population Affected: 489 Crop Area: 12)

	Dhemaji	98	94	118	310	3.5	(Sissiborgaon Population Affected: 310 Crop Area: 3.5)				
	Goalpara	0	0	0	0	0	(Lakhipur Population Affected: 0 Crop Area: 0)				
	Hailakandi	211	126	248	585	0	(Hailakandi Population Affected: 585 Crop Area: 0)				
	Hojai	0	0	0	0	124	(Doboka Population Affected: 0 Crop Area: 62), (Hojai Population Affected: 0 Crop Area: 62)				
	Karimganj	59486	50936	41711	152133	223	(Nilambazar Population Affected: 45012 Crop Area: 46), (RK Nagar Population Affected: 28649 Crop Area: 0), (Karimganj Population Affected: 62837 Crop Area: 0), (Badarpur Population Affected: 15635 Crop Area: 177)				
	Kokrajhar	450	450	0	900	88	(Bagribari Population Affected: 900 Crop Area: 78), (Kokrajhar Population Affected: 0 Crop Area: 10)				
	Lakhimpur	0	0	0	0	8	(Bihpuria Population Affected: 0 Crop Area: 0), (Narayanpur Population Affected: 0 Crop Area: 8)				
	Nagaon	1904	2026	1317	5247	513	(Kampur Population Affected: 5247 Crop Area: 513)				
	Nalbari	316	215	145	676	0	(Banekuchi Population Affected: 142 Crop Area: 0), (Paschim Nalbari Population Affected: 496 Crop Area: 0), (Tihu Population Affected: 38 Crop Area: 0)				
	Tamulpur	0	0	0	0	161.14	(Tamulpur Population Affected: 0 Crop Area: 21.98), (Goreswar Population Affected: 0 Crop Area: 139.16)				
	Udalguri	0	0	0	0	30	(Khairabari Population Affected: 0 Crop Area: 30)				
	Total	63116	54363	43730	161209	1378.64					
Relief Camps / Centres Opened	District	Total	Relief Camp			Relief Distribution Centres					
	Biswanath	0	0 (Halem 0), (Gohpur 0)			0 (Halem 0), (Gohpur 0)					
	Bongaigaon	0	0 (Boitamari 0), (Bongaigaon 0), (Manikpur 0)			0 (Boitamari 0), (Bongaigaon 0), (Manikpur 0)					
	Chirang	0	0 (Sidli 0)			0 (Sidli 0)					
	Darrang	0	0 (Patharighat 0), (Mangaldoi 0)			0 (Patharighat 0), (Mangaldoi 0)					
	Dhemaji	0	0 (Sissiborgaon 0)			0 (Sissiborgaon 0)					
	Goalpara	0	0 (Lakhipur 0)			0 (Lakhipur 0)					
	Hailakandi	4	0 (Hailakandi 0)			4 (Hailakandi 4)					
	Hojai	0	0 (Doboka 0), (Hojai 0)			0 (Doboka 0), (Hojai 0)					
	Karimganj	35	27 (Nilambazar 5), (RK Nagar 1), (Karimganj 13), (Badarpur 8)			8 (Nilambazar 4), (RK Nagar 0), (Karimganj 0), (Badarpur 4)					
	Kokrajhar	0	0 (Bagribari 0), (Kokrajhar 0)			0 (Bagribari 0), (Kokrajhar 0)					
	Lakhimpur	0	0 (Bihpuria 0), (Narayanpur 0)			0 (Bihpuria 0), (Narayanpur 0)					
	Nagaon	4	0 (Kampur 0)			4 (Kampur 4)					
	Nalbari	0	0 (Banekuchi 0), (Paschim Nalbari 0), (Tihu 0)			0 (Banekuchi 0), (Paschim Nalbari 0), (Tihu 0)					
	Tamulpur	0	0 (Tamulpur 0), (Goreswar 0)			0 (Tamulpur 0), (Goreswar 0)					
Udalguri	0	0 (Khairabari 0)			0 (Khairabari 0)						
	Total	43	27			16					
Inmates In Relief Camps	District	Total	Revenue Circlewise			Male	Female	Children	Pregnant / Lactating Mother	Person with Disability	
	Biswanath	0	(Halem 0), (Gohpur 0)			0	0	0	0	0	
	Bongaigaon	0	(Boitamari 0), (Bongaigaon 0), (Manikpur 0)			0	0	0	0	0	
	Chirang	0	(Sidli 0)			0	0	0	0	0	
	Darrang	0	(Patharighat 0), (Mangaldoi 0)			0	0	0	0	0	
	Dhemaji	0	(Sissiborgaon 0)			0	0	0	0	0	
	Goalpara	0	(Lakhipur 0)			0	0	0	0	0	
	Hailakandi	0	(Hailakandi 0)			0	0	0	0	0	
	Hojai	0	(Doboka 0), (Hojai 0)			0	0	0	0	0	
	Karimganj	5114	(Nilambazar 279), (RK Nagar 185), (Karimganj 3801), (Badarpur 849)			2338	1465	1308	3	0	
	Kokrajhar	0	(Bagribari 0), (Kokrajhar 0)			0	0	0	0	0	
	Lakhimpur	0	(Bihpuria 0), (Narayanpur 0)			0	0	0	0	0	
	Nagaon	0	(Kampur 0)			0	0	0	0	0	
	Nalbari	0	(Banekuchi 0), (Paschim Nalbari 0), (Tihu 0)			0	0	0	0	0	
	Tamulpur	0	(Tamulpur 0), (Goreswar 0)			0	0	0	0	0	
	Udalguri	0	(Khairabari 0)			0	0	0	0	0	
		Total	5114				2338	1465	1308	3	0

Non Camp Inmates in Relief Distribution Centers	District	Total	Revenue Circlewise			Male	Female	Children	Animals		
									Big	Small	Poultry
	Biswanath	0	(Halem 0), (Gohpur 0)			0	0	0	0		00
	Bongaigaon	0	(Boitamari 0), (Bongaigaon 0), (Manikpur 0)			0	0	0	0		00
	Chirang	0	(Sidli 0)			0	0	0	0		00
	Darrang	0	(Patharighat 0), (Mangaldoi 0)			0	0	0	0		00
	Dhemaji	0	(Sissiborgaon 0)			0	0	0	0		00
	Goalpara	0	(Lakhipur 0)			0	0	0	0		00
	Hailakandi	585	(Hailakandi 585)			211	126	248	0		00
	Hojai	0	(Doboka 0), (Hojai 0)			0	0	0	0		00
	Karimganj	17350	(Nilambazar 12420), (RK Nagar 0), (Karimganj 0), (Badarpur 4930)			7195	5625	4530	0		00
	Kokrajhar	0	(Bagribari 0), (Kokrajhar 0)			0	0	0	0		00
	Lakhimpur	0	(Bihpuria 0), (Narayanpur 0)			0	0	0	0		00
	Nagaon	0	(Kampur 0)			0	0	0	0		00
	Nalbari	0	(Banekuchi 0), (Paschim Nalbari 0), (Tihu 0)			0	0	0	0		00
	Tamulpur	0	(Tamulpur 0), (Goreswar 0)			0	0	0	0		00
	Udalguri	0	(Khairabari 0)			0	0	0	0		00
	Total	17935				7406	5751	4778	0		00
Human Lives Lost - Confirmed	District	Total	Male	Female	Children		Others	Revenue Circlewise			
					Male	Female					
	Biswanath	0	0	0	0	0	0	0 (Halem 0), (Gohpur 0)			
	Lakhimpur	0	0	0	0	0	0	0 (Bihpuria 0), (Narayanpur 0)			
	Hojai	0	0	0	0	0	0	0 (Doboka 0), (Hojai 0)			
	Bongaigaon	0	0	0	0	0	0	0 (Boitamari 0), (Bongaigaon 0), (Manikpur 0)			
	Nalbari	0	0	0	0	0	0	0 (Banekuchi 0), (Paschim Nalbari 0), (Tihu 0)			
	Tamulpur	0	0	0	0	0	0	0 (Tamulpur 0), (Goreswar 0)			
	Udalguri	0	0	0	0	0	0	0 (Khairabari 0)			
	Darrang	0	0	0	0	0	0	0 (Patharighat 0), (Mangaldoi 0)			
	Dhemaji	0	0	0	0	0	0	0 (Sissiborgaon 0)			
	Hailakandi	1	1	0	0	0	0	1 (Hailakandi 1)			
	Karimganj	0	0	0	0	0	0	0 (Nilambazar 0), (RK Nagar 0), (Karimganj 0), (Badarpur 0)			
	Goalpara	0	0	0	0	0	0	0 (Lakhipur 0)			
	Nagaon	0	0	0	0	0	0	0 (Kampur 0)			
	Chirang	0	0	0	0	0	0	0 (Sidli 0)			
	Kokrajhar	0	0	0	0	0	0	0 (Bagribari 0), (Kokrajhar 0)			
	Total	1	1	0	0	0	0				
Human Lives Lost - Missing	District	Total	Male	Female	Children		Others	Revenue Circlewise			
					Male	Female					
	Biswanath	0	0	0	0	0	0	0 (Halem 0), (Gohpur 0)			
	Lakhimpur	0	0	0	0	0	0	0 (Bihpuria 0), (Narayanpur 0)			
	Hojai	0	0	0	0	0	0	0 (Doboka 0), (Hojai 0)			
	Bongaigaon	0	0	0	0	0	0	0 (Boitamari 0), (Bongaigaon 0), (Manikpur 0)			
	Nalbari	0	0	0	0	0	0	0 (Banekuchi 0), (Paschim Nalbari 0), (Tihu 0)			
	Tamulpur	0	0	0	0	0	0	0 (Tamulpur 0), (Goreswar 0)			
	Udalguri	0	0	0	0	0	0	0 (Khairabari 0)			
	Darrang	0	0	0	0	0	0	0 (Patharighat 0), (Mangaldoi 0)			
	Dhemaji	0	0	0	0	0	0	0 (Sissiborgaon 0)			
	Hailakandi	0	0	0	0	0	0	0 (Hailakandi 0)			
	Karimganj	0	0	0	0	0	0	0 (Nilambazar 0), (RK Nagar 0), (Karimganj 0), (Badarpur 0)			
	Goalpara	0	0	0	0	0	0	0 (Lakhipur 0)			
	Nagaon	0	0	0	0	0	0	0 (Kampur 0)			
	Chirang	0	0	0	0	0	0	0 (Sidli 0)			
	Kokrajhar	0	0	0	0	0	0	0 (Bagribari 0), (Kokrajhar 0)			
	Total	0	0	0	0	0	0				
Animals Affected	District	Total	Big	Small	Poultry						
	Biswanath	980	630	350	0						
	Bongaigaon	0	0	0	0						

	Chirang	0	0	0	0		
	Darrang	0	0	0	0		
	Dhemaji	0	0	0	0		
	Goalpara	0	0	0	0		
	Hailakandi	0	0	0	0		
	Hojai	0	0	0	0		
	Karimganj	81493	17715	8901	54877		
	Kokrajhar	0	0	0	0		
	Lakhimpur	180	133	47	0		
	Nagaon	6261	4820	1441	0		
	Nalbari	4588	2577	2011	0		
	Tamulpur	393	279	114	0		
	Udalguri	0	0	0	0		
	Total	93895	26154	12864	54877		
Animals Washed Away	District	Total	Big	Small	Poultry		
	Biswanath	0	0	0	0		
	Bongaigaon	0	0	0	0		
	Chirang	0	0	0	0		
	Darrang	0	0	0	0		
	Dhemaji	0	0	0	0		
	Goalpara	0	0	0	0		
	Hailakandi	0	0	0	0		
	Hojai	0	0	0	0		
	Karimganj	0	0	0	0		
	Kokrajhar	0	0	0	0		
	Lakhimpur	0	0	0	0		
	Nagaon	0	0	0	0		
	Nalbari	0	0	0	0		
	Tamulpur	0	0	0	0		
	Udalguri	0	0	0	0		
	Total	0	0	0	0		
Houses Damaged	District	Fully Kuccha	Fully Pukka	Fully Total	Partially Kuccha	Partially Pukka	Partially Total
	Biswanath	0	0	0	0	0	0
	Lakhimpur	0	0	0	0	0	0
	Hojai	0	0	0	0	0	0
	Bongaigaon	0	0	0	0	0	0
	Nalbari	0	0	0	0	0	0
	Tamulpur	0	0	0	0	0	0
	Udalguri	0	0	0	0	0	0
	Darrang	0	0	0	0	0	0
	Dhemaji	0	0	0	0	0	0
	Hailakandi	0	0	0	0	0	0
	Karimganj	0	0	0	0	0	0
	Goalpara	0	0	0	0	0	0
	Nagaon	0	0	0	0	0	0
	Chirang	0	0	0	0	0	0
	Kokrajhar	0	0	0	0	0	0
	Total	0	0	0	0	0	0
Houses Damaged Others	District	Others Huts		Others Cattle Shed		Others Total	
	Biswanath	0		0		0	
	Lakhimpur	0		0		0	
	Hojai	0		0		0	
	Bongaigaon	0		0		0	
	Nalbari	0		0		0	
	Tamulpur	0		0		0	
	Udalguri	0		0		0	
	Darrang	0		0		0	
	Dhemaji	0		0		0	
	Hailakandi	0		0		0	
	Karimganj	0		0		0	

Assam Flood Report as on 19-06-2024			
Particulars	Assam Flood Report as on 19-06-2024		
Rivers flowing above Danger Level (as per CWC bulletin issued at 8 AM)	Rivers flowing above danger level		Kopili (Kampur)
	Rivers flowing above highest flood level		Nil
District Affected	No. of Districts Affected	Name of Affected Districts	
	19	Kamrup, South Salmara, Goalpara, Nagaon, Bongaigaon, Lakhimpur, Hojai, Darrang, Nalbari, Karimganj, Udalguri, Tamulpur, Hailakandi, Biswanath, Barpeta, Cachar, Baksa, Bajali, Sonitpur	
No. Of Revenue Circles Affected	48		
Name Of Revenue Circle Affected	District	Total	Revenue Circle
	Bajali	2	Bajali, Sarupeta
	Baksa	1	Barnagar RC part
	Barpeta	2	Sarthebari, Barnagar
	Biswanath	2	Halem, Gohpur
	Bongaigao n	3	Manikpur, Srijangram, Bongaigaon
	Cachar	1	Katigorah
	Darrang	5	Patharighat, Dalgaon, Sipajhar, Pub-Mangaldai, Mangaldoi
	Goalpara	4	Lakhipur, Balijana, Matia, Dudhnoi
	Hailakandi	1	Hailakandi
	Hojai	2	Doboka, Hojai
	Kamrup	3	Boko, Kamalpur, Rangia
	Karimganj	5	Nilambazar, Patherkandi, RK Nagar, Karimganj, Badarpur
	Lakhimpur	4	North Lakhimpur, Bihpuria, Narayanpur, Nowboicha
	Nagaon	2	Kampur, Raha
	Nalbari	6	Barbhag, Ghograpar, Banekuchi, Paschim Nalbari, Tihu, Nalbari
	Sonitpur	1	Dhekiajuli
	Tamulpur	2	Tamulpur, Goreswar
	Udalguri	2	Kalaigaon, Harisinga
		Total	48
Villages Affected	District	Total	Revenue Circle
	Kamrup	31	(Boko 4), (Kamalpur 6), (Rangia 21)
	South Salmara	41	(Mankachar 41)
	Goalpara	79	(Lakhipur 26), (Balijana 17), (Matia 31), (Dudhnoi 5)
	Nagaon	35	(Kampur 19), (Raha 16)
	Bongaigao n	92	(Manikpur 15), (Srijangram 76), (Bongaigaon 1)
	Lakhimpur	17	(North Lakhimpur 1), (Bihpuria 5), (Narayanpur 4), (Nowboicha 7)
	Hojai	24	(Doboka 9), (Hojai 15)
	Darrang	60	(Patharighat 31), (Dalgaon 5), (Sipajhar 13), (Pub-Mangaldai 7), (Mangaldoi 4)
	Nalbari	109	(Barbhag 18), (Ghograpar 29), (Banekuchi 5), (Paschim Nalbari 8), (Tihu 15), (Nalbari 34)
	Karimganj	280	(Nilambazar 106), (Patherkandi 28), (RK Nagar 71), (Karimganj 50), (Badarpur 25)
	Udalguri	8	(Kalaigaon 7), (Harisinga 1)
	Tamulpur	91	(Tamulpur 35), (Goreswar 56)
	Hailakandi	7	(Hailakandi 7)
	Biswanath	31	(Halem 30), (Gohpur 1)
	Barpeta	28	(Sarthebari 26), (Barnagar 2)
	Cachar	26	(Katigorah 26)
	Baksa	2	(Barnagar RC part 2)
	Bajali	17	(Bajali 3), (Sarupeta 14)
	Sonitpur	1	(Dhekiajuli 1)
	Total	979	

Population And Crop Area Affected	District	Male	Female	Children	Total Population	Total Crop Area	Population and Crop Area Details
	Bajali	3009	2356	306	5671	82.5	(Bajali Population Affected: 601 Crop Area: 5), (Sarupeta Population Affected: 5070 Crop Area: 77.5)
	Baksa	975	1110	605	2690	0	(Barnagar RC part Population Affected: 2690 Crop Area: 0)
	Barpeta	412	758	256	1426	20	(Sarthebari Population Affected: 102 Crop Area: 20), (Barnagar Population Affected: 1324 Crop Area: 0)
	Biswanath	415	305	150	870	128.5	(Halem Population Affected: 650 Crop Area: 109), (Gohpur Population Affected: 220 Crop Area: 19.5)
	Bongaigaon	0	0	0	0	395.5	(Manikpur Population Affected: 0 Crop Area: 61.5), (Srijangram Population Affected: 0 Crop Area: 334), (Bongaigaon Population Affected: 0 Crop Area: 0)
	Cachar	1735	1780	640	4155	0	(Katigorah Population Affected: 4155 Crop Area: 0)
	Darrang	2183	1966	840	4989	255.35	(Patharighat Population Affected: 3791 Crop Area: 0), (Dalgaoon Population Affected: 0 Crop Area: 8), (Sipajhar Population Affected: 0 Crop Area: 12.35), (Pub-Mangaldai Population Affected: 271 Crop Area: 0), (Mangaldoi Population Affected: 927 Crop Area: 235)
	Goalpara	1160	1150	830	3140	182.1	(Lakhipur Population Affected: 3112 Crop Area: 0), (Balijana Population Affected: 0 Crop Area: 24.1), (Matia Population Affected: 0 Crop Area: 154), (Dudhnoi Population Affected: 28 Crop Area: 4)
	Hailakandi	280	201	170	651	0	(Hailakandi Population Affected: 651 Crop Area: 0)
	Hojai	2741	1677	854	5272	199	(Doboka Population Affected: 837 Crop Area: 65), (Hojai Population Affected: 4435 Crop Area: 134)
	Kamrup	0	0	0	0	35.21	(Boko Population Affected: 0 Crop Area: 0), (Kamalpur Population Affected: 0 Crop Area: 21), (Rangia Population Affected: 0 Crop Area: 14.21)
	Karimganj	104517	84116	56746	245379	151	(Nilambazar Population Affected: 58300 Crop Area: 151), (Patherkandi Population Affected: 14743 Crop Area: 0), (RK Nagar Population Affected: 52561 Crop Area: 0), (Karimganj Population Affected: 83055 Crop Area: 0), (Badarpur Population Affected: 36720 Crop Area: 0)
	Lakhimpur	700	330	39	1069	80	(North Lakhimpur Population Affected: 1069 Crop Area: 18), (Bihpuria Population Affected: 0 Crop Area: 25), (Narayanpur Population Affected: 0 Crop Area: 3.5), (Nowboicha Population Affected: 0 Crop Area: 33.5)
	Nagaon	1904	2026	1317	5247	1089	(Kampur Population Affected: 5247 Crop Area: 513), (Raha Population Affected: 0 Crop Area: 576)
	Nalbari	1897	1258	782	3937	213.7	(Barbhag Population Affected: 0 Crop Area: 29.5), (Ghograpar Population Affected: 0 Crop Area: 44.7), (Banekuchi Population Affected: 422 Crop Area: 19), (Paschim Nalbari Population Affected: 2638 Crop Area: 0), (Tihu Population Affected: 877 Crop Area: 0), (Nalbari Population Affected: 0 Crop Area: 120.5)
	Sonitpur	92	43	16	151	0	(Dhekiajuli Population Affected: 151 Crop Area: 0)
	South Salmara	32	37	43	112	0	(Mankachar Population Affected: 112 Crop Area: 0)
	Tamulpur	3852	3784	3890	11526	449.45	(Tamulpur Population Affected: 1771 Crop Area: 85), (Goreswar Population Affected: 9755 Crop Area: 364.45)
	Udalguri	43	33	23	99	45	(Kalaigaon Population Affected: 0 Crop Area: 45), (Harisinga Population Affected: 99 Crop Area: 0)
	Total	125947	102930	67507	296384	3326.31	
Relief Camps / Centres Opened	District	Total	Relief Camp			Relief Distribution Centres	
	Bajali	1	1 (Bajali 0), (Sarupeta 1)			0 (Bajali 0), (Sarupeta 0)	
	Baksa	0	0 (Barnagar RC part 0)			0 (Barnagar RC part 0)	
	Barpeta	0	0 (Sarthebari 0), (Barnagar 0)			0 (Sarthebari 0), (Barnagar 0)	
	Biswanath	2	0 (Halem 0), (Gohpur 0)			2 (Halem 2), (Gohpur 0)	
	Bongaigaon	0	0 (Manikpur 0), (Srijangram 0), (Bongaigaon 0)			0 (Manikpur 0), (Srijangram 0), (Bongaigaon 0)	

	Cachar	0	0 (Katigora 0)	0 (Katigora 0)				
	Darrang	0	0 (Patharighat 0), (Dalgao 0), (Sipajhar 0), (Pub-Mangaldai 0), (Mangaldoi 0)	0 (Patharighat 0), (Dalgao 0), (Sipajhar 0), (Pub-Mangaldai 0), (Mangaldoi 0)				
	Goalpara	1	1 (Lakhipur 1), (Balijana 0), (Matia 0), (Dudhnoi 0)	0 (Lakhipur 0), (Balijana 0), (Matia 0), (Dudhnoi 0)				
	Hailakandi	0	0 (Hailakandi 0)	0 (Hailakandi 0)				
	Hojai	12	12 (Doboka 2), (Hojai 10)	0 (Doboka 0), (Hojai 0)				
	Kamrup	0	0 (Boko 0), (Kamalpur 0), (Rangia 0)	0 (Boko 0), (Kamalpur 0), (Rangia 0)				
	Karimganj	77	59 (Nilambazar 11), (Patherkandi 1), (RK Nagar 4), (Karimganj 33), (Badarpur 10)	18 (Nilambazar 4), (Patherkandi 0), (RK Nagar 5), (Karimganj 0), (Badarpur 9)				
	Lakhimpur	0	0 (North Lakhimpur 0), (Bihpuria 0), (Narayanpur 0), (Nowboicha 0)	0 (North Lakhimpur 0), (Bihpuria 0), (Narayanpur 0), (Nowboicha 0)				
	Nagaon	1	0 (Kampur 0), (Raha 0)	1 (Kampur 1), (Raha 0)				
	Nalbari	7	6 (Barbhag 0), (Ghograpar 0), (Banekuchi 0), (Paschim Nalbari 0), (Tihu 6), (Nalbari 0)	1 (Barbhag 0), (Ghograpar 0), (Banekuchi 0), (Paschim Nalbari 1), (Tihu 0), (Nalbari 0)				
	Sonitpur	1	0 (Dhekiajuli 0)	1 (Dhekiajuli 1)				
	South Salmara	1	1 (Mankachar 1)	0 (Mankachar 0)				
	Tamulpur	1	0 (Tamulpur 0), (Goreswar 0)	1 (Tamulpur 1), (Goreswar 0)				
	Udalguri	1	1 (Kalaigaon 0), (Harisinga 1)	0 (Kalaigaon 0), (Harisinga 0)				
	Total	105	81	24				
Inmates In Relief Camps	District	Total	Revenue Circlewise	Male	Female	Children	Pregnant / Lactating Mother	Person with Disability
	Bajali	151	(Bajali 0), (Sarupeta 151)	41	70	37	2	1
	Baksa	0	(Barnagar RC part 0)	0	0	0	0	0
	Barpeta	0	(Sarthebari 0), (Barnagar 0)	0	0	0	0	0
	Biswanath	0	(Halem 0), (Gohpur 0)	0	0	0	0	0
	Bongaigaon	0	(Manikpur 0), (Srijangram 0), (Bongaigaon 0)	0	0	0	0	0
	Cachar	0	(Katigora 0)	0	0	0	0	0
	Darrang	0	(Patharighat 0), (Dalgao 0), (Sipajhar 0), (Pub-Mangaldai 0), (Mangaldoi 0)	0	0	0	0	0
	Goalpara	170	(Lakhipur 170), (Balijana 0), (Matia 0), (Dudhnoi 0)	60	50	44	11	5
	Hailakandi	0	(Hailakandi 0)	0	0	0	0	0
	Hojai	1623	(Doboka 362), (Hojai 1261)	814	523	282	3	1
	Kamrup	0	(Boko 0), (Kamalpur 0), (Rangia 0)	0	0	0	0	0
	Karimganj	9788	(Nilambazar 672), (Patherkandi 13), (RK Nagar 794), (Karimganj 7216), (Badarpur 1093)	4277	2912	2588	9	2
	Lakhimpur	0	(North Lakhimpur 0), (Bihpuria 0), (Narayanpur 0), (Nowboicha 0)	0	0	0	0	0
	Nagaon	0	(Kampur 0), (Raha 0)	0	0	0	0	0
	Nalbari	223	(Barbhag 0), (Ghograpar 0), (Banekuchi 0), (Paschim Nalbari 0), (Tihu 223), (Nalbari 0)	101	75	42	0	5
	Sonitpur	0	(Dhekiajuli 0)	0	0	0	0	0
	South Salmara	112	(Mankachar 112)	32	34	43	2	1
	Tamulpur	0	(Tamulpur 0), (Goreswar 0)	0	0	0	0	0
	Udalguri	99	(Kalaigaon 0), (Harisinga 99)	43	33	23	0	0
	Total	12166		5368	3697	3059	27	15
Non Camp Inmates in Relief Distribution Centers	District	Total	Revenue Circlewise	Male	Female	Children	Animals	
							Big	Small
	Bajali	0	(Bajali 0), (Sarupeta 0)	0	0	0	0	00
	Baksa	0	(Barnagar RC part 0)	0	0	0	0	00
	Barpeta	0	(Sarthebari 0), (Barnagar 0)	0	0	0	0	00
	Biswanath	0	(Halem 0), (Gohpur 0)	0	0	0	0	00
	Bongaigaon	0	(Manikpur 0), (Srijangram 0), (Bongaigaon 0)	0	0	0	0	00
	Cachar	0	(Katigora 0)	0	0	0	0	00
	Darrang	0	(Patharighat 0), (Dalgao 0), (Sipajhar 0), (Pub-Mangaldai 0), (Mangaldoi 0)	0	0	0	0	00

	Goalpara	0	(Lakhipur 0), (Balijana 0), (Matia 0), (Dudhnoi 0)		0	0	0	0	0
	Hailakandi	0	(Hailakandi 0)		0	0	0	0	0
	Hojai	0	(Doboka 0), (Hojai 0)		0	0	0	0	0
	Kamrup	0	(Boko 0), (Kamalpur 0), (Rangia 0)		0	0	0	0	0
	Karimganj	10022	(Nilambazar 4339), (Patherkandi 0), (RK Nagar 0), (Karimganj 0), (Badarpur 5683)		3318	3272	3432	0	0
	Lakhimpur	0	(North Lakhimpur 0), (Bihpuria 0), (Narayanpur 0), (Nowboicha 0)		0	0	0	0	0
	Nagaon	265	(Kampur 265), (Raha 0)		67	56	142	0	0
	Nalbari	0	(Barbhag 0), (Ghograpar 0), (Banekuchi 0), (Paschim Nalbari 0), (Tihu 0), (Nalbari 0)		0	0	0	0	0
	Sonitpur	0	(Dhekiajuli 0)		0	0	0	0	0
	South Salmara	0	(Mankachar 0)		0	0	0	0	0
	Tamulpur	0	(Tamulpur 0), (Goreswar 0)		0	0	0	279	1140
	Udalguri	0	(Kalaigaon 0), (Harisinga 0)		0	0	0	0	0
	Total	10287			3385	3328	3574	279	1140
Human Lives Lost - Confirmed	District	Total	Male	Female	Children		Others	Revenue Circlewise	
					Male	Female			
	Kamrup	0	0	0	0	0	0	0 (Boko 0), (Kamalpur 0), (Rangia 0)	
	South Salmara	0	0	0	0	0	0	0 (Mankachar 0)	
	Goalpara	0	0	0	0	0	0	0 (Lakhipur 0), (Balijana 0), (Matia 0), (Dudhnoi 0)	
	Nagaon	0	0	0	0	0	0	0 (Kampur 0), (Raha 0)	
	Bongaigaon	0	0	0	0	0	0	0 (Manikpur 0), (Srijangram 0), (Bongaigaon 0)	
	Lakhimpur	0	0	0	0	0	0	0 (North Lakhimpur 0), (Bihpuria 0), (Narayanpur 0), (Nowboicha 0)	
	Hojai	0	0	0	0	0	0	0 (Doboka 0), (Hojai 0)	
	Darrang	0	0	0	0	0	0	0 (Patharighat 0), (Dalgaon 0), (Sipajhar 0), (Pub-Mangaldai 0), (Mangaldoi 0)	
	Nalbari	0	0	0	0	0	0	0 (Barbhag 0), (Ghograpar 0), (Banekuchi 0), (Paschim Nalbari 0), (Tihu 0), (Nalbari 0)	
	Karimganj	0	0	0	0	0	0	0 (Nilambazar 0), (Patherkandi 0), (RK Nagar 0), (Karimganj 0), (Badarpur 0)	
	Udalguri	0	0	0	0	0	0	0 (Kalaigaon 0), (Harisinga 0)	
	Tamulpur	0	0	0	0	0	0	0 (Tamulpur 0), (Goreswar 0)	
	Hailakandi	0	0	0	0	0	0	0 (Hailakandi 0)	
	Biswanath	0	0	0	0	0	0	0 (Halem 0), (Gohpur 0)	
	Barpeta	0	0	0	0	0	0	0 (Sarthebari 0), (Barnagar 0)	
	Cachar	0	0	0	0	0	0	0 (Katigora 0)	
	Baksa	0	0	0	0	0	0	0 (Barnagar RC part 0)	
	Bajali	0	0	0	0	0	0	0 (Bajali 0), (Sarupeta 0)	
	Sonitpur	0	0	0	0	0	0	0 (Dhekiajuli 0)	
	Total	0	0	0	0	0	0		
Human Lives Lost - Missing	District	Total	Male	Female	Children		Others	Revenue Circlewise	
					Male	Female			
	Kamrup	0	0	0	0	0	0	0 (Boko 0), (Kamalpur 0), (Rangia 0)	
	South Salmara	0	0	0	0	0	0	0 (Mankachar 0)	
	Goalpara	0	0	0	0	0	0	0 (Lakhipur 0), (Balijana 0), (Matia 0), (Dudhnoi 0)	
	Nagaon	0	0	0	0	0	0	0 (Kampur 0), (Raha 0)	
	Bongaigaon	0	0	0	0	0	0	0 (Manikpur 0), (Srijangram 0), (Bongaigaon 0)	
	Lakhimpur	0	0	0	0	0	0	0 (North Lakhimpur 0), (Bihpuria 0), (Narayanpur 0), (Nowboicha 0)	
	Hojai	0	0	0	0	0	0	0 (Doboka 0), (Hojai 0)	
	Darrang	0	0	0	0	0	0	0 (Patharighat 0), (Dalgaon 0), (Sipajhar 0), (Pub-Mangaldai 0), (Mangaldoi 0)	



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Assam Flood Report as on 20-06-2024			
Particulars	Assam Flood Report as on 20-06-2024		
Rivers flowing above Danger	Rivers flowing above danger level	Kopili (Kampur), Katakhal (MATIZURI), Barak (BADARPUR GHAT), Kushiara (KARIMGANJ)	
Level (as per CWC bulletin issued at 8 AM)	Rivers flowing above highest flood level	Nil	
District Affected	No. of Districts Affected	Name of Affected Districts	
	22	Tamulpur, Barpeta, Karimganj, Udalguri, Kamrup, Lakhimpur, Kokrajhar, Kamrup (M), Hojai, South Salmara, Cachar, Nalbari, Darrang, Goalpara, Bongaigaon, Baksa, Nagaon, Sonitpur, Biswanath, Hailakandi, Bajali, Karbi Anglong West	
No. Of Revenue Circles Affected	67		
Name Of Revenue Circle Affected	District	Total	Revenue Circle
	Bajali	2	Sarupeta, Bajali
	Baksa	3	Baska, Jalah, Barnagar RC part
	Barpeta	3	Sarthebari, Barnagar, Barpeta
	Biswanath	2	Halem, Gohpur
	Bongaigaon	4	Srijangram, Boitamari, Bongaigaon, Manikpur
	Cachar	1	Katigora
	Darrang	5	Patharighat, Dalgaon, Sipajhar, Pub-Mangaldai, Mangaldoi
	Goalpara	4	Lakhipur, Matia, Dudhnoi, Balijana
	Hailakandi	1	Hailakandi
	Hojai	3	Doboka, Hojai, Lanka
	Kamrup	7	Rangia, Chaygaon, North Ghy, Boko, Kayan, Hajo, Kamalpur
	Kamrup (M)	1	Azara
	Karbi Anglong West	1	Donkamokam
	Karimganj	5	Patherkandi, Nilambazar, Badarpur, RK Nagar, Karimganj
	Kokrajhar	4	Bhawraguri, Kokrajhar, Gossaigaon, Bagribari
	Lakhimpur	3	North Lakhimpur, Kadam, Narayanpur
	Nagaon	2	Kampur, Raha
	Nalbari	6	Ghograpar, Banekuchi, Nalbari, Barbhag, Tihu, Paschim Nalbari
	Sonitpur	2	Thelamara, Dhekiajuli
	South Salmara	1	Mankachar
	Tamulpur	2	Tamulpur, Goreswar
	Udalguri	5	Khairabari, Harisinga, Kalaigaon, Mazbat, Udalguri
	Total	67	
Villages Affected	District	Total	Revenue Circle
	Tamulpur	84	(Tamulpur 11), (Goreswar 73)
	Barpeta	58	(Sarthebari 54), (Barnagar 2), (Barpeta 2)
	Karimganj	279	(Patherkandi 28), (Nilambazar 106), (Badarpur 24), (RK Nagar 71), (Karimganj 50)
	Udalguri	51	(Khairabari 16), (Harisinga 1), (Kalaigaon 19), (Mazbat 4), (Udalguri 11)
	Kamrup	182	(Rangia 82), (Chaygaon 4), (North Ghy 14), (Boko 1), (Kayan 25), (Hajo 25), (Kamalpur 31)
	Lakhimpur	19	(North Lakhimpur 1), (Kadam 4), (Narayanpur 14)
	Kokrajhar	70	(Bhawraguri 12), (Kokrajhar 12), (Gossaigaon 11), (Bagribari 35)
	Kamrup (M)	6	(Azara 6)
	Hojai	24	(Doboka 9), (Hojai 11), (Lanka 4)
	South Salmara	66	(Mankachar 66)
	Cachar	36	(Katigora 36)
	Nalbari	99	(Ghograpar 15), (Banekuchi 4), (Nalbari 20), (Barbhag 30), (Tihu 21), (Paschim Nalbari 9)
	Darrang	82	(Patharighat 41), (Dalgaon 8), (Sipajhar 9), (Pub-Mangaldai 8), (Mangaldoi 16)
	Goalpara	98	(Lakhipur 45), (Matia 43), (Dudhnoi 1), (Balijana 9)
	Bongaigaon	41	(Srijangram 15), (Boitamari 18), (Bongaigaon 7), (Manikpur 1)
	Baksa	18	(Baska 12), (Jalah 4), (Barnagar RC part 2)
	Nagaon	38	(Kampur 20), (Raha 18)
	Sonitpur	2	(Thelamara 1), (Dhekiajuli 1)
	Biswanath	12	(Halem 11), (Gohpur 1)

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	Hailakandi	6	(Hailakandi 6)				
	Bajali	39	(Sarupeta 13), (Bajali 26)				
	Karbi Anglong West	1	(Donkamokam 1)				
	Total	1311					
Population And Crop Area Affected	District	Male	Female	Children	Total Population	Total Crop Area	Population and Crop Area Details
	Bajali	5074	4211	554	9839	208.7	(Sarupeta Population Affected: 5160 Crop Area: 137.7), (Bajali Population Affected: 4679 Crop Area: 71)
	Baksa	1554	1636	960	4150	66	(Baksa Population Affected: 0 Crop Area: 48), (Jalah Population Affected: 1835 Crop Area: 18), (Barnagar RC part Population Affected: 2315 Crop Area: 0)
	Barpeta	7318	6402	4390	18110	79.75	(Sarthebari Population Affected: 17185 Crop Area: 79.75), (Barnagar Population Affected: 725 Crop Area: 0), (Barpeta Population Affected: 200 Crop Area: 0)
	Biswanath	275	198	103	576	54	(Halem Population Affected: 576 Crop Area: 44.5), (Gohpur Population Affected: 0 Crop Area: 9.5)
	Bongaigaon	0	0	0	0	132	(Srijangram Population Affected: 0 Crop Area: 19), (Boitamari Population Affected: 0 Crop Area: 113), (Bongaigaon Population Affected: 0 Crop Area: 0), (Manikpur Population Affected: 0 Crop Area: 0)
	Cachar	5200	4930	1030	11160	0	(Katigorah Population Affected: 11160 Crop Area: 0)
	Darrang	24101	21812	7467	53380	792.7	(Patharighat Population Affected: 35742 Crop Area: 0), (Dalgaon Population Affected: 0 Crop Area: 12), (Sipajhar Population Affected: 9683 Crop Area: 83.45), (Pub-Mangaldai Population Affected: 0 Crop Area: 98), (Mangaldoi Population Affected: 7955 Crop Area: 599.25)
	Goalpara	2694	2580	1993	7267	199	(Lakhipur Population Affected: 7239 Crop Area: 0), (Matia Population Affected: 0 Crop Area: 183), (Dudhnoi Population Affected: 28 Crop Area: 0), (Balijana Population Affected: 0 Crop Area: 16)
	Hailakandi	175	138	217	530	0	(Hailakandi Population Affected: 530 Crop Area: 0)
	Hojai	1704	1138	663	3505	322	(Doboka Population Affected: 837 Crop Area: 65), (Hojai Population Affected: 2668 Crop Area: 88), (Lanka Population Affected: 0 Crop Area: 169)
	Kamrup	39	54	15	108	451.8	(Rangia Population Affected: 108 Crop Area: 179.32), (Chaygaon Population Affected: 0 Crop Area: 0), (North Ghy Population Affected: 0 Crop Area: 15.3), (Boko Population Affected: 0 Crop Area: 0), (Kayen Population Affected: 0 Crop Area: 25.68), (Hajo Population Affected: 0 Crop Area: 173), (Kamelpur Population Affected: 0 Crop Area: 58.5)
	Kamrup (M)	0	0	0	0	0	(Azara Population Affected: 0 Crop Area: 0)
	Karbi Anglong West	0	0	0	0	34	(Donkamokam Population Affected: 0 Crop Area: 34)
	Karimganj	108628	86726	59268	254622	1221.5	(Patherkandi Population Affected: 14743 Crop Area: 862.5), (Nilambazar Population Affected: 58433 Crop Area: 359), (Badarpur Population Affected: 39502 Crop Area: 0), (RK Nagar Population Affected: 52561 Crop Area: 0), (Karimganj Population Affected: 89383 Crop Area: 0)
	Kokrajhar	504	500	0	1004	146.57	(Bhawraguri Population Affected: 0 Crop Area: 18.24), (Kokrajhar Population Affected: 0 Crop Area: 7), (Gossaigaon Population Affected: 0 Crop Area: 11.03), (Bagribari Population Affected: 1004 Crop Area: 110.3)
	Lakhimpur	700	330	39	1069	131	(North Lakhimpur Population Affected: 1069 Crop Area: 18), (Kadam Population Affected: 0 Crop Area: 44), (Narayanpur Population Affected: 0 Crop Area: 69)
	Nagaon	3994	3736	4017	11747	1298	(Kampur Population Affected: 11747 Crop Area: 553), (Raha Population Affected: 0 Crop Area: 745)
	Nalbari	3128	2478	1236	6842	151.9	(Ghograpar Population Affected: 0 Crop Area: 17.1), (Banekuchi Population Affected: 766 Crop Area: 0), (Nalbari Population Affected: 0 Crop Area: 97), (Barbhag Population Affected: 0 Crop Area: 37.8), (Tihu Population Affected: 2964 Crop Area: 0), (Paschim Nalbari Population Affected: 3112 Crop Area: 0)
	Sonitpur	46	24	16	86	0	(Thelamara Population Affected: 0 Crop Area: 0), (Dhekiajuli Population Affected: 86 Crop Area: 0)
	South Salmara	32	37	43	112	424	(Mankachar Population Affected: 112 Crop Area: 424)
	Tamulpur	8101	8012	7073	23186	509.91	(Tamulpur Population Affected: 4390 Crop Area: 40.5), (Goreswar Population Affected: 18796 Crop Area: 469.41)



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	Udalguri	910	937	216	2063	202	(Khairabari Population Affected: 1964 Crop Area: 62), (Harisinga Population Affected: 99 Crop Area: 0), (Kalaigaon Population Affected: 0 Crop Area: 140), (Mazbat Population Affected: 0 Crop Area: 0), (Udalguri Population Affected: 0 Crop Area: 0)			
	Total	174177	145879	89300	409356	6424.83				
Relief Camps / Centres Opened	District	Total	Relief Camp			Relief Distribution Centres				
	Bajali	2	2 (Sarupeta 1), (Bajali 1)			0 (Sarupeta 0), (Bajali 0)				
	Baksa	1	1 (Baska 0), (Jalah 1), (Barnagar RC part 0)			0 (Baska 0), (Jalah 0), (Barnagar RC part 0)				
	Barpeta	10	0 (Sarthebari 0), (Barnagar 0), (Barpeta 0)			10 (Sarthebari 10), (Barnagar 0), (Barpeta 0)				
	Biswanath	1	0 (Halem 0), (Gohpur 0)			1 (Halem 1), (Gohpur 0)				
	Bongaigaon	0	0 (Srijangram 0), (Boitamari 0), (Bongaigaon 0), (Manikpur 0)			0 (Srijangram 0), (Boitamari 0), (Bongaigaon 0), (Manikpur 0)				
	Cachar	0	0 (Katigorah 0)			0 (Katigorah 0)				
	Darrang	6	0 (Patharighat 0), (Dalgaon 0), (Sipajhar 0), (Pub-Mangaldai 0), (Mangaldoi 0)			6 (Patharighat 3), (Dalgaon 0), (Sipajhar 0), (Pub-Mangaldai 0), (Mangaldoi 3)				
	Goalpara	2	1 (Lakhipur 1), (Matia 0), (Dudhnoi 0), (Balijana 0)			1 (Lakhipur 0), (Matia 0), (Dudhnoi 1), (Balijana 0)				
	Hailakandi	0	0 (Hailakandi 0)			0 (Hailakandi 0)				
	Hojai	14	11 (Doboka 3), (Hojai 8), (Lanka 0)			3 (Doboka 3), (Hojai 0), (Lanka 0)				
	Kamrup	2	2 (Rangia 2), (Chaygaon 0), (North Ghy 0), (Boko 0), (Kayan 0), (Hajo 0), (Kamalpur 0)			0 (Rangia 0), (Chaygaon 0), (North Ghy 0), (Boko 0), (Kayan 0), (Hajo 0), (Kamalpur 0)				
	Kamrup (M)	0	0 (Azara 0)			0 (Azara 0)				
	Karbi Anglong West	0	0 (Donkamokam 0)			0 (Donkamokam 0)				
	Karimganj	124	75 (Patherkandi 1), (Nilambazar 16), (Badarpur 13), (RK Nagar 12), (Karimganj 33)			49 (Patherkandi 17), (Nilambazar 8), (Badarpur 12), (RK Nagar 7), (Karimganj 5)				
	Kokrajhar	0	0 (Bhawraguri 0), (Kokrajhar 0), (Gossaigaon 0), (Bagribari 0)			0 (Bhawraguri 0), (Kokrajhar 0), (Gossaigaon 0), (Bagribari 0)				
	Lakhimpur	1	0 (North Lakhimpur 0), (Kadam 0), (Narayanpur 0)			1 (North Lakhimpur 1), (Kadam 0), (Narayanpur 0)				
	Nagaon	1	0 (Kampur 0), (Raha 0)			1 (Kampur 1), (Raha 0)				
	Nalbari	13	11 (Ghograpar 0), (Banekuchi 0), (Nalbari 0), (Barbhag 0), (Tihu 9), (Paschim Nalbari 2)			2 (Ghograpar 0), (Banekuchi 0), (Nalbari 0), (Barbhag 0), (Tihu 1), (Paschim Nalbari 1)				
	Sonitpur	1	0 (Thelamara 0), (Dhekiajuli 0)			1 (Thelamara 0), (Dhekiajuli 1)				
	South Salmara	1	1 (Mankachar 1)			0 (Mankachar 0)				
	Tamulpur	3	0 (Tamulpur 0), (Goreswar 0)			3 (Tamulpur 0), (Goreswar 3)				
	Udalguri	1	1 (Khairabari 0), (Harisinga 1), (Kalaigaon 0), (Mazbat 0), (Udalguri 0)			0 (Khairabari 0), (Harisinga 0), (Kalaigaon 0), (Mazbat 0), (Udalguri 0)				
		Total	183	105			78			
	Inmates In Relief Camps	District	Total	Revenue Circlewise			Male	Female	Children	Pregnant / Lactating Mother
Bajali		188	(Sarupeta 152), (Bajali 36)			55	90	39	3	1
Baksa		117	(Baska 0), (Jalah 117), (Barnagar RC part 0)			29	43	39	6	0
Barpeta		0	(Sarthebari 0), (Barnagar 0), (Barpeta 0)			0	0	0	0	0
Biswanath		0	(Halem 0), (Gohpur 0)			0	0	0	0	0
Bongaigaon		0	(Srijangram 0), (Boitamari 0), (Bongaigaon 0), (Manikpur 0)			0	0	0	0	0
Cachar		0	(Katigorah 0)			0	0	0	0	0
Darrang		0	(Patharighat 0), (Dalgaon 0), (Sipajhar 0), (Pub-Mangaldai 0), (Mangaldoi 0)			0	0	0	0	0
Goalpara		176	(Lakhipur 176), (Matia 0), (Dudhnoi 0), (Balijana 0)			60	53	47	11	5
Hailakandi		0	(Hailakandi 0)			0	0	0	0	0



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	Hojai	1542	(Doboka 457), (Hojai 1085), (Lanka 0)	761	480	298	3	0
	Kamrup	108	(Rangia 108), (Chaygaon 0), (North Ghy 0), (Boko 0), (Kayan 0), (Hajo 0), (Kamalpur 0)	39	54	15	0	0
	Kamrup (M)	0	(Azara 0)	0	0	0	0	0
	Karbi Anglong West	0	(Donkamokam 0)	0	0	0	0	0
	Karimganj	11318	(Patherkandi 13), (Nilambazar 588), (Badarpur 1205), (RK Nagar 1417), (Karimganj 8095)	4490	3411	3397	18	2
	Kokrajhar	0	(Bhawraguri 0), (Kokrajhar 0), (Gossaigaon 0), (Bagribari 0)	0	0	0	0	0
	Lakhimpur	0	(North Lakhimpur 0), (Kadam 0), (Narayanpur 0)	0	0	0	0	0
	Nagaon	0	(Kampur 0), (Raha 0)	0	0	0	0	0
	Nalbari	555	(Ghograpar 0), (Banekuchi 0), (Nalbari 0), (Barbhag 0), (Tihu 487), (Paschim Nalbari 68)	261	208	78	5	3
	Sonitpur	0	(Thelamara 0), (Dhekiajuli 0)	0	0	0	0	0
	South Salmara	112	(Mankachar 112)	32	34	43	2	1
	Tamulpur	0	(Tamulpur 0), (Goreswar 0)	0	0	0	0	0
	Udalguri	99	(Khairabari 0), (Harisinga 99), (Kalaigaon 0), (Mazbat 0), (Udalguri 0)	43	33	23	0	0
	Total	14215		5770	4406	3979	48	12
Non Camp Inmates in Relief Distribution Centers	District	Total	Revenue Circlewise	Male	Female	Children	Animals	
							Big	Small Poultry
	Bajali	0	(Sarupeta 0), (Bajali 0)	0	0	0	0	00
	Baksa	0	(Baska 0), (Jalah 0), (Barnagar RC part 0)	0	0	0	0	00
	Barpeta	10000	(Sarthebari 10000), (Barnagar 0), (Barpeta 0)	3912	3588	2500	9525	96610
	Biswanath	0	(Halem 0), (Gohpur 0)	0	0	0	0	00
	Bongaigaon	0	(Srijangram 0), (Boitamari 0), (Bongaigaon 0), (Manikpur 0)	0	0	0	0	00
	Cachar	0	(Katigora 0)	0	0	0	0	00
	Darrang	738	(Patharighat 0), (Dalgaon 0), (Sipajhar 0), (Pub-Mangaldai 0), (Mangaldoi 738)	370	230	138	310	3101800
	Goalpara	28	(Lakhipur 0), (Matia 0), (Dudhnoi 28), (Balijana 0)	9	11	8	0	00
	Hailakandi	0	(Hailakandi 0)	0	0	0	0	00
	Hojai	381	(Doboka 381), (Hojai 0), (Lanka 0)	142	126	113	0	00
	Kamrup	0	(Rangia 0), (Chaygaon 0), (North Ghy 0), (Boko 0), (Kayan 0), (Hajo 0), (Kamalpur 0)	0	0	0	0	00
	Kamrup (M)	0	(Azara 0)	0	0	0	0	00
	Karbi Anglong West	0	(Donkamokam 0)	0	0	0	0	00
	Karimganj	89547	(Patherkandi 8727), (Nilambazar 22043), (Badarpur 12609), (RK Nagar 21793), (Karimganj 24375)	33100	28805	27642	0	00
	Kokrajhar	0	(Bhawraguri 0), (Kokrajhar 0), (Gossaigaon 0), (Bagribari 0)	0	0	0	0	00

ANNEXURE-XIX
**Hospital Infection Prevention
And Control Plan**

ANNEXURE-XIX

HOSPITAL INFECTION PREVENTION AND CONTROL PLAN

1.0 Introduction: Health care-associated infections (HAIs) are preventable with correct infection prevention and control (IPC) practices. This IPC guideline will ensure a safe working environment for the health care providers and patients.

2.0 Cause of Infections: The most important HAIs are

- Urinary tract infections, pneumonia, and diarrhea
- Infections following surgery or invasive medical procedures
- Maternal and newborn infections

The organisms causing most HAIs come from the patient's own body (endogenous flora). They also can come from contact with staff (cross-contamination), contaminated instruments and needles, and the environment (exogenous flora). Key contributing factors are:

- Inadequate standards and practices for operating blood transfusion services
- Increasing use of invasive medical devices (e.g., mechanical ventilators, urinary catheters, and central intravenous lines) without proper training or laboratory support
- Use of contaminated intravenous fluids
- Antibiotic resistance due to overuse of broad-spectrum antibiotics
- Unsafe and frequently unnecessary injections
- Unscientific disposal of BMW Infection to waste handlers

3.0 Preventive Measures from the Infection: Most of these infections can be prevented with readily available, relatively inexpensive strategies by:

- Adhering to recommended infection prevention practices, especially hand hygiene and wearing gloves.
- Paying attention to well-established processes for decontamination and cleaning of soiled instruments and other items, followed by either sterilization or high-level disinfection
- Improving safety in operating rooms and other high-risk areas where the most serious and frequent injuries and exposures to infectious agents occur.
