MINISTRY OF PANCHAYATI RAJ

Enhanced Gram Panchayat Spatial Development Plan (GPSDP) of Aguibani Gram Panchayat

District: Jhargram

Block: Jhargram

State: West Bengal

"A self-reliant and inclusive rural community by strengthening basic infrastructure, promoting tribal and cultural heritage, enhancing disaster resilience, and enabling sustainable livelihoods through eco-tourism, clean energy, and digital empowerment."

Prepared By: Indian Institute of Technology

Draft Plan

June 2025

GOVERNMENT OF INDIA

Please Note:

1. **Kindly refer to the circulated Enhancement of GPSDP Guidelines. For the same, please find below a Table of Contents (ToC)/List of Contents for reference to prepare the Draft and Final Enhanced GPSDP.**

2. **Kindly ensure these topics are covered so that the GPSDP can be evaluated based on the shared below ToC/List of Contents.**

3. **The Enhanced GPSDP is to be kept very focused, relevant, and brief as possible, so that GPs can use it for implementation.**

4. **All the Important Maps to be of A2/A3 size, folded and attached at the section where they are referred to. Smaller Maps can be placed between the running text of the Enhanced GPSDP.**

5. **Bigger Tables can be placed at a relevant place in Landscape Mode in the Enhanced GPSDP.**

6. **All the detailed research/documentation cited for preparing Enhanced GPSDP may be referred to in the main section, but should be placed as Annexures to the Enhanced GPSDP. Research/documentation can also be shared separately, along with the final Enhanced GPSDP.**

7. **The Final Deliverables to MoPR and the State will have the following:**

    a. **Enhanced GPSDP Document (Editable .doc/other file format and Final Softcopy in .pdf format).**

    b. **Small Video (3-5 Minutes Max.) on the Enhanced GPSDP along with 3D Visualisations/Walkthrough of the Proposals.**

    c. **Spatial Analysis & generated Maps (Proper Scaled) (in editable GIS formats with all layers & Final Maps in .pdf/.jpeg format).**

    d. **Financial Model.**

    e. **Technical & Financial Feasibility Reports.**

8. **(GP Copies) Document Converted in Local Language (Optional)**

Project Team

1.	Tarak Nath Mazumder	Advisor & Mentor
2.	Prof. Shreyas Bharule	Team Leader
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Abbreviations

Abbreviation	Full Form
ADM	Additional District Magistrate
AH46	Asian Highway 46
BDO	Block Development Officer
CAMPA	Compensatory Afforestation Fund Management and Planning Authority
CAA	Constitutional Amendment Act
CBO	Community-Based Organization
CEPT	Centre for Environmental Planning and Technology
DEM	Digital Elevation Model
DDO	District Development Officer
DIO	District Informatics Officer
DPRO	District Panchayat and Rural Officer
GP	Gram Panchayat
GPDP	Gram Panchayat Development Plan
GIS	Geographic Information System
GIA	Grant-in-Aid
ICDS	Integrated Child Development Services
ICT	Information and Communication Technology
IIT	Indian Institute of Technology
ISGPP	Institutional Strengthening of Gram Panchayats Program
JJM	Jal Jeevan Mission
LPG	Liquefied Petroleum Gas
LULC	Land Use Land Cover
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MNRE	Ministry of New and Renewable Energy
MoPR	Ministry of Panchayati Raj
MP	Member of Parliament
NIT	National Institute of Technology
NGO	Non-Governmental Organization
NH	National Highway
NIC	National Informatics Centre
NOISE	Needs, Opportunities, Improvements, Strengths, Exceptions
NRDWP	National Rural Drinking Water Programme
NRHM	National Rural Health Mission
NRLM	National Rural Livelihood Mission
PMAY-G	Pradhan Mantri Awas Yojana - Gramin
PMKSY	Pradhan Mantri Krishi Sinchayee Yojana
PRI	Panchayati Raj Institution
PRDD	Panchayat and Rural Development Department
PFP	Panchayat Financial Plan
PA&AO	Panchayat Accounts and Audit Officer
RKVY	Rashtriya Krishi Vikas Yojana
RADPFI	Rural Area Development Plan Formulation and Implementation
SAGY	Saansad Adarsh Gram Yojana

SAHAY (WB)	Sports and Health Auxiliary for Youth scheme(West Bengal Scheme)
SBM	Swachh Bharat Mission
SDG	Sustainable Development Goals
SEC	State Election Commission
SEZ	Special Economic Zone
SFC	State Finance Commission
SHG	Self-Help Group
SPA	School of Planning and Architecture
ST	Scheduled Tribe
SC	Scheduled Caste
SWAMITVA	Survey of Villages and Mapping with Improvised Technology in Village Areas
VC	Video Conference
WB	West Bengal
WBSRDA	West Bengal State Rural Development Agency
WBSEDCL	West Bengal State Electricity Distribution Company Limited

Table of Contents

List of Tables

List of Figures

Finalization of GPSDP (As per Annexure-2 of the guidelines)

Gram Panchayat Spatial Development Plan (GPSDP) for Aguibani Gram Panchayat

The Enhanced GPSDP of Aguibani Gram Panchayat, of Jhargram Block, Jhargram District and West Bengal State, prepared by Indian Institute of Technology Kharagpur, Department of Architecture and Regional Planning has been approved by the Policy Committee and Technical Committee.

A Gram Sabha Resolution has been passed on _____(Date)____. It shall be completely implemented by the Gram Panchayat in the coming years, with coordination from the aligned departments.

Signature

(Name) **Date:_____**

(Gram Pradhan)

Signature

(Name) **Date:_____**

(Block Development Officer)

Signature

(Name) **Date:_____**

(CEO Zila Parishad/DPRO)

Signature

(Name) **Date:_____**

(Director, State Panchayati Raj Dept.)

Gram Sabha Resolution (at the discretion of the Gram Panchayat)

(As per Annexure-1 of the guidelines)

RESOLUTION

We, the Elected Representatives and Officials of Aguibani Gram Panchayat of Jhargram Block, Jhargram District, West Bengal State, declare that the Enhancement of GPSDP has been successfully prepared. We concur with the Prepared plan, and it shall be completely implemented by the Gram Panchayat in the coming years, with coordination from the aligned departments.

This resolution is passed unanimously in the Gram Sabha.

Signature (Panchayat Pradhan)

Gram Panchayat: Aguibani **Date:_____**

District: Jhargram

State: West Bengal

Executive Summary

The Ministry of Panchayati Raj, Government of India, has launched the Gram Panchayat Spatial Development Plan (GPSDP) initiative under the SRIJAN programme, aiming to enable integrated planning and development for Gram Panchayats (GPs). With implementation in 34 GPs across 14 states, and support from 17 institutional partners, the programme leverages spatial data, base maps, and drone-based GIS surveys to prepare comprehensive local development plans. Aided by updated RADPFI guidelines (2022) and the Swamitva Scheme, the initiative promotes the use of digital tools, such as 3D mapping, to create village digital twins and foster data-driven rural transformation.

Introduction to the Gram Panchayat

- Aguibani Gram Panchayat is located in the picturesque region of West Bengal, India. Gram Panchayats in India function as the lowest tier of the Panchayati Raj system, a decentralized form of governance that empowers rural communities through local self-governance.
- Aguibani Gram Panchayat is a Rural Local Body within the Jhargram Panchayat Samiti, which is part of the Jhargram Zila Parishad. It has jurisdiction over a total of 28 villages which is located on Kolkata Mumbai Highway (NH49).
- Aguibani Gram Panchayat in Jhargram district is well connected to nearby towns and cities through a network of roads and railways. National Highway 49 (NH49), formerly known as NH6, passes through the region, linking it with major cities like Kolkata, Kharagpur, and Raipur.
- Rail connectivity in the region is ensured by the South Eastern Railway network. The nearest major railway station is Jhargram, which is well connected to Kolkata, Kharagpur, Tatanagar, and other key destinations through express and passenger trains. Several smaller railway stations in the vicinity further enhance accessibility for local commuters.
- The nearest airports are Netaji Subhas Chandra Bose International Airport in Kolkata and Biju Patnaik International Airport in Bhubaneswar. Both airports are accessible via NH49, ensuring regional and international connectivity.
- The region benefits from its proximity to industrial hubs and ports like Haldia, which is well connected through road and rail networks, supporting trade and logistics in the area.

Demographic Profile

Population Distribution				
Year	West Bengal (Rural)	Jhargram (Rural)	Jhargram Block(Rural)	Aguibani GP
1991*	49,370,364	500,061	133,794	8260
2001*	57,748,946	852,251	153,331	9392
2011*	62,183,113	953,694	170,097	10184
2024#	78,053,395	1,491,778	176,285	10505

Demographic Profile:Key Observations

- Average household size is 4.37.
- The literacy rate in the GP is 66%, Digital Literacy is extremely low at 7%.

GP Economic Profile

- Most villagers in Aguibani Gram Panchayat work in agriculture, especially cashew farming, supported by local aggregators. Animal husbandry, including poultry, goats, cows, and some pig farming, also supports household incomes.
- Traditional goldsmith and silver craftsmanship remain important, though brass work has declined due to low demand and industrial stagnation.
- Small-scale industries like bamboo trade, leaf platemaking, iron pin and GI net production, and puffed rice processing offer jobs but struggle due to limited training and market access.

GP Cultural Profile

- Traditional customs continue to shape everyday life in Aguibani Gram Panchayat. However, a shift is emerging with the rise of community clubs, sanghas, and cultural halls in villages like Baraektal, Purna Pani, and Baghjhapa, fostering organized cultural and recreational activities.
- The panchayat reflects a rich social mix—OBCs form the largest group (37%), followed by General (26%), ST (22%), and SC (15%). Major tribal groups include Lodha, Munda, and Bhumij, while SC communities largely consist of Dome, Tati, and Bhagal. Bengali is the dominant language, with Santali spoken widely among tribal populations.
- While pilgrimage sites exist, there are no designated tourist or heritage monuments in the panchayat.

In response, the Department of Architecture and Regional Planning at IIT Kharagpur developed an integrated spatial development plan for Aguibani. Key interventions include:

- Livelihood Generation: Establishment of an Eco-Tourism Centre, Forest Produce Aggregation and Branding Hub, and Local Product Stalls along NH-49 to tap into traditional crafts such as leaf weaving and puffed rice production.
- Social Infrastructure: Development of a Modular and Context-Sensitive Primary School (also functioning as a skill development centre), a Primary Health Centre for critical care and health awareness, and Mobile Herbal Oil Extraction Units.
- Public Spaces and Amenities: Beautification of local ponds, construction of pavements and seating areas, a Multipurpose Playground for community activities, and solar street lighting for improved safety and visibility.

- Cultural and Ecological Preservation: Special attention to tribal communities (Lodha, Munda, Bhumij), conservation of traditional knowledge systems, and creation of a Model Forest promoting coexistence between human habitation and wildlife.

These interventions are designed not only to address current challenges but also to provide a long-term development pathway for the panchayat up to 2035, aligning with sustainable rural planning and ecological sensitivity. Aguibani is positioned to become a model panchayat for forest-edge and tribal-dominated areas, demonstrating how spatial planning, technology integration, and community participation can reshape rural futures under the GPSDP framework.

1. Project Background

1.1. Context

The Ministry of Panchayati Raj had prepared 34 Gram Panchayat Spatial Development Plans (GPSDP) with the help of 17 partner Planning and Architecture Institutions like SPA, CEPT, NITs, IITs and other institutions of national repute across 14 States in India in the year 2020. The prepared GPSDPs have proved to be a steppingstone in better understanding the selected 34 Panchayats existing conditions, identifying the issues related to the service delivery of the infrastructure (physical as well as social), projecting various needs for the upcoming 10-20 years and based on the projections the projects required to be taken up in a phase-wise manner for better development. The prepared plans were based on the Spatial analysis of various parameters, preparation of base map, surveys, etc. Though GPSDPs were prepared for the panchayats to adapt, due to various reasons, they were not taken up in complete capacity, and in the course of time, the MoPR has also introduced a few new programs which shall further strengthen the course of development of the Panchayats. Thus, the enhancement of the GPSDP becomes a necessary exercise to pool in the new programs and stage the new development strategies by incorporating them all in the enhanced GPSDP. Some of the new developments and programs introduced by MoPR are as follows:

1.2. Enhanced GPSDP - Areas of Emphasis

Like almost all panchayats in the state, Aguibani faces many challenges. However, the unique case is of presence of deep forest and elephant movement corridors in the panchayat.

Other issues, such as an abundance of natural resources but a lack of employment for youth, irregular spread of buildings due to a lack of zoning regulations, complete absence of building bylaws, mud roads with no drainage, and the impact of ever-increasing traffic on them, and drainage of wastewater, etc.

In order to deal with the problem of youth not being employed, an eco-tourism centre, Forest Produce Aggregation and Branding Hub a has been proposed in the Gram Panchayat. Besides, several other proposals such as Modular and Context Sensitive Primary School which can be used as a skill development center, Primary Health Center, Pond Rejuvenation, Local Product Stalls and Display Boards at NH 49, Fair Area at NH49, Eco-tourism Center, Multipurpose Playground, Forest Produce Aggregation & Branding Hub and art installation zones using local crafts, Mobile Herbal Oil Extraction Units, Village entry gates and Beautification of GP office complex are targeted.

1.3. Objective and Scope of the Assignment

Keeping in mind the end objective as indicated in the Guidelines fro Enhancement of GPSDP fro Rural Areas- *to ensure equitable development of the area, prevent concentration of a particular activity in one place, take into account efficient distribution of facilities, place-making, infrastructure, networks, and housing, and follows the neighbourhood concept of development.* The IIT Kharagpur team has achieved proposals of the following order –

1) Primary School-cum-Skills development Center
2) Primary Health Center
3) Pond Rejuvenation
4) Local Product Stalls and Display Boards at NH 49
5) Fair Area at NH49
6) Eco-tourism Center
7) Multipurpose Playground
8) Forest Produce Aggregation & Branding Hub for local products and crafts
9) Mobile Herbal Oil Extraction Units
10) Village entry gates and Beautification of the GP office complex

1.4. Approach and Methodology

1.4.1. GP Selection Criteria

The coordinating institute was to select GPs for the project in mutual consultation with the Panchayati Raj Department of the State Government. For consultation with stakeholders and guidance on the selection of two GPs by the various coordinating institutes, the Ministry hosted a Video Conference (VC) on July 01, 2020. During the meeting, the following criteria were specified for the selection of GPs.

11) Rapid Development Potential: The GPs should be located on or near national or state highways with good connectivity and high potential for rapid economic development.

2) Proximity: The GPs should be close to the Coordinating Institute.

As per the criteria specified, Aguibani Gram Panchayat in Jhargram District and Makrampur Gram Panchayat in Paschim Medinipur District were selected in coordination with the Panchayat and Rural Development Department of West Bengal.

1.4.2. Methodology Adopted

The methodology for the preparation of the GPSDP for Aguibani GP was conceptualized as a structured, iterative, and participatory planning process, in alignment with the guidelines issued by the MoPR.

It involved a blend of qualitative and quantitative techniques, spatial mapping, stakeholder engagement, and technical analysis to ensure that the development plan is both grounded in reality and future ready.

The approach adopted can be broadly classified into the following key phases:

1. Formation of Committees

To ensure institutional ownership and coordinated implementation, three key committees were constituted per Annexure-1 of the MoPR guidelines:

- **Policy Committee:** Led by the Additional District Magistrate, this committee provided strategic oversight and approvals.
- **Technical Committee:** Headed by the Block Development Officer, this group facilitated technical guidance and on-ground coordination.
- **Working Group on Finance:** Focused on aligning the development plan with financial feasibility, budget allocation, and convergence of schemes.

These committees included representatives from various departments such as education, health, forest, and rural development, as well as elected GP members, SHGs, NGOs, and community-based organizations.

2. Baseline Data Collection and Surveys

- **Secondary data** was gathered from Census reports, Jal Jeevan Mission Dashboard, government department records, and previous planning documents.
- **Primary surveys** were conducted to fill data gaps related to housing, infrastructure, socio-economic conditions, and environmental aspects.
- **GIS based field verification and mapping** helped prepare updated base maps and spatial layers including land use, drainage, and topography.

3. Spatial and Sectoral Analysis

A detailed spatial analysis of the GP was undertaken using QGIS tools. This included:

- Topography and slope mapping
- Watershed and drainage analysis

- Land use and land cover classification (LULC 2020 and 2023)
- Soil and hydrology assessment
- Connectivity and infrastructure evaluation

In parallel, sectoral profiles were prepared covering demographics, economy, education, health, housing, social infrastructure, and environmental resilience.

4. Stakeholder Engagement

Multiple rounds of consultations were held:

- For data validation and scheme convergence.
- With GP representatives and local stakeholders for the needs assessment.
- Gram Sabha discussions to capture community aspirations and finalize the vision.

Key stakeholder meetings were conducted, including state level reviews, site level interactions, and VC consultations.

5. Development Vision and Thematic Strategy Formulation

Based on analysis and consultations, a shared Development Vision was articulated for the GP. Key development themes were identified such as livelihood enhancement, infrastructure improvement, disaster resilience, and environmental sustainability each supported by proposals and spatial interventions.

6. Proposal Drafting, Validation, and Finalization

Spatial strategies, project proposals, and land suitability plans were drafted with technical detailing. These were then:

- Reviewed by technical committees and stakeholders.
- Revised based on feedback from the Gram Panchayat and community.
- Finalized in coordination with the District Planning Committee and Policy Committee.

The entire methodology was documented in a transparent, scalable, and replicable format to serve as a model for future GP-level spatial planning exercises.

The detailed methodology followed in the preparation of the Enhanced GPSDP is illustrated in the Figure 1.1.

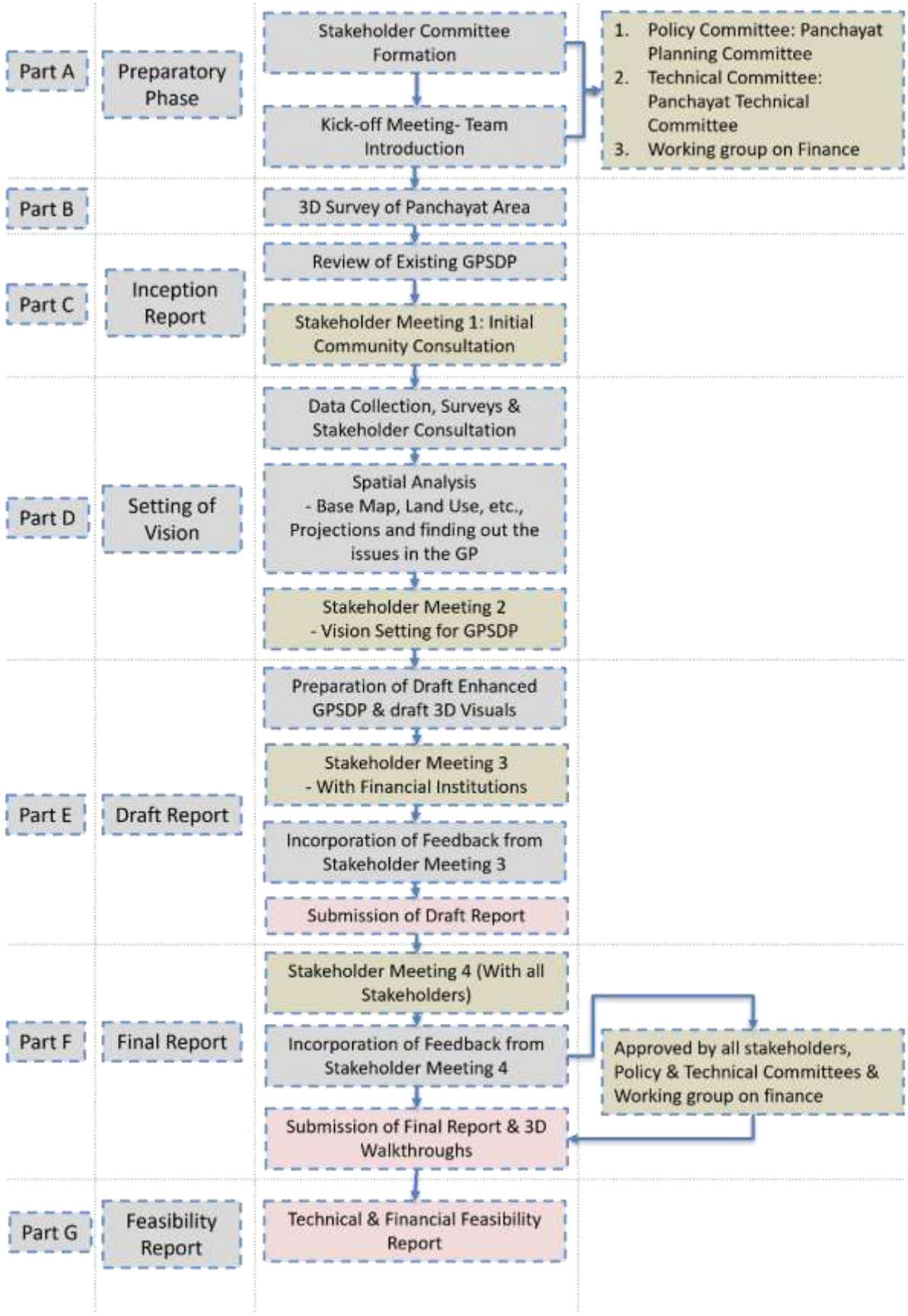

Figure 1.1 Methodology

1.5. Key processes undertaken for the enhancement of the GPSDP

1.5.1. Formulation & Details of the Policy Committee

- The Additional District Magistrate (Zilla parishad/ panchayat) - Chairperson
- The Additional District Magistrate (LR) - Member
- The District Panchayats & Rural Development Officer - Member-Convenor
- The District Engineer, WBSRDA - Member
- The District Planning Officer - Member
- The District Inspector of School - Member
- The District Programme Officer, ICDS - Member
- The DIO, NIC - Member
- District Nodal Officer, GPSDP
- The Block Development Officer - Member
- Representative of the PHE Department
- Representatives of nearby ULBs - Member
- Representatives of WBSEDCL - Member
- Representative of District Forest Officer - Member
- Pradhan of the concerned Gram Panchayat - Member
- Any other member as decided by the Committee

1.5.2. Formulation & Details of the Technical Committee

- The Block Development Officer - Chairperson
- The Block Land & Land Reforms Officer - Member
- The Joint Block Development Officer - Member
- The Block Nodal Officer, GPSDP - Member - Convenor
- The PDO/ PA&AO - Member
- One Jr. Engineer from Block - Member
- Nirman Sahayak of Gram Panchayat - Member
- Block level Official of PHE Department - Member
- An official of the Forest Department (For Paschim Medinipur & Jhargram only) - Member
- All Elected Representatives of Gram Panchayat - Member
- Any other member as decided by the Committee

1.5.3. Formulation & Details of the Working Group on Finance

Members at Block Level -

- The Block Development Officer - Chairperson
- The Block Medical Officer of Health - Member
- The Assistant Development Officer Agriculture - Member
- The Child Development Project Officer - Member
- The Block Nodal Officer, GPSDP - Member Convenor
- The Assistant Inspector of School - Member
- Auxiliary Nurse Midwife (ANM)/ 2nd ANM _ Member
- Representatives of Educational Institutions - Member
- Representatives of parent-teacher Association - Member
- Representatives of Maha-sangha/Sangha (cluster or SHGs) - Member
- Representatives of NGO/ CBO - Member
- Representatives of SC/ST Communities - Member
- Any other member as decided by the Committee

1.5.4. Team Members of the Institution involved in the process

- Prof. V.K. Tiwari, Former Director & Former Professor, IIT Kharagpur
- Prof. T. N. Mazumdar, Head & Professor, Department of Architecture and Regional Planning
- Dr Shreyas P. Bharule, Assistant Professor, Department of Architecture and Regional Planning
- Dr Priyanka Dey, Assistant Professor, Department of Architecture and Regional Planning
- Mr. Akshay Bhalerao, Project Staff
- Mr. Ajinkya Pehekar, Project Staff

1.5.5. List of Meetings held with the Committees

Meeting 1 - A meeting was held on 29.07.2024 on the operationalisation of the GPSDP process in FY 2024-25 Mrittika Bhaban, P&RD Department, Kolkata

Meeting 2 - A meeting was held on 04.09.2024 with ADM(LR), Jhargram, and Cadastral Maps were requested.

Meeting 3 - A VC meeting was held on 29.10.2024 on the progress of the GPSDP process in FY 2024-25

Meeting 4 - A meeting was held on 30.10.2024 with ADM(LR), Paschim Medinipur, and Cadastral Maps were requested.

Meeting 5 - A meeting was held on 23.12.2024 with the stakeholders of the Makrampur Gram Panchayat, Paschim Medinipur

Meeting 6 - A meeting was held on 24.12.2024 with the stakeholders of the Aguibani Gram Panchayat, Jhargram

Meeting 7 - A meeting was held on 05.03.2025 on the review of the Progress of the GPSDP process in FY 2024-25, Mrittika Bhaban, P&RD Department, Kolkata

Meeting 8 - A meeting was held on 11.03.2025 on the review of the Progress of the GPSDP at the Office of District Magistrate & Collector, Paschim Medinipur, Midnapore

Table 1-1 List of Meetings held with the Committees

Sr. No.	Date	Meeting Detail	Venue
1	29.07.2024	Operationalisation of the GPSDP process & Committee Formation	Mrittika Bhaban, P&RD Department, Kolkata
2	04.09.2024	Meeting with ADM(LR), Jhargram, requesting Cadastral Maps	Office of ADM(LR), Jhargram
3	29.10.2024	VC Meeting on the progress of the GPSDP process (FY 2024-25)	Video Conference
4	30.10.2024	Meeting with ADM(LR), Paschim Medinipur, requesting Cadastral Maps	Office of ADM(LR), Paschim Medinipur
5	23.12.2024	Meeting with stakeholders of Makrampur Gram Panchayat	Makrampur Gram Panchayat, Paschim Medinipur
6	24.12.2024	Meeting with stakeholders of Aguibani Gram Panchayat	Aguibani Gram Panchayat, Jhargram
7	05.03.2025	Review of Progress of GPSDP process (FY 2024-25)	Mrittika Bhaban, P&RD Department, Kolkata
8	11.03.2025	Review of Progress of the GPSDP Process	Office of District Magistrate & Collector, Paschim Medinipur, Midnapore

1.5.6. List of Discussions held with the Stakeholders

The list of discussions held with the Policy & Technical Committee and the working group on finance is as shown in Table 1-2, Table 1-3 & Table 1-4.

Table 1-2 Policy Committee Details

Gram Panchayat Spatial Development Plan (GPSDP) for Aguibani GP			
Policy Committee Details			
Sr. No.	Department	Date	Signature
1	Mrittika Bhaban, P&RD Department, Kolkata	29.07.2024	
4	Video Conference	29.10.2024	
2	Mrittika Bhaban, P&RD Department, Kolkata	05.03.2025	
3	Office of District Magistrate & Collector, Paschim Medinipur, Midnapore	11.03.2025	

Table 1-3 Technical Committee Details

Gram Panchayat Spatial Development Plan (GPSDP) for Aguibani GP			
Technical Committee Details			
Sr. No.	Department	Date	Signature
1	Office of ADM(LR), Jhargram	04.09.2024	
2	Office of ADM(LR), Paschim Medinipur	30.10.2024	

Table 1-4 The Working Group on Finance details

Gram Panchayat Spatial Development Plan (GPSDP) for Aguibani GP			
The Working Group on Finance			
Sr. No.	Department	Date	Signature
1	Aguibani Gram Panchayat, Jhargram	24.12.2024	

1.5.7. Details of Surveys conducted and data collected

1. Household Survey

The Household Survey has been conducted following the GPSDP survey application provided by the Ministry of Panchayat Raj Representative. The sample size of the Household surveys was calculated as per the population size of the GP.

2. Site and Services Survey

A Reconnaissance Survey has been conducted to:

Observe the available services, infrastructure facilities, and amenities at the GP.

Site visit of location demanding critical attention and redevelopment as indicated by GP Pradhan and other members of the GP Committee.

2. Introduction to the Gram Panchayat

2.1. Evolution and Growth of the GP

Aguibani Gram Panchayat, located in the Jhargram district of West Bengal, has evolved as a vibrant rural entity shaped by its geographic location, tribal heritage, and socio-economic transitions. Historically, the region has been part of the Jungle Mahal area, known for its dense sal forests and tribal settlements, including the Lodha, Munda, and Bhumij communities. These groups have preserved unique cultural practices and forest-based livelihoods for generations.

The Panchayat's growth trajectory has been influenced by its proximity to National Highway 49 (formerly NH6), which connects it to major urban centers like Kharagpur and Kolkata. This strategic location has facilitated trade, mobility, and access to services, gradually transforming Aguibani from a forest-fringe settlement into a semi-urbanized rural hub.

The spatial expansion of Aguibani, particularly between 2015 and 2023, reflects a shift from compact village clusters to ribbon-type development along transportation corridors. This pattern is evident in satellite imagery and GIS-based land use analysis, which show increasing built-up areas and encroachment into agricultural zones. Such growth underscores the need for regulated land use planning to balance development with ecological preservation.

The region's historical significance is also tied to its role in tribal resistance movements and cultural resilience. Clubs like the Adibasi Sidhu Kanhu Club commemorate tribal leaders who fought against colonial oppression, linking Aguibani's identity to broader socio-political narratives of empowerment and autonomy.

2.2. Regional settings, connectivity, and their influence on GP

Aguibani Gram Panchayat is located in the picturesque region of West Bengal, India. Gram Panchayats in India function as the lowest tier of the Panchayati Raj system, a decentralized form of governance that empowers rural communities through local self-governance. Aguibani Gram Panchayat is a Rural Local Body within the Jhargram

Panchayat Samiti, which is part of the Jhargram Zila Parishad. It has jurisdiction over a total of 28 villages, which are located on Kolkata-Mumbai Highway (NH49).

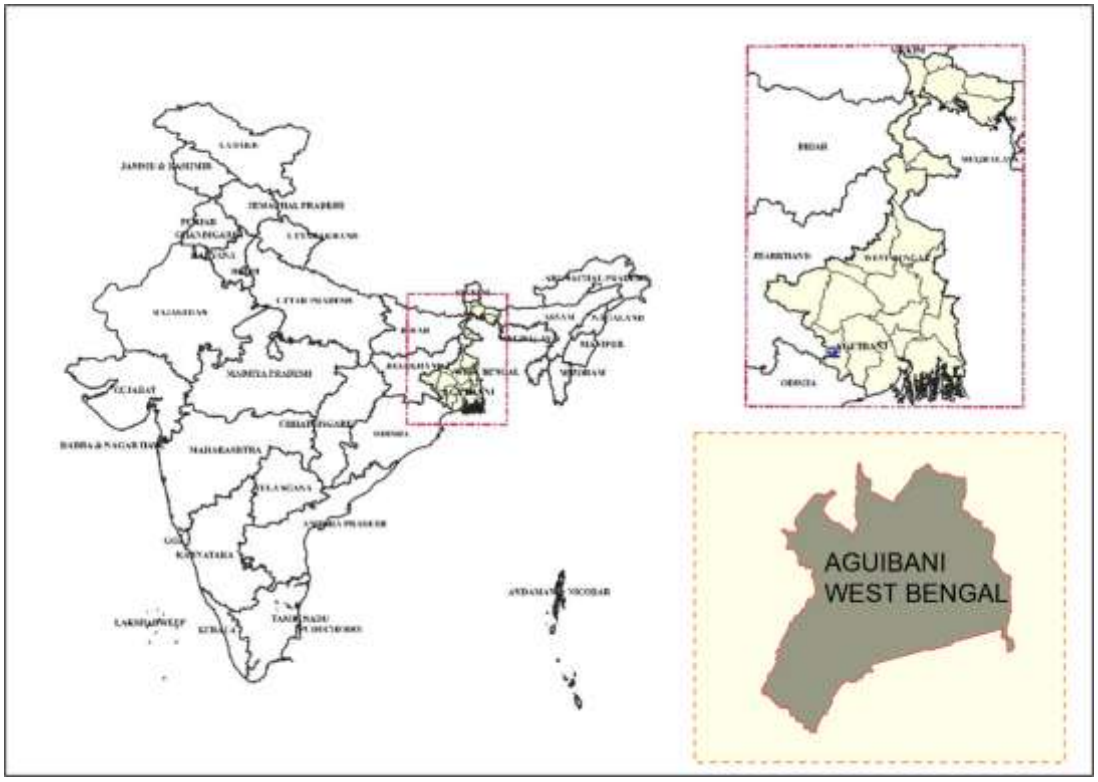

Figure 2.1 Regional context of Aguibani GP

This Gram Panchayat is situated roughly 15 kilometers south of Jhargram Municipality and approximately 34 kilometers west of the Indian Institute of Technology, Kharagpur. The district headquarters, Jhargram, is located 15 kilometers away, and Kharagpur Railway Station is about 35 kilometers from this Gram Panchayat.

2.2.1. Connectivity of Major Transportation

2.2.1.1. Road

Aguibani Gram Panchayat in Jhargram district is well connected to nearby towns and cities through a network of roads and railways. National Highway 49 (NH49), formerly known as NH6, passes through the region, linking it with major cities like Kolkata, Kharagpur, and Raipur. Additionally, several state highways and rural roads provide connectivity to nearby villages and local markets, facilitating economic and social activities.

2.2.1.2. Railways

Rail connectivity in the region is ensured by the South Eastern Railway network. The nearest major railway station is Jhargram, which is well connected to Kolkata, Kharagpur, Tatanagar, and other key destinations through express and passenger trains. Several smaller railway stations in the vicinity further enhance accessibility for local commuters.

2.2.1.3. Airport

The nearest airports are Netaji Subhas Chandra Bose International Airport in Kolkata and Biju Patnaik International Airport in Bhubaneswar. Both airports are accessible via NH49, ensuring regional and international connectivity.

2.2.1.4. Ports/Waterways

The region benefits from its proximity to industrial hubs and ports like Haldia, which is well connected through road and rail networks, supporting trade and logistics in the area.

2.2.2. Influence of regional connectivity and development on the GP

Aguibani Gram Panchayat, located in Jhargram district, is witnessing significant regional development initiatives aimed at improving socio-economic conditions while preserving its rich forest and biodiversity. The district is known for its dense sal and teak forests, which provide a habitat for diverse flora and fauna, including elephants, deer, and several bird species. These forests are not only ecologically significant but also play a crucial role in the livelihoods of local communities, with many depending on forest produce, minor timber, and eco-tourism. Conservation initiatives are being introduced to balance development with environmental sustainability, ensuring that the region's rich biodiversity is protected. Additionally, the government has been promoting afforestation and sustainable forestry practices to mitigate deforestation and human-wildlife conflicts, which are common in the region due to its proximity to elephant corridors.

Alongside ecological preservation, Jhargram district is experiencing infrastructure and industrial growth that is expected to positively impact Aguibani Gram Panchayat. The West Bengal government has recently launched multiple projects focusing on road connectivity, healthcare, and education, aimed at uplifting living standards. 1A

significant ₹1,500 crore investment in a pellet plant is expected to create new employment opportunities, further boosting the local economy. Efforts are also being made to support tribal communities through specialized programs that promote socio-economic empowerment and skill development. Improved road networks, enhanced public services, and increased investment in community welfare are strengthening the region's growth trajectory. As a result, Aguibani Gram Panchayat stands to benefit from both economic development and environmental sustainability, ensuring a balanced and holistic approach to regional progress.

2.2.3. Rural-Urban Linkages and Dependencies

Aguibani Gram Panchayat benefits from its strategic location along National Highway 49 (NH49), previously known as NH6 and part of the historic Asian Highway 46 (AH46). NH49 is a vital arterial route in eastern India, connecting major cities such as Kolkata, Kharagpur, Jamshedpur, and Raipur, and serving as a key corridor for regional trade and mobility. Its alignment through Aguibani significantly enhances the Gram Panchayat's accessibility and rural-urban integration.

This highway facilitates strong connectivity to nearby urban centres like Jhargram, Kharagpur, and Medinipur which serve as primary nodes for essential services including advanced healthcare, higher education, administrative support, and market linkages. Residents frequently depend on these towns for services and employment that are not available within the Gram Panchayat, underlining the area's reliance on urban infrastructure.

Economically, Aguibani Gram Panchayat is closely tied to its natural forest resources, which form the backbone of several traditional livelihood activities. The sal forests and bamboo reserves in the region provide raw materials for sal leaf plate production and bamboo trading, which are practiced at a household or community scale. These forest-based goods are typically collected and processed locally before being transported to urban centres for sale, thereby establishing forward linkages with urban markets.

This flow of resources and services highlights a bidirectional rural-urban dependency: while Aguibani depends on urban centres for institutional and service support, it in turn contributes raw materials and locally produced goods to the regional economy. This interdependence emphasizes the importance of improving physical and economic connectivity to foster sustainable and inclusive development in the region.

2.2.4. Spatial Growth of the Gram Panchayat

The spatial growth analysis of Aguibani Gram Panchayat over the period from 2015 to 2023 reveals a gradual expansion of built-up areas, particularly along and around NH49. In 2015, the settlement clusters were relatively compact, with distinct separation between agricultural plots and residential areas. However, by 2020, linear development along the highway had intensified, indicating ribbon-type growth driven by improved road connectivity and increasing accessibility to nearby towns.

Figure 2.2 Spatial Growth of Aguibani-Netura Area (2015) (Source: Google Earth Pro)

Figure 2.3 Spatial Growth of Aguibani-Netura Area (2020) (Source: Google Earth Pro)

Figure 2.4 Spatial Growth of Aguibani-Netura Area (2023) (Source: Google Earth Pro)

By 2023, the growth pattern further evolved into a more dispersed and fragmented form, with increased infill development in the central village areas and noticeable encroachment into agricultural lands. The rise in small residential pockets and scattered structures suggests a transition toward peri-urban characteristics, possibly influenced by growing dependency on urban centres like Jhargram and Kharagpur.

This trend reflects a typical rural transformation trajectory, where transportation corridors stimulate land use change and create pressures on traditional agricultural zones. Such patterns also underscore the need for regulating spatial growth through appropriate land use planning strategies to preserve agricultural productivity and ecological balance.

2.2.5. Administrative Framework of the Gram Panchayat

The governance structure of Aguibani Gram Panchayat in Jharagram Block, Jhargram district, West Bengal, follows the three-tier Panchayati Raj system as per the 73rd Constitutional Amendment Act (CAA), 1992. The institutional framework consists of the State-Level Setup, District Panchayat (Zilla Parishad), Block-Level Panchayat (Panchayat Samiti), and Village-Level Panchayat (Gram Panchayat). Each tier has specific responsibilities in planning, resource allocation, and rural development to ensure effective decentralized governance.

State-Level Setup

At the state level, the Panchayats and Rural Development Department (PRDD), the Government of West Bengal is responsible for rural governance and development policies. It regulates Panchayati Raj Institutions (PRIs) and ensures effective implementation of state and central schemes.

Key Institutions:

- **State Election Commission (SEC):** Conducts Panchayat elections.
- **State Finance Commission (SFC):** Allocates financial resources to PRIs.
- **West Bengal Panchayati Raj and Rural Development Department:** Provides guidelines for the functioning of PRIs.

The State Development Commissioner supervises the administration of district-level panchayats and monitors financial allocations, rural infrastructure projects, and social welfare schemes.

District Panchayat

The Jhargram Zilla Parishad is the highest authority in the district's three-tier Panchayati Raj system. It is responsible for coordinating and supervising the functioning of Panchayat Samitis and Gram Panchayats, including Aguibani.

Functions:

Preparing district-wide development plans.
Allocating funds and resources to Panchayat Samitis.
Supervising major rural infrastructure projects such as roads, irrigation, electrification, and sanitation.
Monitoring centrally and state-sponsored schemes like MGNREGA, PMAY-G, NRLM, and Swachh Bharat Mission.

Committees within Zilla Parishad:

- **Executive Committee:** Oversees financial management and administration.
- **Social Justice Committee:** Ensures welfare schemes for Scheduled Castes, Scheduled Tribes, and other disadvantaged groups.

- **Education Committee:** Handles primary and secondary education, literacy programs, and cultural activities.
- **Public Health Committee:** Manages healthcare services, sanitation, drinking water supply, and family welfare programs.
- **Public Works Committee:** Oversees infrastructure projects like roads, bridges, and rural housing.
- **Women & Child Development Committee:** Implements programs for the welfare of women and children.

Composition:

- Elected Representatives: Members from Panchayat Samitis.
- Ex-Officio Members: MLAs and MPs from the district.
- Officials: District Magistrate (DM) and District Development Officer (DDO).

Block-Level Panchayat

Aguibani Gram Panchayat falls under the jurisdiction of the Jhargram Panchayat Samiti, which acts as an intermediary between the district and village levels.

Functions:

- Planning and Implementing Rural Development Projects: Includes healthcare, primary education, drinking water, electrification, and social welfare.
- Coordinating with Line Departments: Works with agriculture, irrigation, rural housing, and employment departments.
- Supervising the Work of Gram Panchayats: Ensures the effective functioning of all Gram Panchayats under its jurisdiction.

Composition:

- Elected Members: Representatives from Gram Panchayats.
- Ex-Officio Members: MLAs and MPs of the region.
- Officials: Block Development Officer (BDO) as the executive head.

2.2.5.1. Roles & Responsibilities of the Gram Panchayat

Aguibani Gram Panchayat is the lowest tier of the Panchayati Raj system. It is responsible for local governance, rural infrastructure, and service delivery. The Gram Sabha (village assembly) is a crucial body where villagers participate in decision-making and development planning.

Functions of Aguibani Gram Panchayat:

- **Rural Infrastructure Development:** Maintenance of roads, water supply, street lighting, sanitation, and waste management.
- **Public Welfare Services:** Implementation of MGNREGA, health schemes, education programs, and social security schemes.
- **Land and Resource Management:** Promotes sustainable agriculture, conservation, and land use planning.
- **Disaster Management:** Plans for flood control, drought relief, and other emergency responses.

Special Committees:

- **Social Justice Committee:** Ensures welfare for Scheduled Castes, Scheduled Tribes, and backward classes.
- **Education Committee:** Supervises primary education, literacy programs, and cultural activities.
- **Health and Sanitation Committee:** Oversees health centers, vaccination programs, and sanitation.
- **Public Works Committee:** Manages infrastructure projects, including rural roads and housing.
- **Women & Child Development Committee:** Implements schemes for women's empowerment, child welfare, and nutrition.

Budget and Financial Planning:

- Receives funding from the State and Central Finance Commissions, MGNREGA, Swachh Bharat Mission, PMAY-G, and other government schemes.
- Generates revenue through property tax, user fees, and local resources.
- Prepares an annual budget in consultation with the Gram Sabha, ensuring transparency and inclusivity.

2.3. Administrative boundaries

Aguibani Gram Panchayat is located in the Jhargram Block of the Jhargram District in West Bengal.

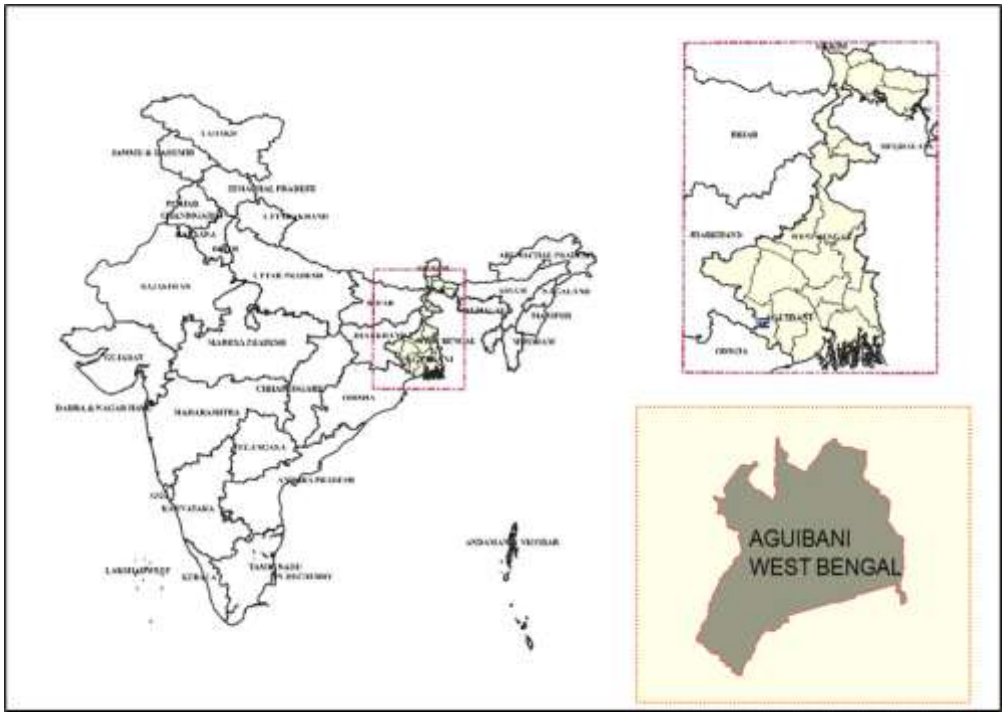

Figure 2.5 Aguibani location and administrative boundaries

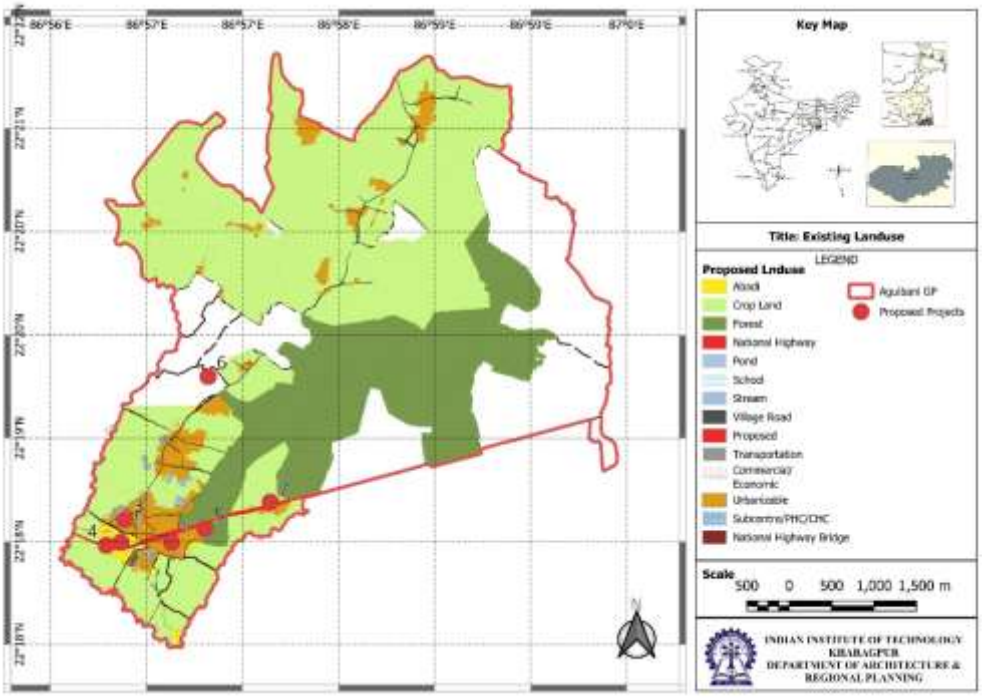

Figure 2.7 Aguibani Panchayat Map

2.4. Defining and delineating the Study Area- Gram Panchayat

Land Revenue/Cadastal (LR) Maps collected from ADM LR, Jhargram's office. The GP Boundary assembled from the LR maps was inadequate, as some of the LR maps were not available/confidential. In such cases, the Census of India and the Survey of India Maps were used to compensate for the absent village boundaries.

The realized village boundary was cross-verified and validated in the field with the GP officials. Upon the advice of the GP Officials, some mistakenly include neighbouring villages that were later removed from the GP map.

The study area for the realization of the GP plan was developed based on the SWAMITVA Drone Survey Map. Since the map received from the SWAMITVA drone survey was conducted only over the Netura Abadi Area. The same has been chosen for the Spatial Study. However, Surveys, Data Collection, Mapping, and Spatial Analysis have been conducted for the whole GP.

2.5. Gram Panchayat Part of the Development Authority (if any)

Not Applicable- Aguibani Gram Panchayat is located in the Jhargram Block of the Jhargram District in West Bengal.

2.6. Base Map

No base map was available for the Aguibani GP. Boundaries for the villages were constructed after rasterization of Land Revenue/Cadastal (LR) Maps collected from ADM LR, Jhargram's office. The GP Boundary assembled from the LR maps was inadequate, as some of the LR maps were not available/confidential. In such cases, the Census of India and the Survey of India Maps were used to compensate for the absent village boundaries.

2.6.1. Data used to prepare the Base Map of the Gram Panchayat

LR/Cadastal/Mouza maps were digitized on a QGIS platform, along with the Census of India and the Survey of India Maps, which were used to develop the village boundaries and GP boundary. The map received from the SWAMITVA drone survey covering Netura Abadi Area has been used to develop the proposals as well as showcase the application of RADPFI Guidelines in the GP area.

2.6.2. Limitations, constraints, and considerations during the preparation of the Base Maps

Access to some remote locations, such as the forest and elephant corridor, was not undertaken and treated as a reserved area in the Existing Spatial Plan.

2.6.3. Final Base Map of the Gram Panchayat

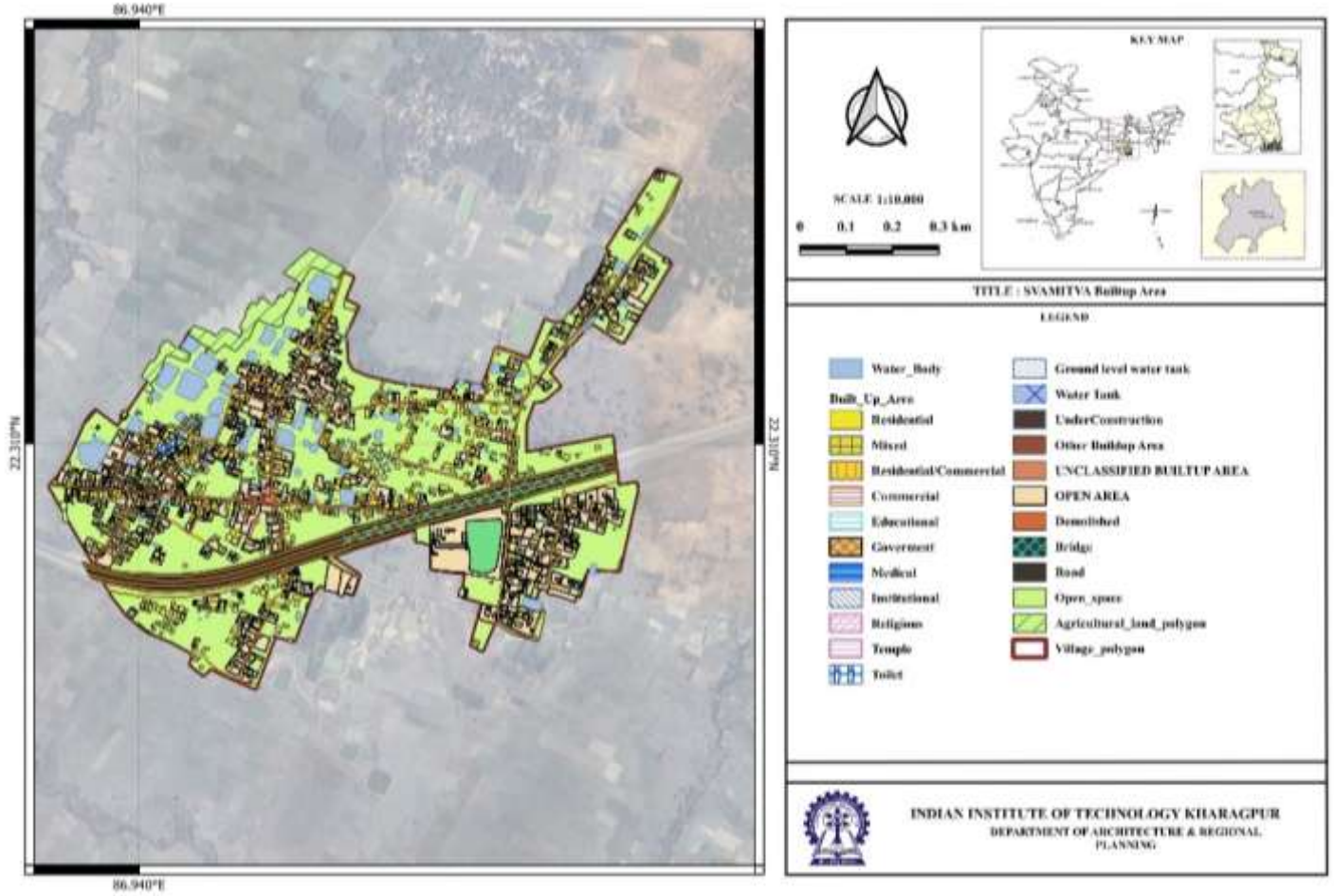

Figure 2.7 SWAMITVA Builtup Area

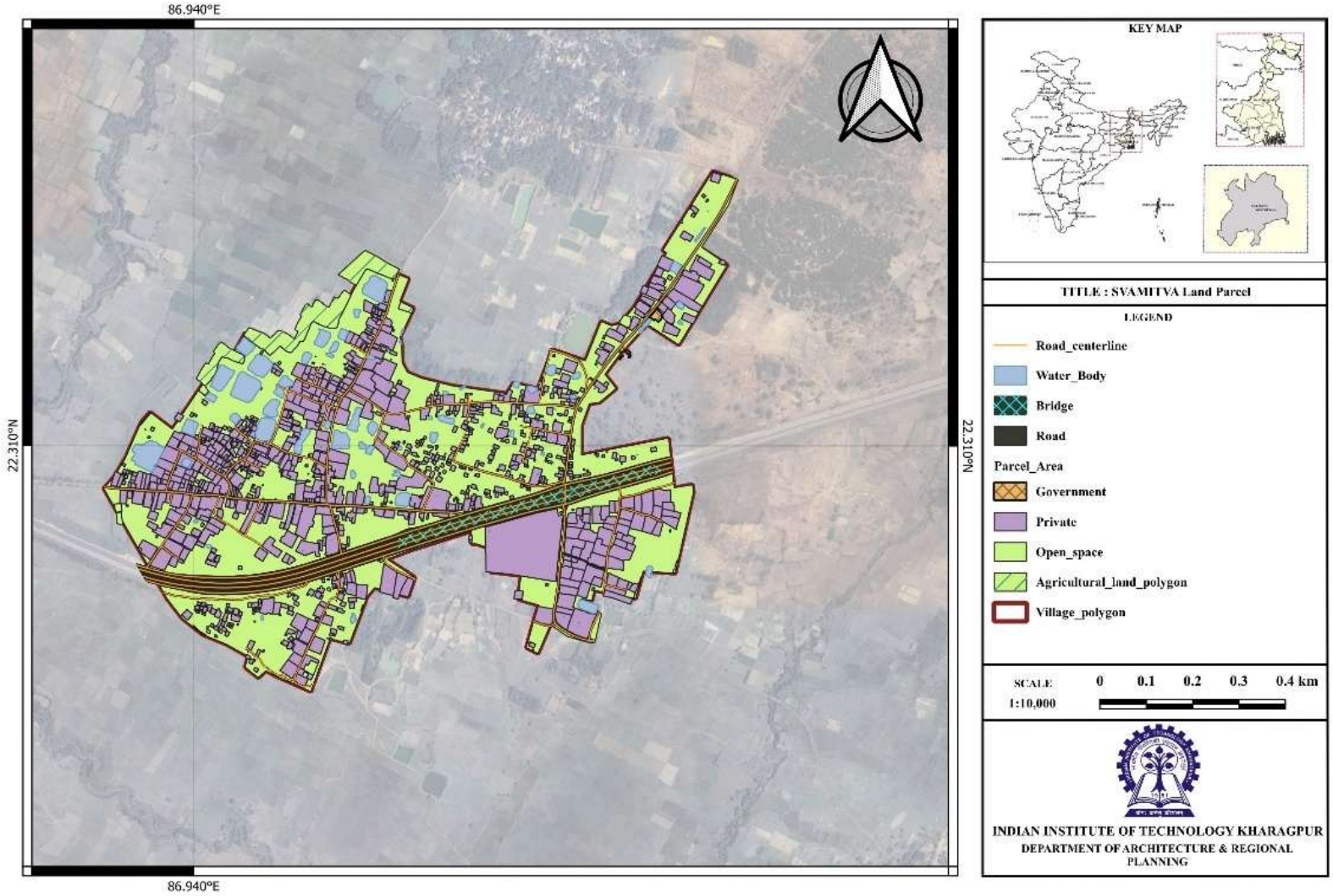

Figure 2.8 SWAMITVA Land parcel

2.7. Spatial Analysis of the GP

2.7.1. Topography Analysis

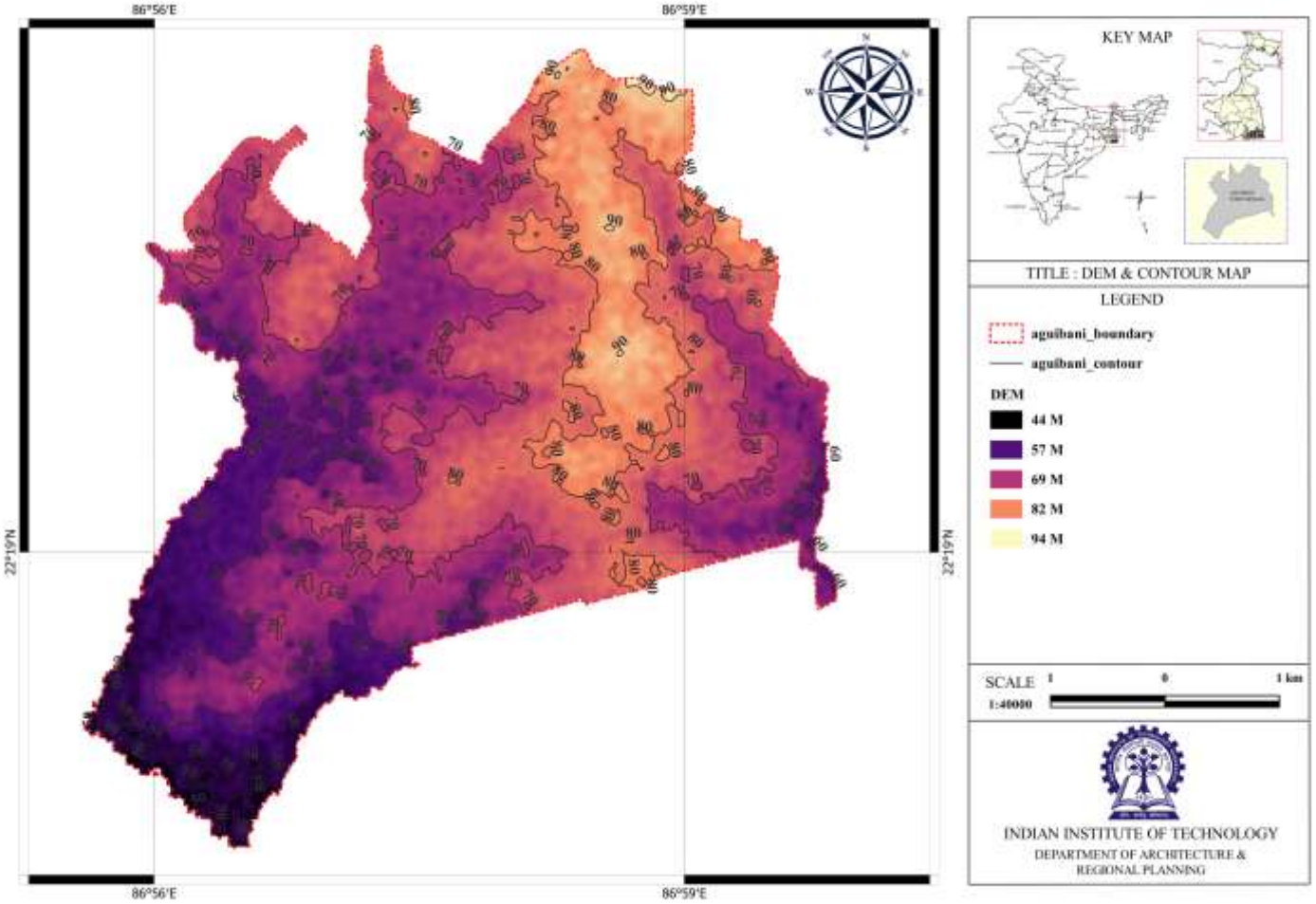

Figure 2.9 DEM & Contour Map
(Source: Author)

2.7.2. Slope Analysis

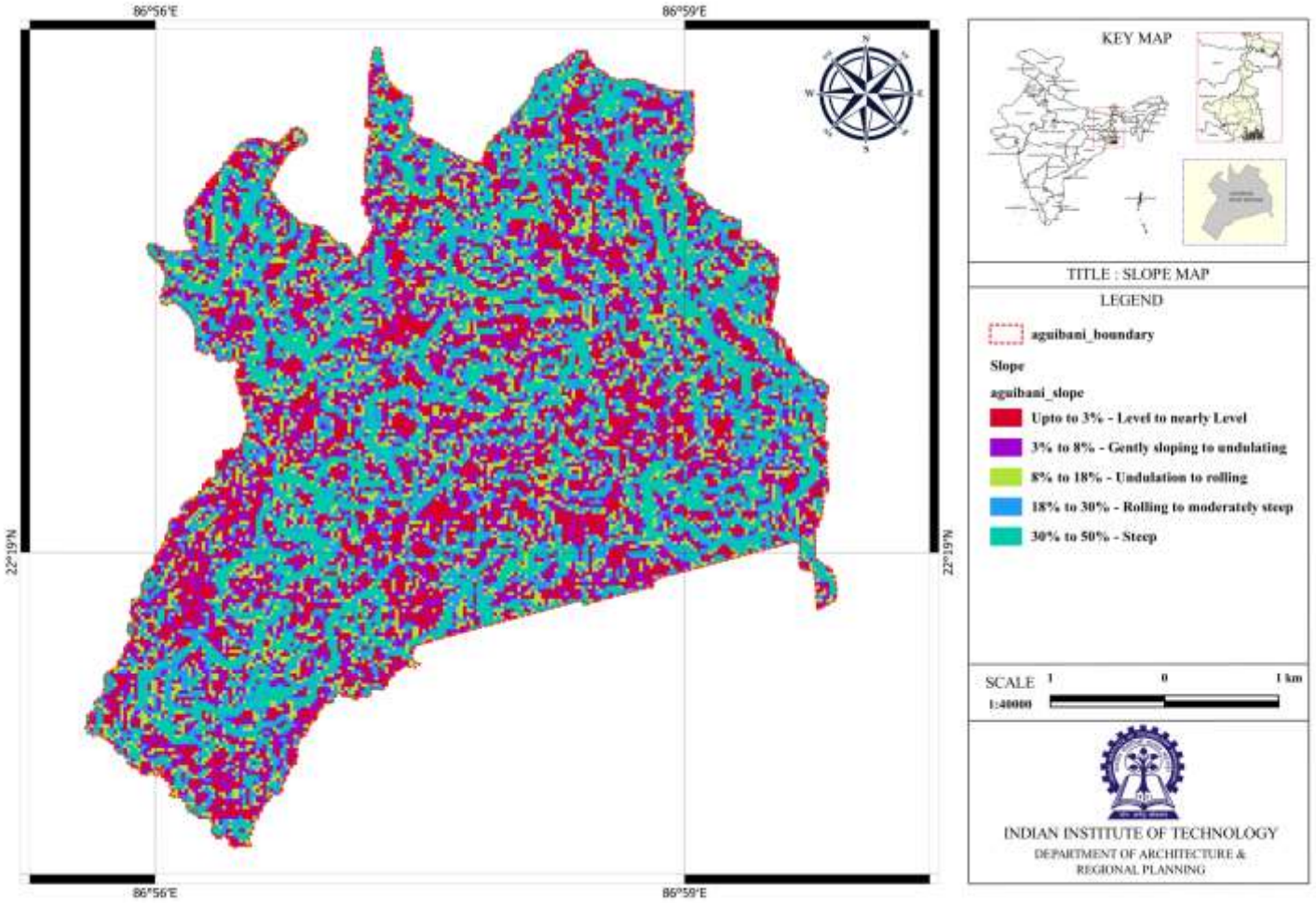

Figure 2.10 Slope Map

(Source: Author)

2.7.3. Watershed Analysis

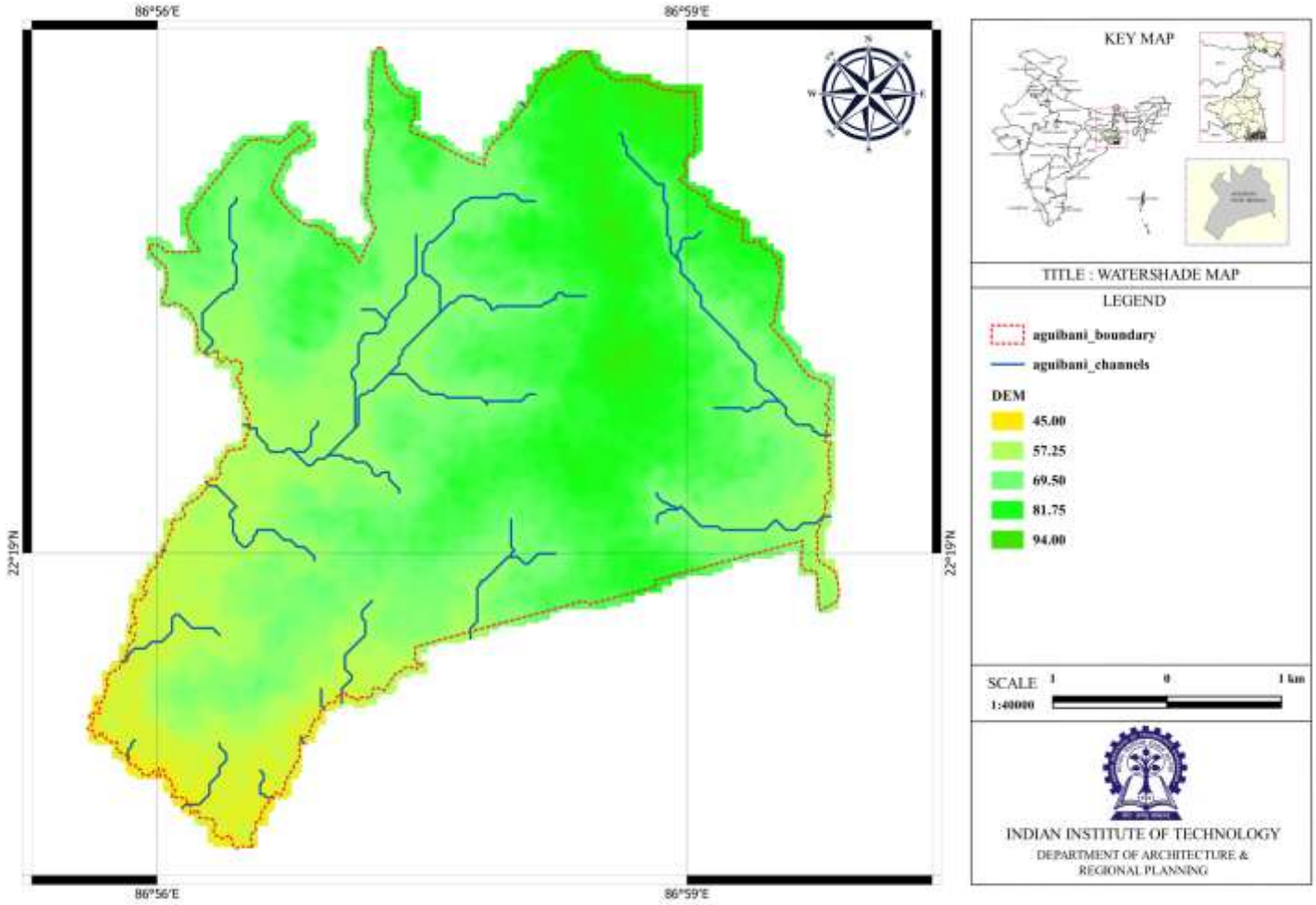

Figure 2.11 Watershed Map

(Source: Author)

2.7.4. Drainage Analysis

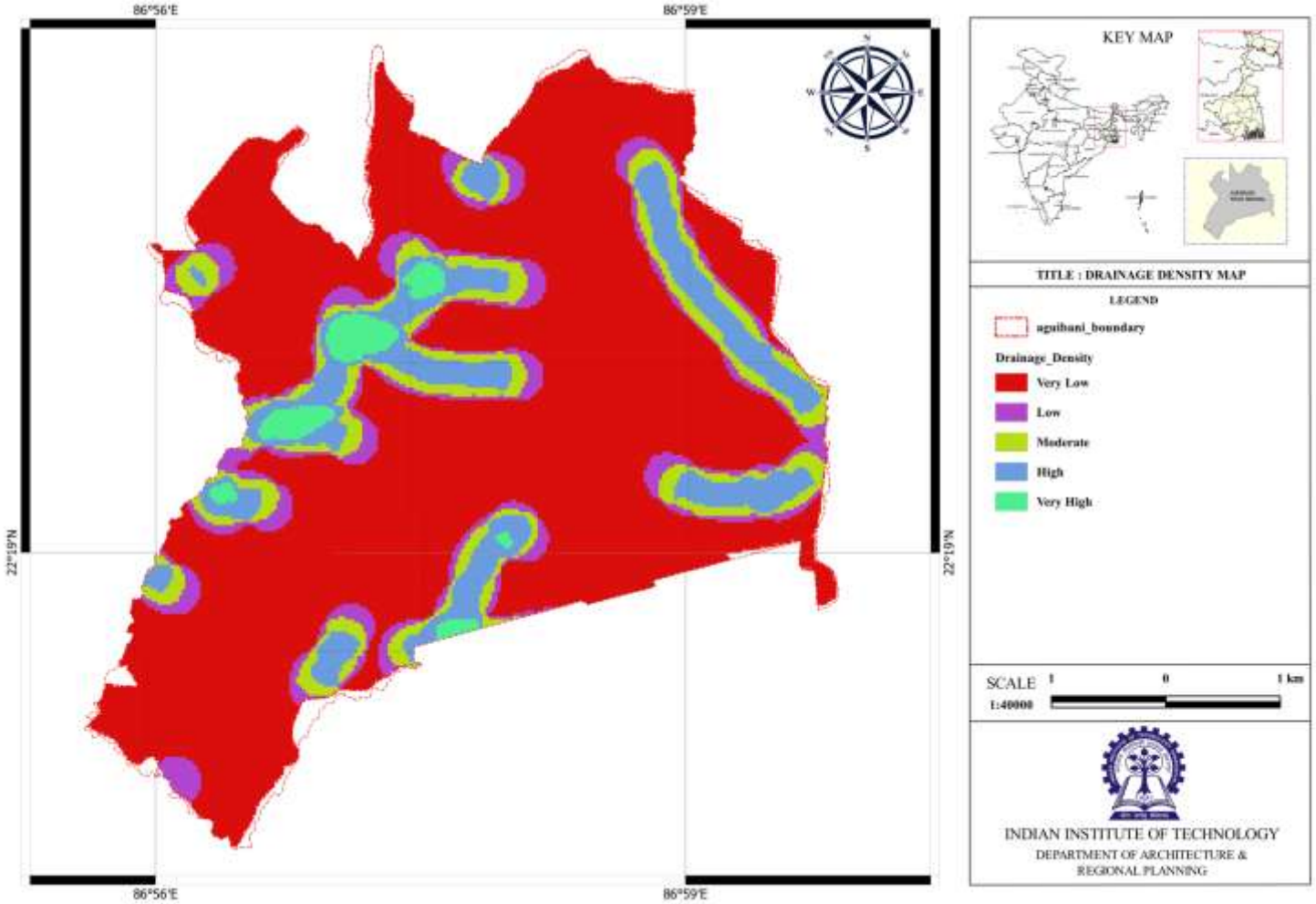

Figure 2.12 Drainage density Map

(Source: Author)

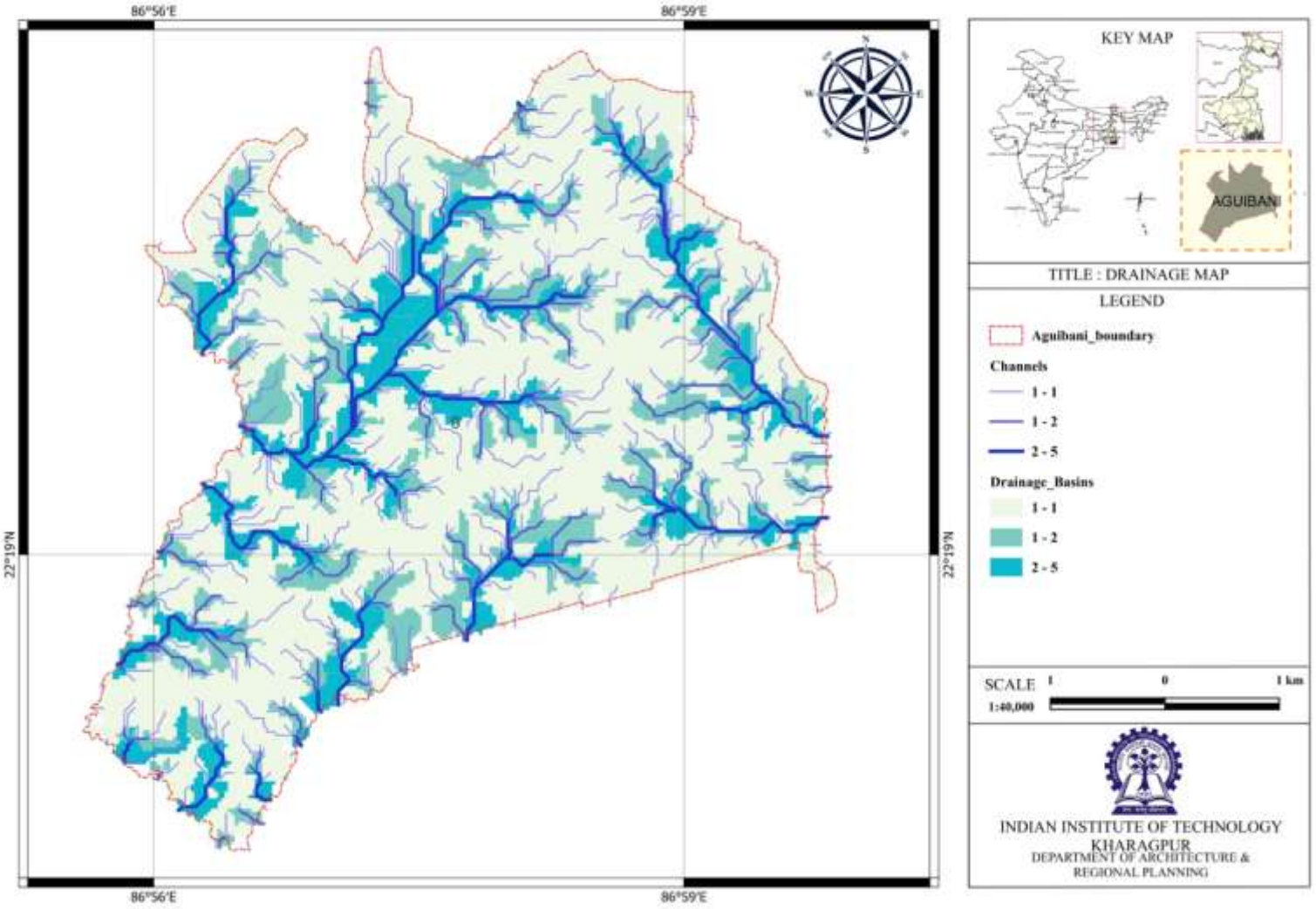

Figure 2.13 Drainage Map

(Source: Author)

2.7.5. Hydrology Analysis

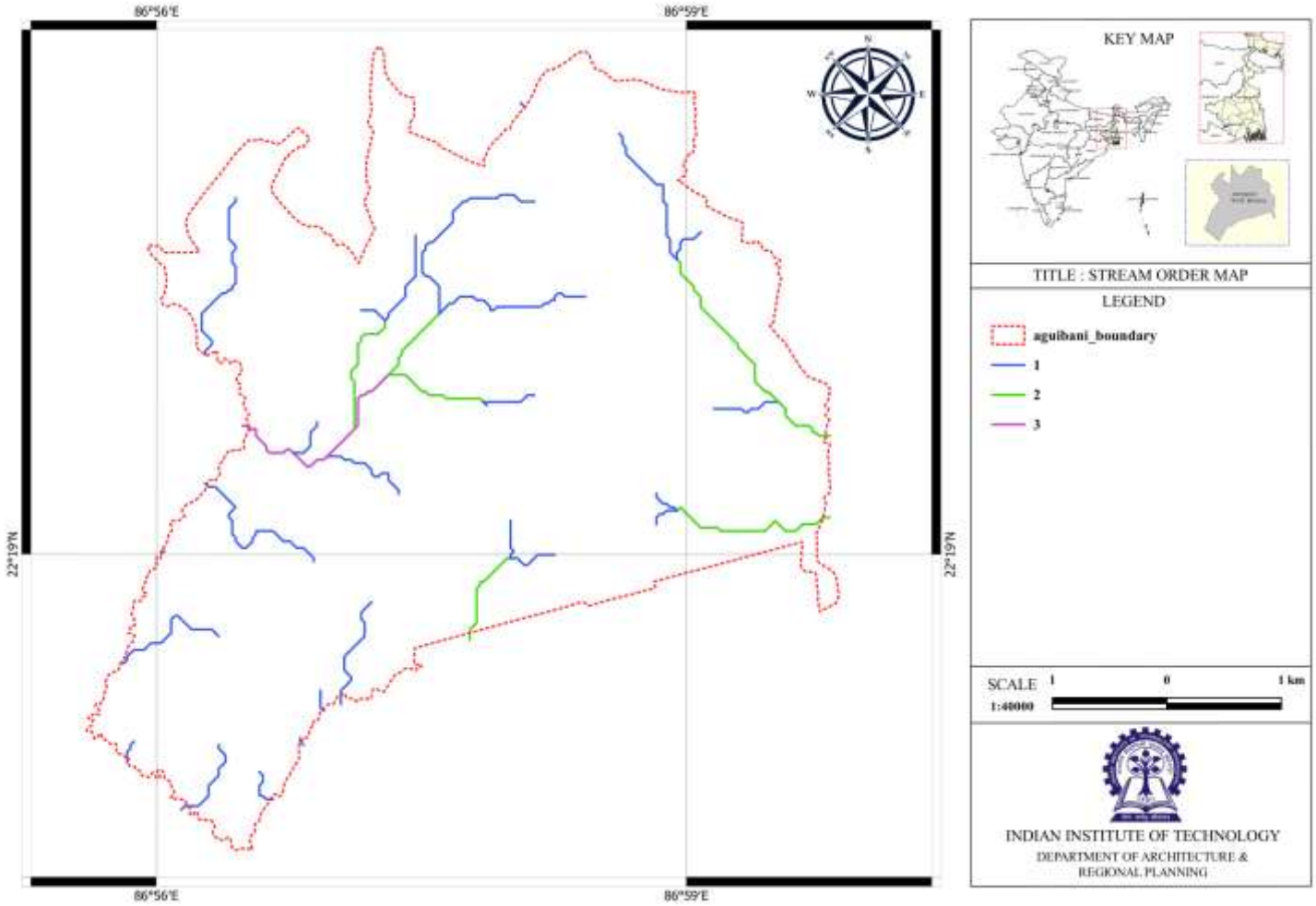

Figure 2.14 Stream Order Map

(Source: Author)

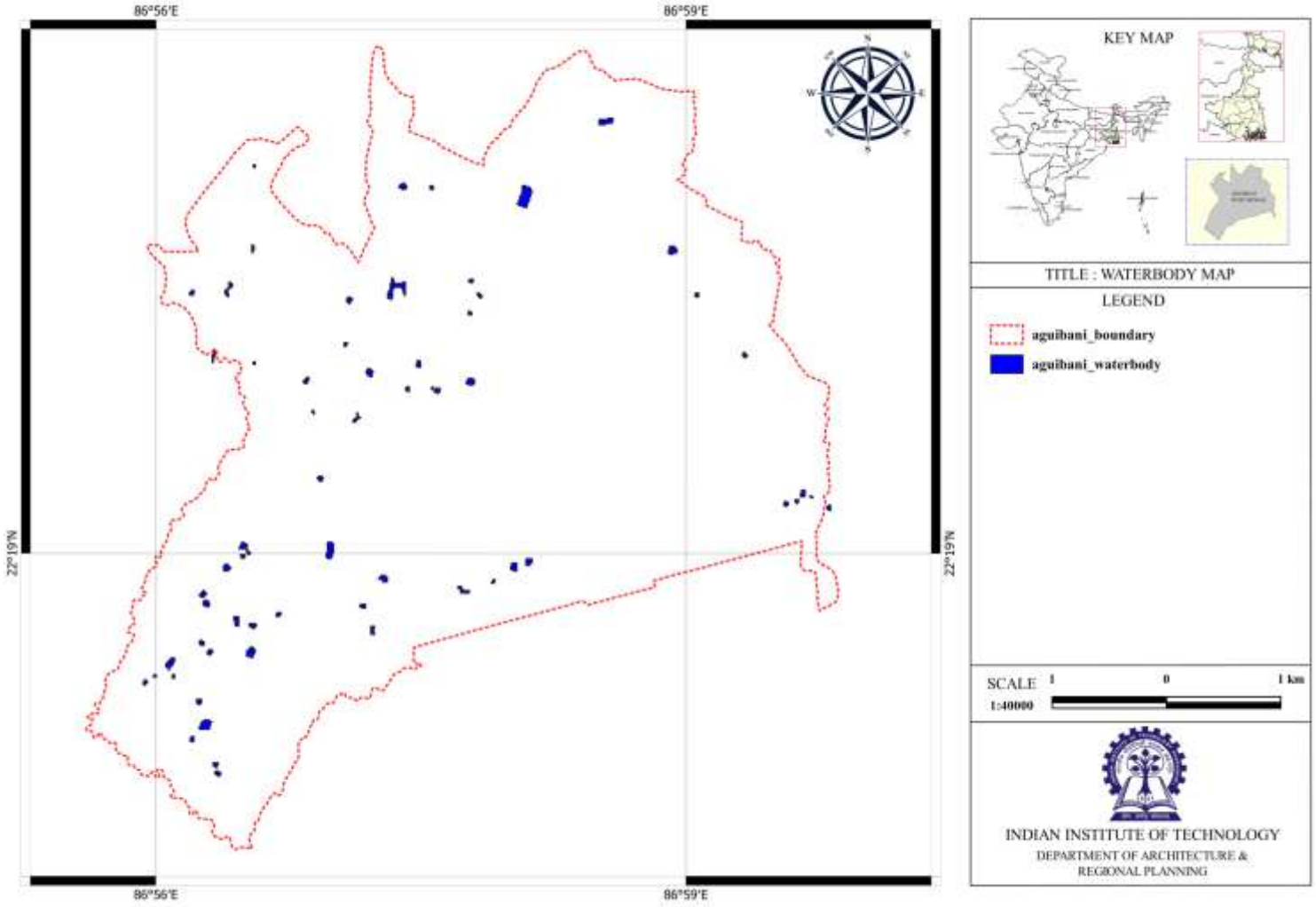

Figure 2.15 Aguibani Waterbodies Map

(Source: Author)

2.7.6. Soil Typology Analysis

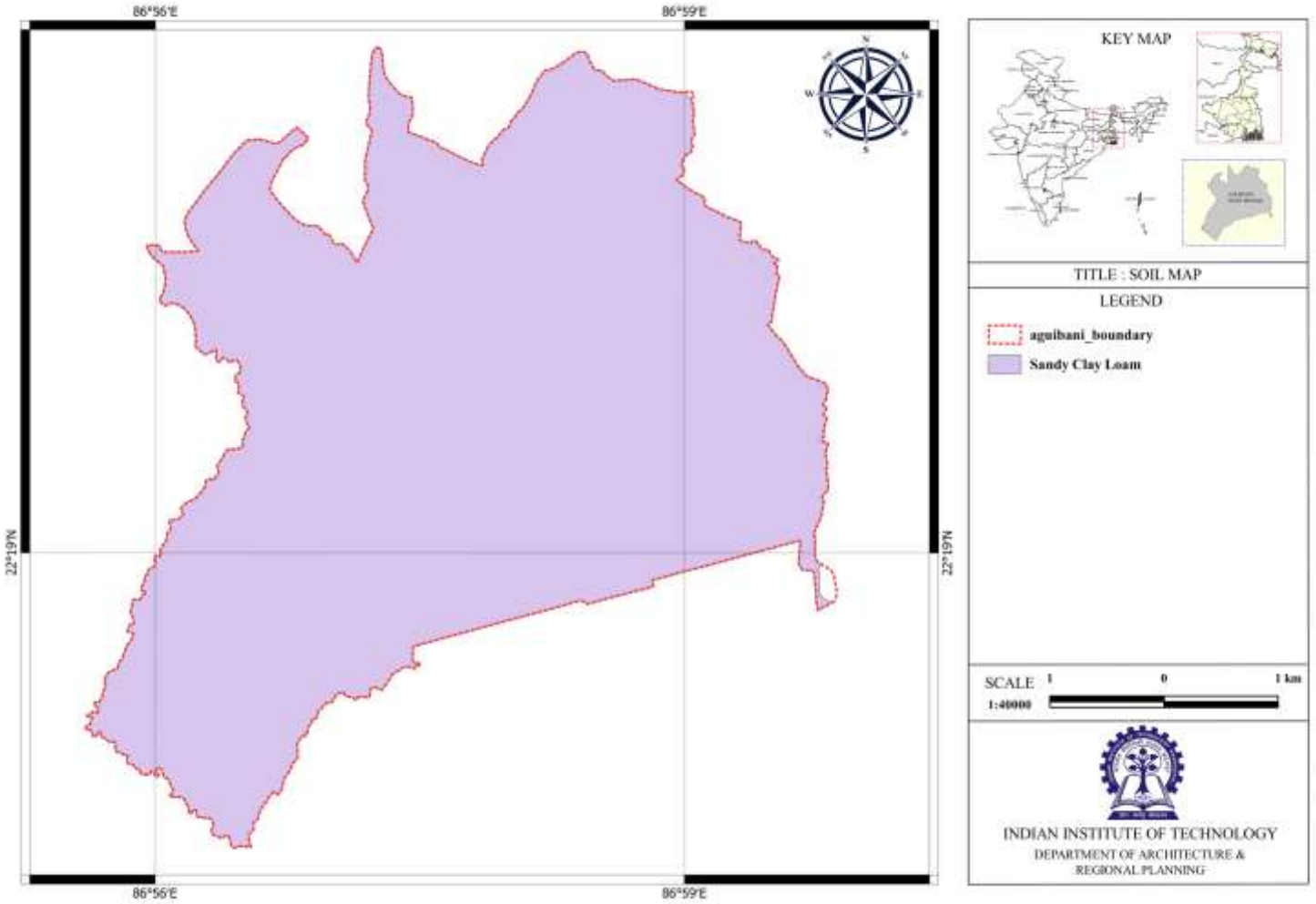

Figure 2.16 Soil Map

(Source: Author)

2.7.7. Land Ownership Analysis

Not Available with the GP

2.7.8. Transportation Analysis- Existing Road Network

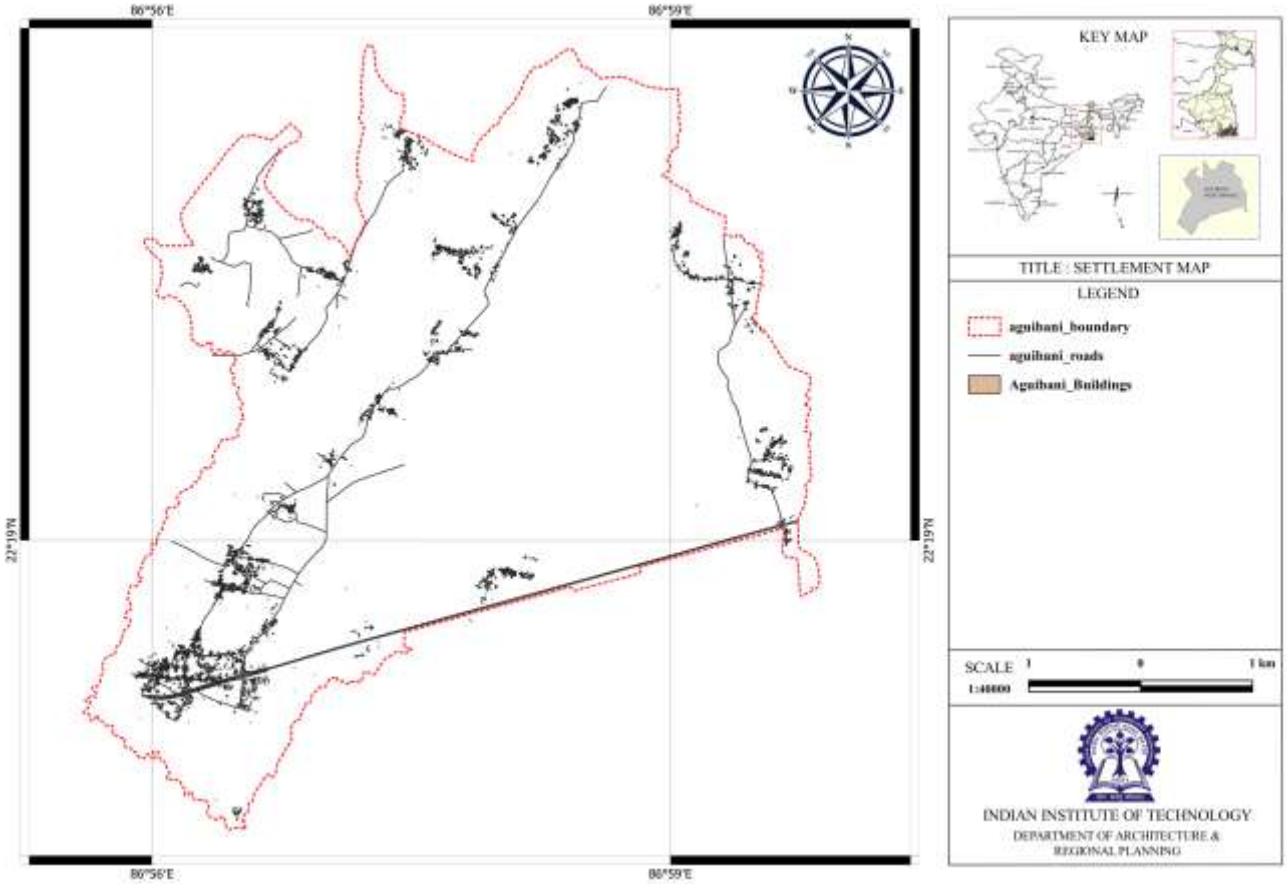

Figure 2.17 Settlement Map

(Source: Author)

2.7.9. Existing Land Use Land Cover Analysis

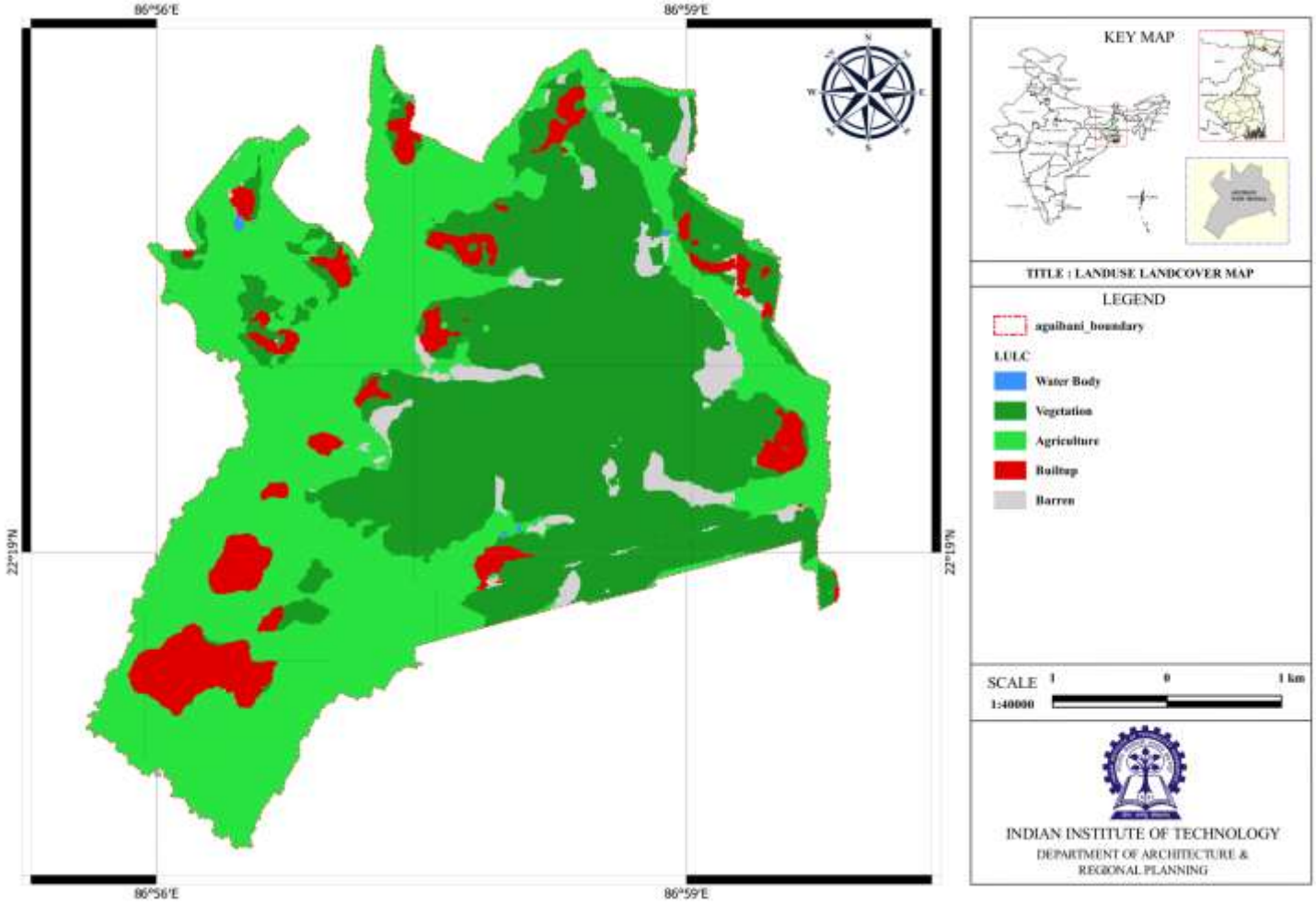

Figure 2.18 Aguibani LULC 2023

(Source: Author)

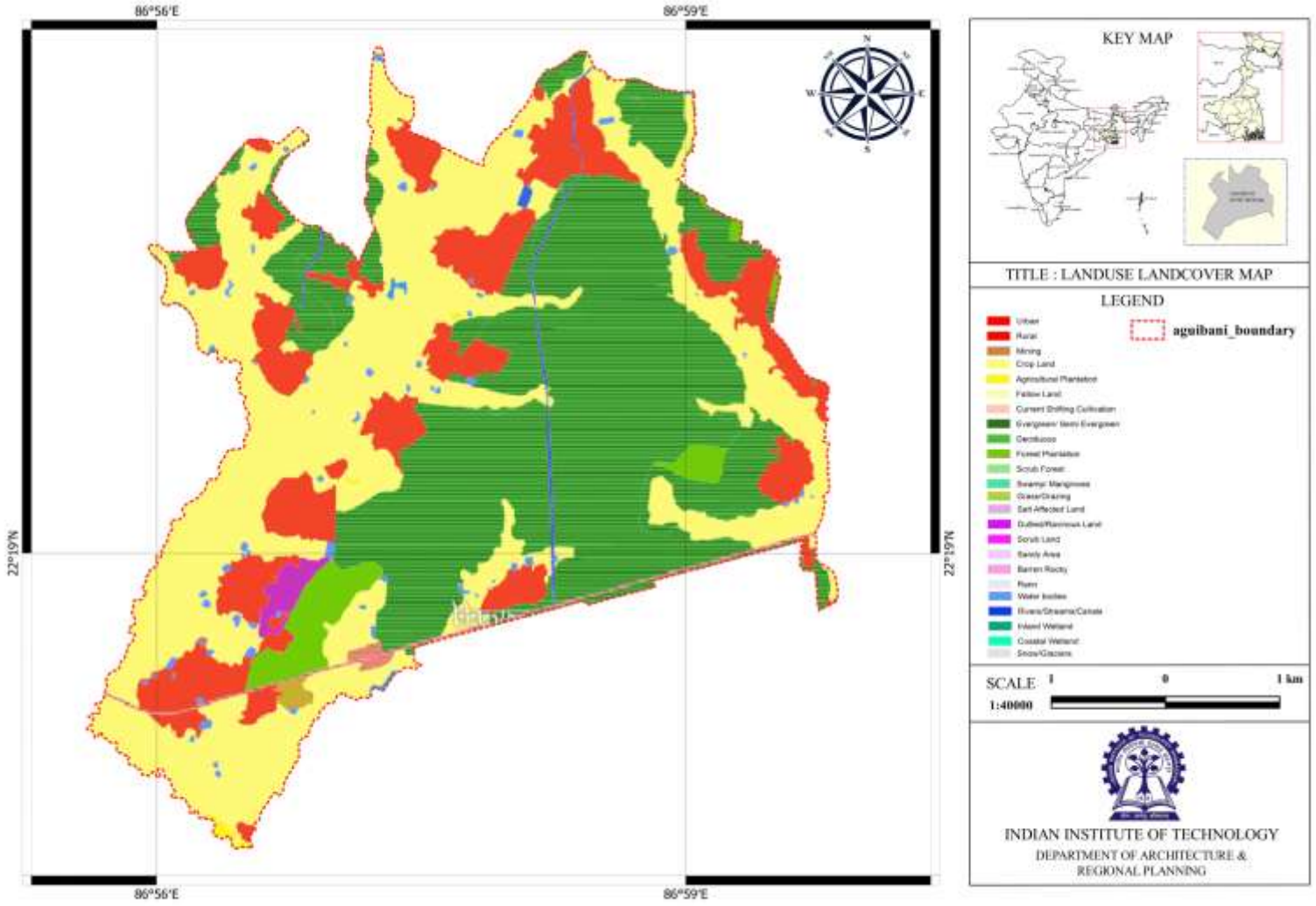

Figure 2.19 Aguibani LULC 2020 (Source: Bhuvan)

2.7.10. Existing Land-Use Analysis

The existing land use structure in Aguibani Gram Panchayat reflects a predominantly rural economy centered around agriculture, forests, and linear settlements. Based on the GIS-based LULC maps and spatial overlays:

- **Agricultural Land**: The majority of land use types, as evidenced in both 2020 and 2023 LULC maps, support paddy cultivation, seasonal vegetables, and mustard. These fields are dispersed across 28 villages.
- **Built-Up Areas**: Built-up expansion is observed along NH49, Netura-Aguibani corridor, and central village nodes. This growth pattern indicates ribbon-type development driven by improved connectivity.
- **Forest Land**: Sal and bamboo forests occupy significant portions, particularly on the western periphery. Classified under Khas Jangal and Jangal Khas, these zones support livelihood activities like leaf platemaking and bamboo trade.
- **Water Bodies**: Natural ponds and seasonal streams are mapped across the GP as represented in Figure 2.15 Aguibani Waterbodies Map. While some water bodies remain functional, many require rejuvenation due to siltation and neglect.
- **Wastelands and Degraded Plots**: Identified adjacent to built-up fringes and unused forest edges, often lacking vegetation or productivity.

2.7.11. Any Other Spatial Analysis

In addition to core land use, several thematic spatial layers have been analysed in the Aguibani GP:

- **Topography and Slope:** The terrain is gently undulating with low gradient slopes. This aids natural drainage but also requires specific treatment in construction zones to prevent waterlogging.
- **Hydrology and Drainage Network:** Watershed and drainage patterns indicate moderate density streams, adequate seasonal flow, and potential for rainwater harvesting. However, absence of formal storm water infrastructure contributes to runoff accumulation.
- **Settlement Distribution:** Village clusters are dispersed and organically grown, notably around Aguibani, Kumari, and Sonamui. Ribbon development is visible along main village roads and NH49.
- **Transportation Network:** Connectivity includes a mix of pucca and kutcha roads. The primary network aligns with regional junctions such as Fasitala Bus Stop and Netura Bazaar Junction, but interior roads lack proper surfacing and width.

2.7.12. Key Observations

- Built-up expansion is encroaching into agricultural land, particularly around NH49 and Netura, posing risks to food security and ecological stability.
- Interior roads are inadequately surfaced and narrow, impeding access to services and emergency response, especially in tribal hamlets like Bara Didiha and Bhagjhapa.
- Water bodies are unevenly distributed, and their condition varies.
- Absence of storm water infrastructure results in seasonal waterlogging in 34% of surveyed pockets.
- Limited irrigation availability and high private irrigation costs particularly in villages like Bhagjhapa and Bara Didiha exacerbate agricultural stress and necessitate alternative solutions such as solar irrigation systems.

2.8. Netura/Residential Area Spatial Analysis

One of the main residential hubs inside Aguibani Gram Panchayat, Netura, displays obvious indicators of change from a solely agricultural community to a mixed-use rural dwelling. The developed regions of Netura's patterns of space, physical features and access to infrastructure are examined here.

2.8.1. Growth Pattern

With the phased addition of homes over time, the spatial expansion of Netura town has mostly followed a ribbon development pattern along internal roadways and footpaths. Residential buildings have slowly spread from the core cluster toward agricultural and open areas. The lack of established layouts or assigned areas has produced a dispersed and organic growth pattern. Netura has become a center of population concentration and housing growth because of its closeness to the arterial roads inside the Gram Panchayat and its access to fundamental utilities.

2.8.2. Topography & Slope Analysis

As observed from the Topography and slope map of the Netura Abadi region reveals mostly flat topography with very less slope gradations detected.

2.8.3. Transportation Analysis- Existing Road Network

With internal connection mostly depending on tiny village pathways and footpaths, the road network in Netura is composed of a mix of pucca (paved) and kutcha (unpaved)

roads. Limited right of way and uneven road widths in some areas restrict vehicle movement and emergency access even if the main access road connects the village to other sections of Gram Panchayat. The internal mobility infrastructure needs improvement through widening, surfacing, and provision of streetlights for safety.

2.8.4. Existing Landuse

As per Figure 2.20 Existing Landuse of Netura, the spatial distribution of land use across the Netura cluster reveals a predominantly rural residential morphology interspersed with agriculture and limited institutional activity. The cluster includes 11 villages, and the proportions of key land use categories are illustrated in Figure 2.21 Netura Land Use Proportion (11 Villages).

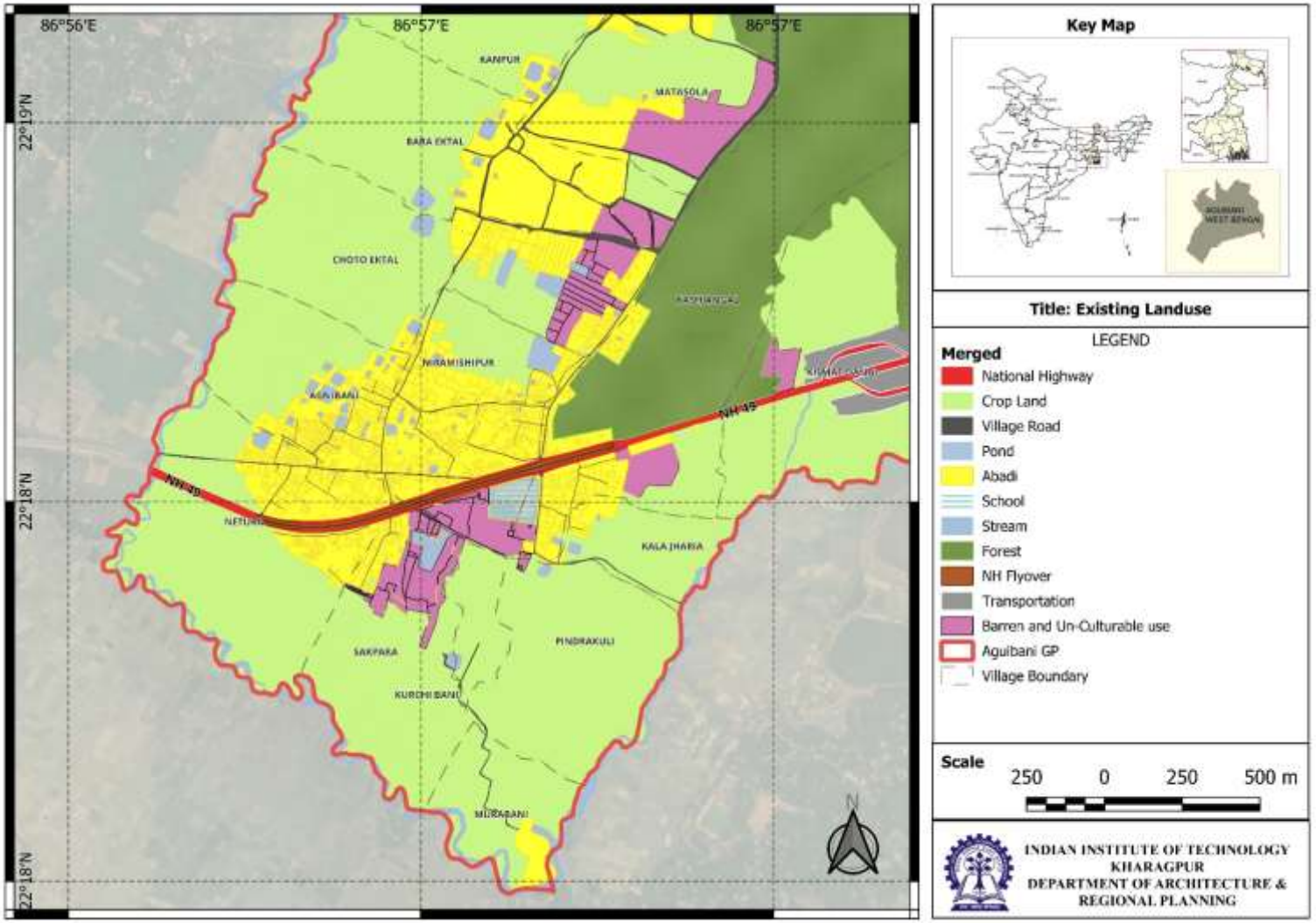

Figure 2.20 Existing Landuse of Netura

(Source: Author)

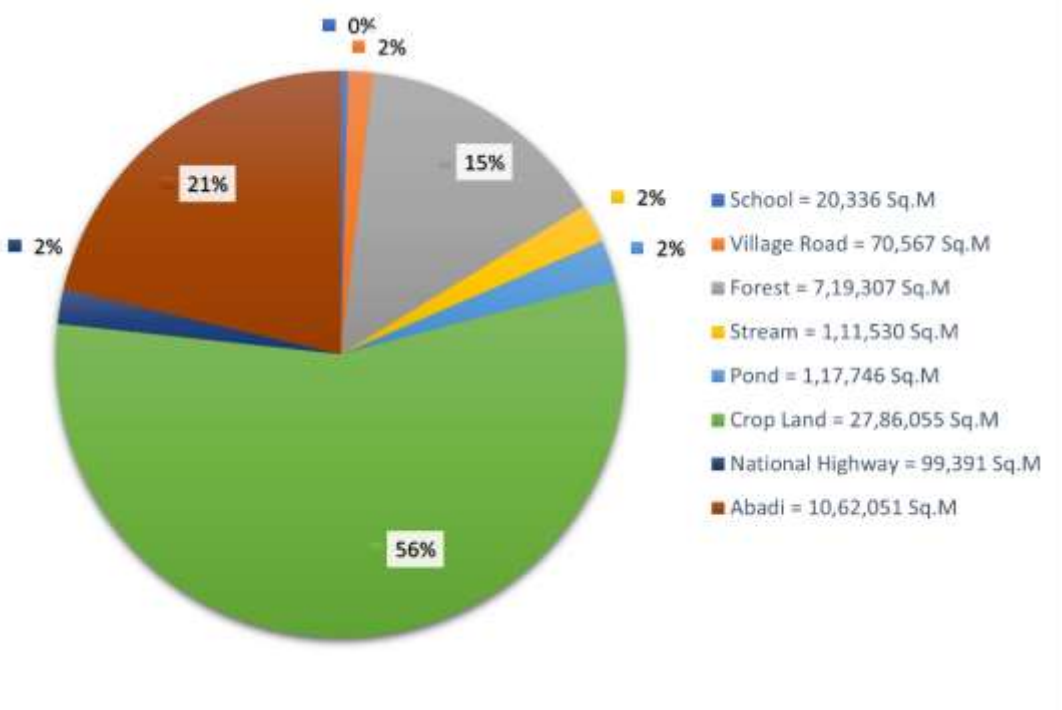

Figure 2.21 Netura Land Use Proportion (11 Villages) (Source: Author)

2.8.5. Spatial Growth Trends & Recent Growth Direction

The Netura residential cluster has experienced linear expansion over the past decade, primarily along internal pucca roads and footpath corridors. Growth trends indicate:

- **Ribbon-Type Development**: Especially along the (Netura) Aguibani corridor and towards Bhagjhapa Road, facilitated by better connectivity and proximity to NH49.
- **Organic Clustering**: Settlement morphology remains largely unplanned, with dwellings expanding around water sources, schools, and religious sites.
- **Recent Directional Shift**: Since 2020, spatial growth has extended toward the southeast, driven by the availability of open plots and improved drainage infrastructure in lower elevation zones.
- **Encroachment Risk**: Certain residential pockets are expanding into semi-cultivable and vacant government plots without formal zoning or development regulation.

2.8.6. Any Other Spatial Analysis

Additional insights from thematic spatial layers within Netura include:

Topography and Slope: Netura exhibits largely flat terrain with minimal slope variation, supporting both construction and seasonal agriculture.

Hydrology Patterns: The area benefits from natural drainage, but lacks engineered storm water structures. Seasonal waterlogging is reported along eastern hamlets.

Settlement Map: Built-up density is highest around Netura Bazaar and Fasitala Junction, tapering toward tribal habitations like Sonamui and Murabani.

Road Network: The pucca-kutcha road ratio remains skewed in Netura's interior lanes. Many lanes do not meet RADPFI width norms.

2.8.7. Key Observations

- **Fragmented Development:** Unregulated ribbon expansion has led to fragmented residential growth, risking overlap with agriculture and open space buffers.
- **Inadequate Infrastructure:** Road surfaces, drainage and lighting in interior settlements need upgrades to meet basic infrastructure norms.
- **Vacant Land Potential:** Fallow and unused lands along Netura's periphery present opportunities for planned community facilities or clustering of economic activities.
- **Zoning Opportunity:** Due to spatial mix of agriculture, built-up and vacant land, there is strong justification to introduce zoning regulation within Netura for managing future growth.

3. Gram Panchayat Profile

3.1. Demographic Profile

3.1.1. Population Distribution

As per census, the population distribution and population share of Aguibani GP, Jhargram (Rural), Paschim Medinipur (Rural) and West Bengal (Rural).

Population Distribution				
Year	**West Bengal (Rural)**	**Jhargram (Rural)**	**Jhargram Block(Rural)**	**Aguibani GP**
1991*	49,370,364	500,061	133,794	8260
2001*	57,748,946	852,251	153,331	9392
2011*	62,183,113	953,694	170,097	10184
2024#	78,053,395	1,491,778	176,285	10505

Census 2001 and Census 2011

#This data has been uploaded on JJM Dashboard by the respective states after calculating the population based on 2011 census and the decadal growth rate

** Jhargram district was formed in 2017. For population data from 1991, 2001, and 2011, the population of its seven blocks was extracted separately.*

Table 3-2 Population share

Population Share				
Spatial Unit	**Total Population (2001)**	**Population shares to the upper Spatial Unit**	**Total Population (2011)**	**Population shares to the upper Spatial Unit**
Aguibani GP	9392	6.13%	10184	5.99%
Jhargram Block (Rural)	153,331	17.99%	170,097	17.84%
Jhargram (Rural)	852,251	1.48%	953,694	1.53%

3.1.2. Population Growth Trend

Overall, the population in the Aguibani GP is growing with the increasing growth rate. Between the year 2001 and 2011, the total population in the GP grew by 8.43%, which is comparatively 5.87% lesser growth rate than the growth rate during the 1991-2001 decade, which was 13.70%. The population growth rate of the GP is lower than that of its upper spatial units.

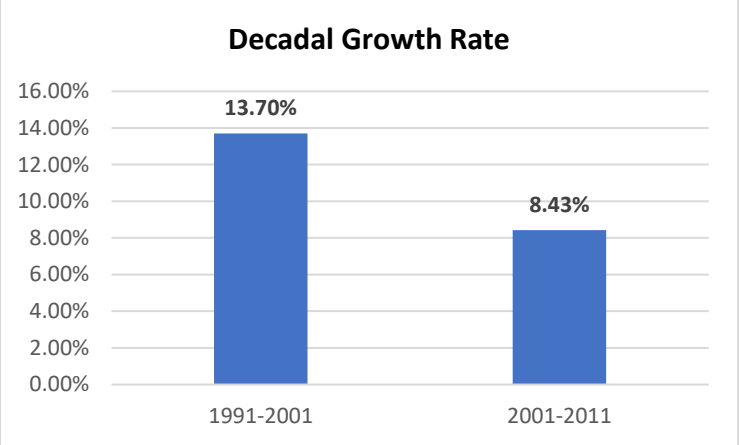

Figure 3.1 Population growth rate

Table 3-3 Population growth rate

Population Growth Rate				
	West Bengal (Rural)	Jhargram (Rural)	Jhargram Block(Rural)	Aguibani GP
2001-2011	7.67%	11.90%	10.93%	8.43%

3.1.3. Population Density

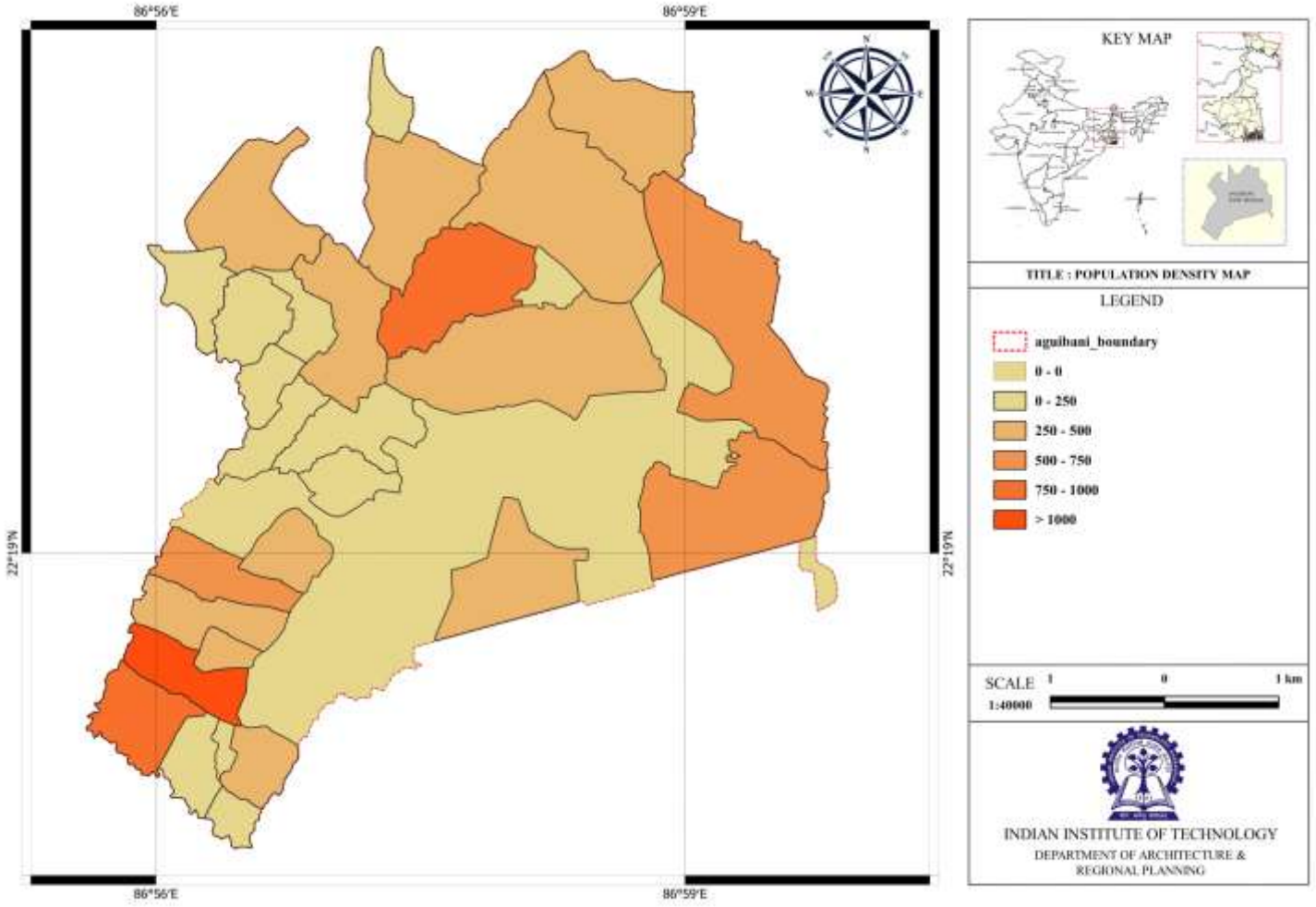

Figure 3.2 Population Density Map

(Source: Census of India,2011 and Author)

3.1.4. Average Household size

As per census 2011, Aguibani GP has 2328 households for 10184 population. So, average household size is 4.37.

3.1.5. Literacy Rate

Development is a dynamic process and it requires an educated, skilled, and competent workforce. Literacy plays an important role in providing skilled workforce as well as literate consumer demands more for a better lifestyle. Literacy rate refers to the number of literate populations to the total.

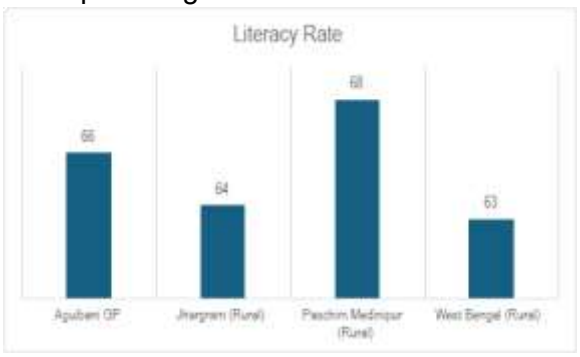

Figure 3 Literacy rate

As per the Census 2011, the literacy rate in the GP is 66%, which means out of the total population 10,184 people in Aguibani GP, 6,722 are literate. The literacy rate amongst, the state, district, taluka and at Aguibani GP levels, the District has the highest number of literates.

3.1.5.1. Digital Literacy

The digital literacy rate in the area is extremely low, with only 7% of the population having digital skills, while 93% lack basic digital knowledge. This highlights a significant gap in technology adoption and access to digital resources, which may hinder economic opportunities and access to essential services. Targeted interventions, such as digital training programs, are crucial to bridging this gap and promoting digital inclusion.

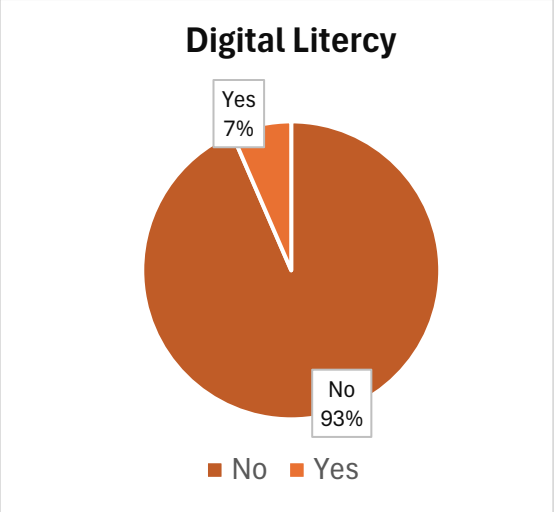

Figure 3.3 Digital literacy

3.1.6. Gender Ratio

The number of females per 1000 males is known as the sex ratio. Currently, there are 980 more females living in GP homes than males, which is higher than the sex ratio in the district and taluka but still relatively higher than that of the state.

3.1.6.1. Age-Gender Pyramid

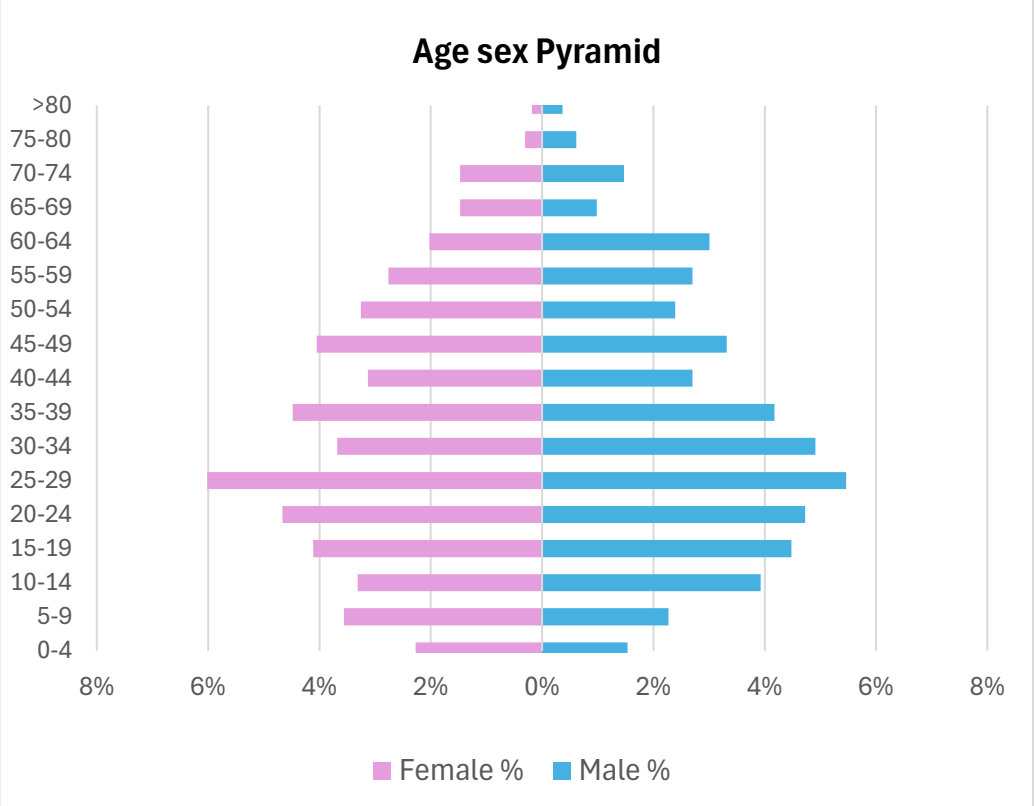

Figure 3.4 Age Sex pyramid

The age-sex pyramid for Aguibani Gram Panchayat (GP) reflects a youthful population with a broad base, indicating a high birth rate and a significant proportion of individuals aged 0-19 years. The working-age population (20-39 years) shows a higher percentage of males, suggesting possible male-dominated migration patterns for employment. In contrast, the older age groups (45+ years) have a higher proportion of females, likely due to male mortality or migration trends. The pyramid narrows at the top, indicating a relatively smaller elderly population, which may be due to lower life expectancy or migration of older individuals. The high dependency ratio, with a large number of young and elderly individuals relying on the working-age population, underscores the need for targeted planning. Investments in education and healthcare are essential to support the younger population, while employment opportunities can help reduce male out-migration. Additionally, the increasing proportion of elderly women highlights the need for enhanced healthcare and social welfare programs. This demographic structure provides crucial insights for planning and development initiatives in Aguibani GP.

3.1.7. Schedule Caste and Schedule Tribe Population

Out of the total population of the GP, only 9.56% (974) population is Schedule Caste, and 17.72% (1805) population is Schedule Tribe.

Table 3-4 Scheduled caste and Scheduled tribe population share

	Total Population	SC Population	SC Population (in %)	ST Population	ST Population (in %)
Aguibani GP	10184	974	9.56	1,805	17.72
Jhargram Block (Rural)	170,097	25,220	14.82	38,625	22.71
Jhargram (Rural)	953,694	200082	20.98	298686	31.32
West Bengal (Rural)	62,183,113	17,095,107	27.49	4,855,115	7.80

3.1.7.1. Spatial Distribution of SC & ST Population

Spatial distribution of SC & ST Popolation is shown in the figures below.

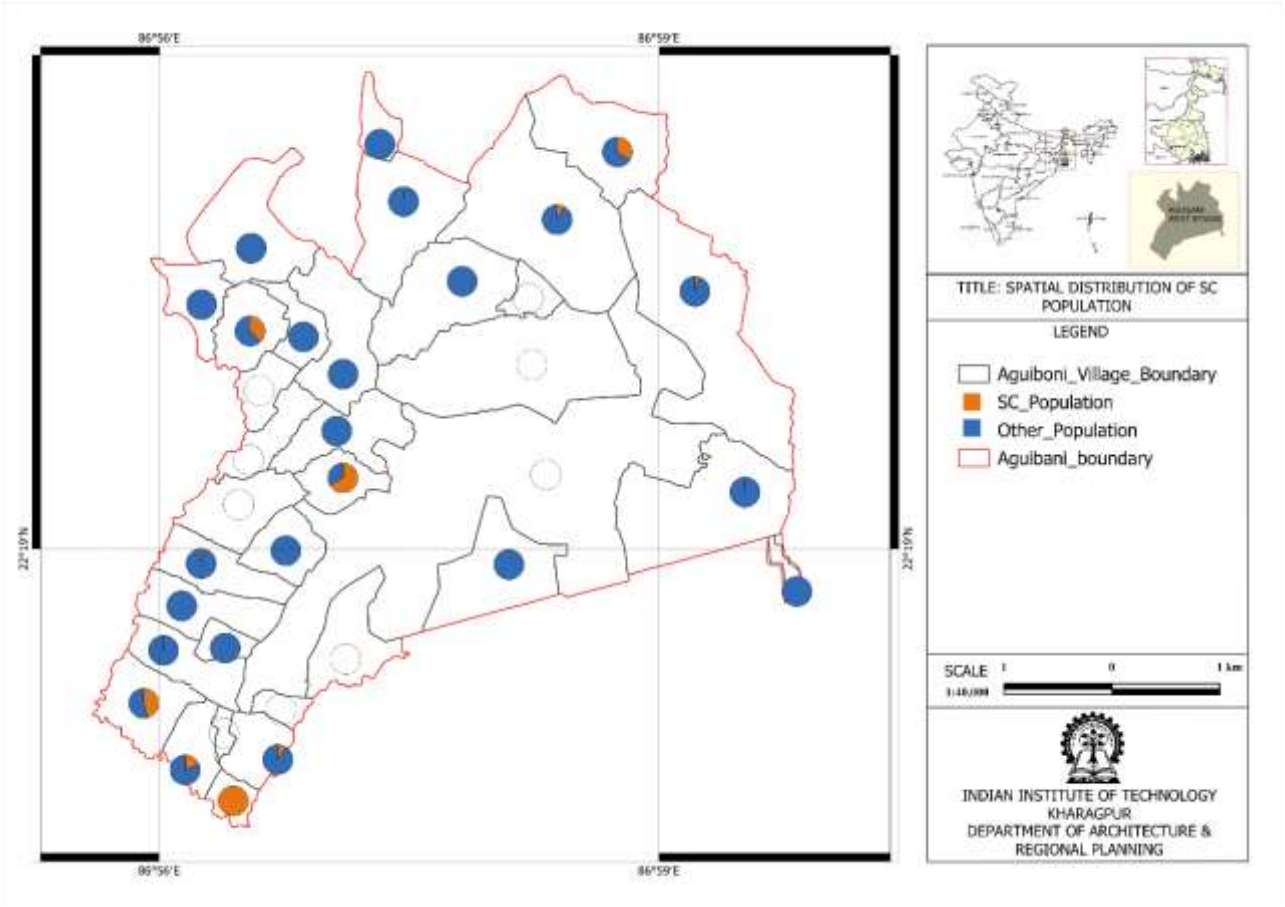

Figure 3.5 Spatial distribution of SC Population compared to the total Population of the Village

(Souce: Author)

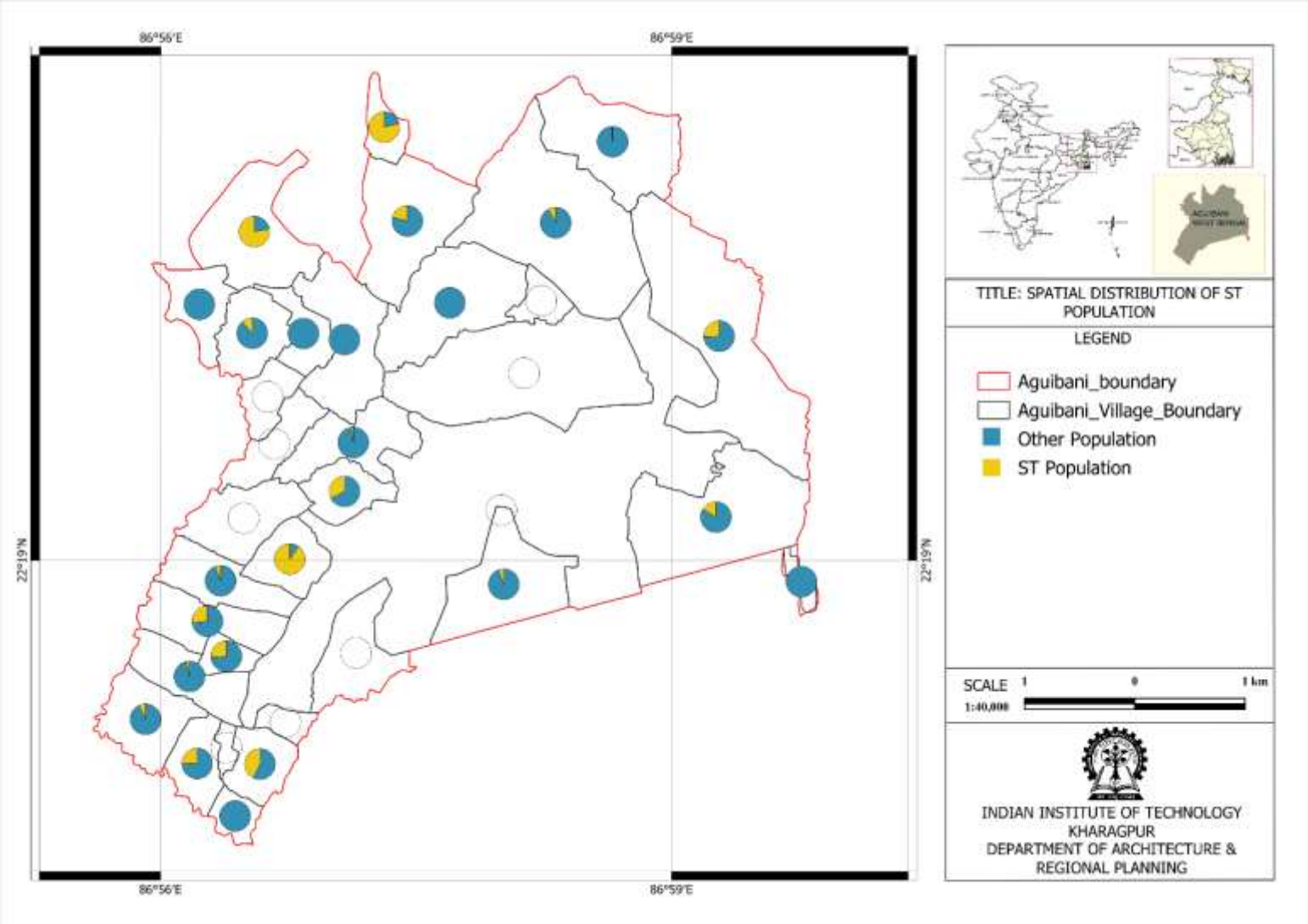

Figure 3.6 Spatial distribution of ST Population compared to the total Population of the Village

(Souce: Author)

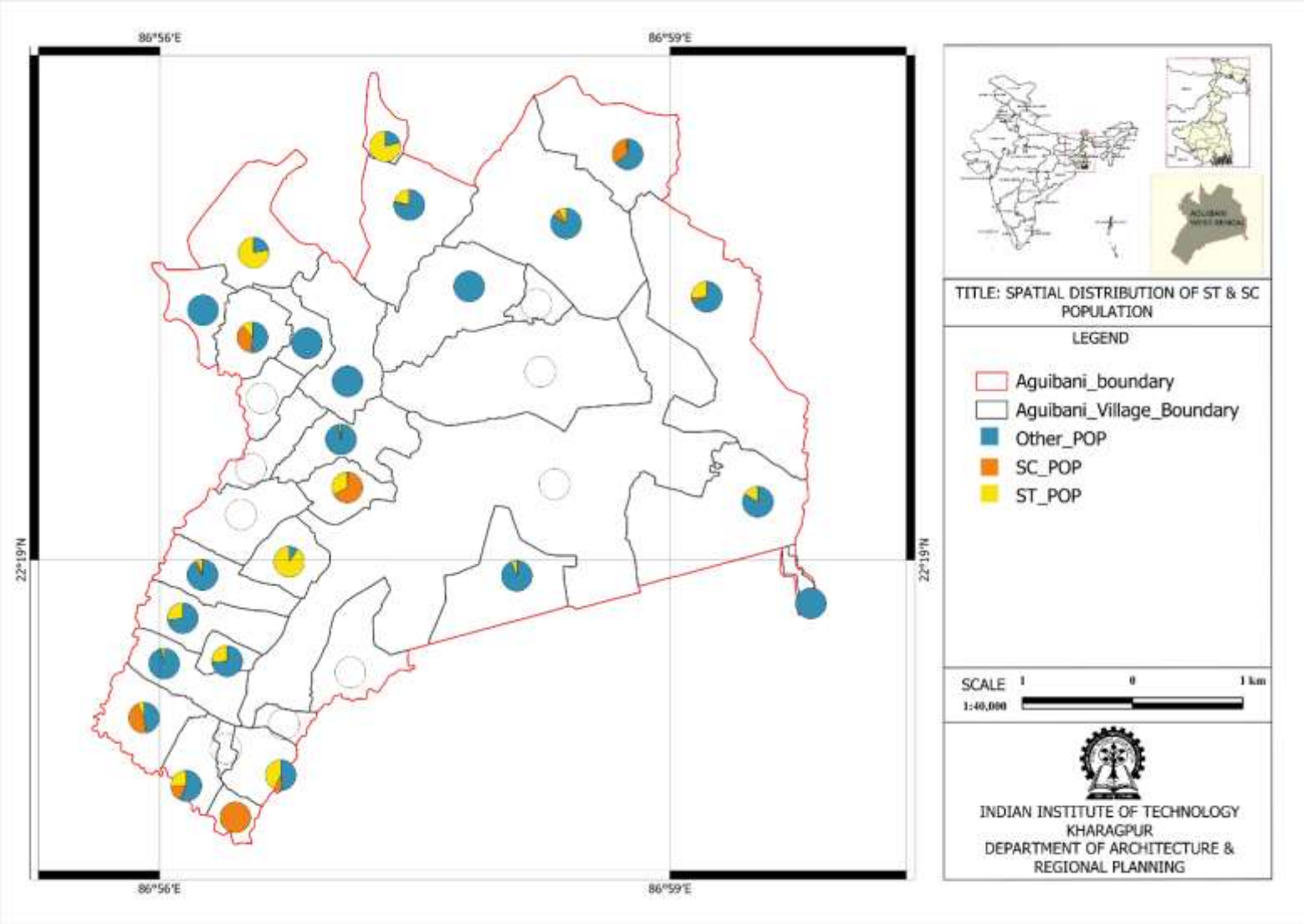

Figure 3.7 Spatial distribution of ST & SC Population compared to the total Population of the Village

(Souce: Author)

3.1.8. Migration

Some people migrate to urban areas for better employment opportunities.

3.1.9. Key Observations

The population of the Aguibani GP is dispersed over 28 villages; however, there is substantial variation in the population of different villages. The Aguibani village is located beside the Mumbai-Kolkata National Highway and thus has attracted relatively more human settlement as well as more development in comparison to the other villages in Aguibani GP. The population density in several other villages in the GP was comparatively very low, and the eastern part of the GP appeared to have fewer human habitations. The observations were in line with the village map received from the GP.

3.1.10. Population Projections

Projections are an extrapolation of historical data (population v/s time) into the future. The accuracy of population projection is generally considered directly proportional to the size of the existing population/ employment and the historical rate of growth, and inversely proportional to the length of the time projection. This section comprises the estimation and projection of population for the planning area (Aguibani GP). Projection is done for horizon the year 2041, for which the Spatial Development Plan is being prepared for the planning area.

3.1.10.1. Methodology Adopted for Estimation of Population

Population projections for Aguibani GP were carried out using three mathematical projection methods. As the population forecasted by Jal Jeevan Mission for the year 2024 is closest to the arithmetic method, the arithmetic method of the three methods considered as a forecast population for 2041 for the further projections required for the development of planning proposals. The following three population forecasting methods:

- **Arithmetic Method-** This method is based upon the assumption that the decadal increase in population is constant.

- **Geometric Increase Method-** In this method, it is assumed that the percentage increase in population from decade to decade remains constant.

- **Incremental Increase Method-** The method refers to the difference between the absolute population increases during the two successive decades.

Data Source

Various data sources have been used to extract population details for the planning area. The population distribution for the years 1991, 2001, and 2011 has been sourced from Census of India publications for the projections.

3.1.10.2. Basic Assumptions of Population Projection

Demographic studies play a pivotal role in predicting how a population will evolve in the future and how it impacts various realms. A growing population could impact the environment negatively if not sustained sustainably. Impacts on the ecology through forest cover reduction, more agricultural lands for more food production, pollution of land and water, an increase in the temperature, and many more are observed to weaken how the world functions. The increase in population also threatens the economic sector as the requirement to cater to different sectors of the growing population, when the future Population is unknown. It can put pressure on various services and resources. In addition to this, the ever-increasing population will need ample income to sustain itself and prevent itself from falling into the cycle of poverty, which will further lead to a lack of education, lesser access to development, and, thereby, leading to poor quality of life. Furthering the implications, the burgeoning population will also need to access various infrastructure in the urban or rural areas like water supply, sewage, transportation, drinking water, healthcare, and many more. Further, the inclusion of senior citizens too is a matter of immediate concern.

1. Arithmetic Increase Method

This method can be utilised for regions that have been established for a very long time and are bigger in size. The following steps have to be followed for an Arithmetic Increase Method of forecasting population.

$Pn = P + n.C$

Where,

Pn= Population after ‘n’ decades

‘P’=present Population.

$dP/dt = C$, i.e., the rate of change in population with respect to time C.

2. Geometrical Progression Method

This method can be used for regions with an industrial background. The following steps have to be followed for a Geometrical Progression Method of forecasting a population.

Pn = P (1+ IG/100) n

Where,

P = Present Population

n = no. of decades.

IG = geometric mean (%)

3. Incremental Increase Method

This analysis method is suitable for regions growing over time on a positive trajectory.

Pn = P+ n.X + {n (n+1)/2}.Y

Where,

Pn = Population after the nth decade

X = Average increase

Y = Incremental increase

Comparison of different methods is provided in Table 3.5

Population projection to estimate future growth of the gram panchayat are estimated with the projection methods as described above and in 3.1.10.1. **Assumptions for fertility rates, mortality rates, migrations patterns are not being considered for the projections.** Also, it is important to note that the assumptions are solely considered for the projection of population and do not consider the sudden influx of population that may arise because of project proposals or other population drawing events.

3.1.10.3. Projected Population for next 10 years (2035)

The Geometric method provides the highest population estimate for Aguibani GP in the horizon year, while the Incremental method projects the lowest, with a difference of 1,870. The Arithmetic method estimates a population of **13,070** for 2041, which has been considered for planning as it reflects a gradual and steady growth trend for Aguibani GP.

Table 3-5 Population projection comparison

Year	Arithmetic Method (AM)	Geometric Method (GM)	Incremental Increase Method (IIM)
1991	8260	8260	8260
2001	9392	9392	9392
2011	10184	10184	10184
2021	11146	11308	10381
2026	11627	11916	9842
2031	12108	12556	10578
2036	12589	13231	10889
2041	**13070**	13942	11200

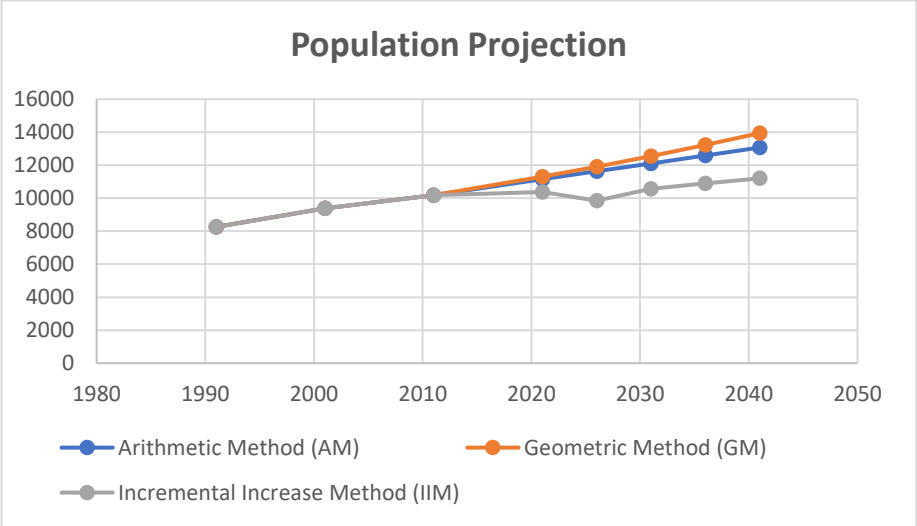

Figure 3.8 Population projection

Source: Census data

3.2. Economic Profile

3.2.1. Regional Economic Profile

Aguibani Gram Panchayat is part of a region where the economy is mainly rural and agriculture-based. The broader economy of West Bengal includes farming, small industries, and services. In rural areas like Aguibani, most people depend on farming, forest produce, and small-scale traditional work.

3.2.1.1. State Economic Profile

West Bengal has a mixed economy that includes agriculture, industries, and services. In rural areas, most people earn their livelihood from farming and forest-based activities. The state is rich in natural resources and has a favourable climate for agriculture, horticulture, and fisheries. It is located close to mineral-rich states like Jharkhand, Bihar, and Odisha. West Bengal also has good connectivity through railways, roads, ports, and airports. It is the second-largest tea-producing state in India.

3.2.1.2. District Economic Profile

Jhargram district is mostly rural and forest-covered. Agriculture is the main occupation, with rice being the most common crop. People also grow vegetables, pulses, and fruits. Many depend on the forest for additional income, especially from sal leaves, wood, and bamboo. The district is also known for its tribal heritage and eco-tourism. Within the Jhargram district, traditional handicrafts represent an important facet of rural economic activity. Local artisans produce a range of handcrafted items such as sabai grass products, wooden crafts, bamboo goods, woolen items, jute trinkets, earthenware, slate and stone carvings, and Dokra metalwork, demonstrating a vibrant artisanal landscape.

3.2.1.3. Block Economic Profile

In the block where Aguibani is located, people earn their living through farming, forest-based activities, and daily wage work. Sal leaf collection and plate making are one of the key local occupations. The area relies on forest produce for extra income. Cashew cultivation is a significant agricultural practice in Aguibani.

3.2.1.4. Industrial Areas/Special Economic Zones (SEZ) near the Gram Panchayats

There are no big industrial zones or SEZs near Aguibani. However, towns like Kharagpur and Medinipur have industries and factories. For local people, small forest-based businesses such as sal leaf plate making are the main source of non-farm income.

3.2.1.5. Major Tourism Spots/Major Economic Activities/Markets near the Gram Panchayats

Although there are no major tourist attractions within the Aguibani Gram Panchayat itself, several popular destinations are located nearby. Tourist spots such as Jhargram Palace, Kanak Durga Temple in Chilkigarh, and the Jungle Mahal Zoological Park attract a steady flow of visitors to the region. These sites offer opportunities for small businesses, especially those involved in local crafts and food services. Additionally, weekly markets in Jhargram and surrounding towns provide important platforms for villagers to sell products such as sal leaf plates, bamboo crafts, and vegetables, supporting the local economy. Elephants are seen at the Jhargram Forest, which is located near Aguibani.

3.2.2. Gram Panchayat Economic Profile/Activities

Primary survey of the village reveals that the majority of workers are involved with agriculture. The primary survey conducted in Aguibani Gram Panchayat indicates that the majority of the workforce is engaged in agricultural activities, either as cultivators or agricultural labourers. Cashew cultivation is a significant agricultural practice, with local farmers selling their produce to a nearby aggregator, ensuring a steady but localized economic cycle. In addition to agriculture, animal husbandry plays an important role in the local economy, with poultry farming, goat rearing, and cow husbandry being the primary livestock activities. Pig farming is also practiced in certain areas, contributing to household income diversification.

Aguibani has a strong traditional artisanal economy, particularly in goldsmith craftsmanship, which has sustained families for three to four generations. Additionally, silver craftsmanship continues to be practiced, although brass craftsmanship, which was once a part of the local industrial base, has declined due to reduced demand and industrial stagnation.

Bamboo cultivation and trade are present in certain areas, contributing to the village's economy. Several household-level industries also play a crucial role in local livelihoods. Notable among them are leaf platemaking, iron pin manufacturing, galvanized iron net production, and small-scale puffed rice industries. These micro-industries provide employment opportunities; however, the lack of formal training and limited market access has led to their decline and reduced profitability.

3.2.2.1. Primary Sector Profile/Activities (Agro-climitic zone and Major Produce from Agriculture/ Cultivation/ Mining/ Forestry and their rotation)

3.2.2.1.1. Agriculture Economy

The Sarpanch survey and primary survey indicate a heavy reliance on paddy cultivation as the primary agricultural activity. Only 8% of farmers practice multi-cropping, while the majority depend solely on paddy cultivation. A significant number of farmers grow paddy twice a year. Apart from paddy, other crops such as mustard, sunflower, potato, and various vegetables are cultivated by a limited number of farmers.

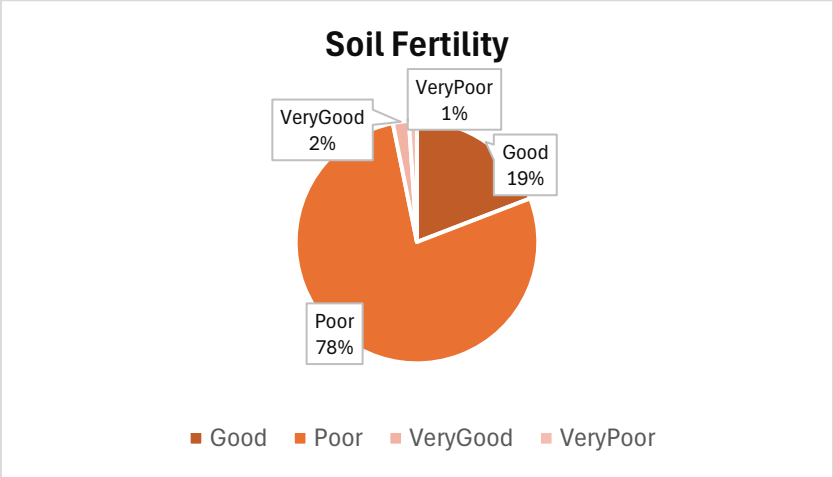

Figure 3.9 Soil fertility in Aguibani Gram Panchayat

For seed procurement, farmers must travel to Aguibani and Jhargram, as local availability remains a challenge. The predominant soil type in Aguibani Gram Panchayat is Bele soil. Soil fertility and crop yield are major concerns among farmers, with 78% of respondents rating soil fertility as poor, while only 19% consider it to be good.

The primary survey highlights significant disparities in irrigation access among farmers in Aguibani Gram Panchayat. Borewells are the most widely used irrigation source, serving 40% of farmers, while 19% depend entirely on rainwater, making their agricultural output highly vulnerable to seasonal variations. Additionally, 12% of

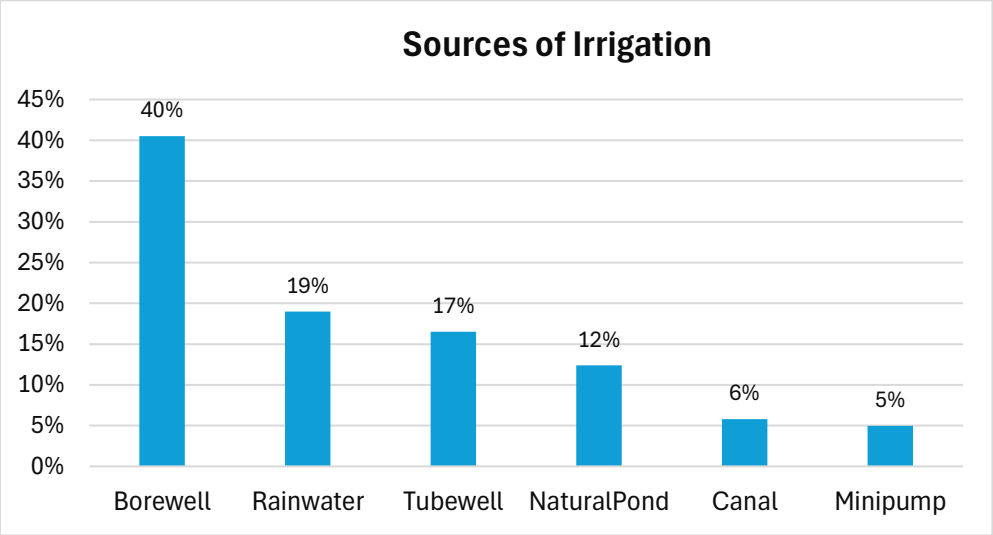

Figure 3.10 Source of irrigation

farmers rely on water from natural ponds, and 5% use mini pumps, indicating a diverse but limited irrigation infrastructure.

A critical issue is the high cost of irrigation in Bhagjhapa, where private players provide irrigation services at INR 3,000 per bigha. This expense is economically burdensome, particularly for small and marginal farmers, restricting their ability to expand agricultural activities. To address this challenge, villagers have proposed the implementation of solar-powered irrigation pumps through the Gram Panchayat. Such an initiative could significantly lower irrigation costs, promote sustainable water management, and generate additional revenue for the Gram Panchayat.

In contrast, Bara Didiha lacks any form of irrigation infrastructure, both public and private, resulting in single-crop farming and agricultural stagnation. The limited availability of irrigation water is a widespread issue, with 44% of farmers having access to water for only three months and another 44% for six months. Only 12% of farmers have irrigation water available for nine months, highlighting a pressing need for enhanced water management strategies.

The primary survey highlights a significant gap in agricultural knowledge among farmers due to limited exposure to modern farming techniques. The absence of a Krishi

Vigyan Kendra (KVK) in the village further exacerbates this issue, as there is no institutional mechanism to guide farmers in technology generation, assessment, refinement, and dissemination in agriculture and allied sectors. As a result, farmers continue to rely on traditional methods, which may not be optimal for productivity and sustainability.

Additionally, Aguibani Gram Panchayat lacks essential agricultural infrastructure such as warehouses and food processing facilities. Due to the absence of storage facilities, farmers are compelled to sell their produce immediately after harvest, often at lower prices, to local shops, the Aguibani market, and the Jhargram market. The lack of value addition through processing further limits their profit margins and economic stability.

Cashew farming is practiced at various scales, ranging from small to large-scale cultivation. A local aggregator collects cashew from farmers and sells it for processing outside the village. This presents a significant opportunity for economic growth establishing a cashew processing plant within the Gram Panchayat could enhance local value addition, improve profitability for farmers, and generate employment opportunities for the local population.
Bamboo cultivation and trade are practiced in certain areas, with bamboo being sold at a price range of INR 50 to 100 per piece. However, in several instances, forest authorities reportedly claim 50% of the revenue, reducing the earnings of local cultivators and impacting the profitability of bamboo farming.

3.2.2.1.2. Animal Husbandry

Beyond agriculture, animal husbandry is a crucial component of the rural economy in Aguibani Gram Panchayat, with poultry farming, goat rearing, and cow husbandry being the primary livestock activities. Pig farming is also practiced in certain areas, contributing to income diversification. However, despite the considerable number of households engaged in livestock rearing, commercial utilization remains low. While 30% of households own cows, only 9% use them for commercial dairy purposes. Similarly, 24% of households rear goats, but only 11% engage in commercial goat farming, and out of 21% of households with poultry, only 9% use them for commercial purposes. This indicates that livestock is primarily maintained for subsistence rather than as a significant income source.

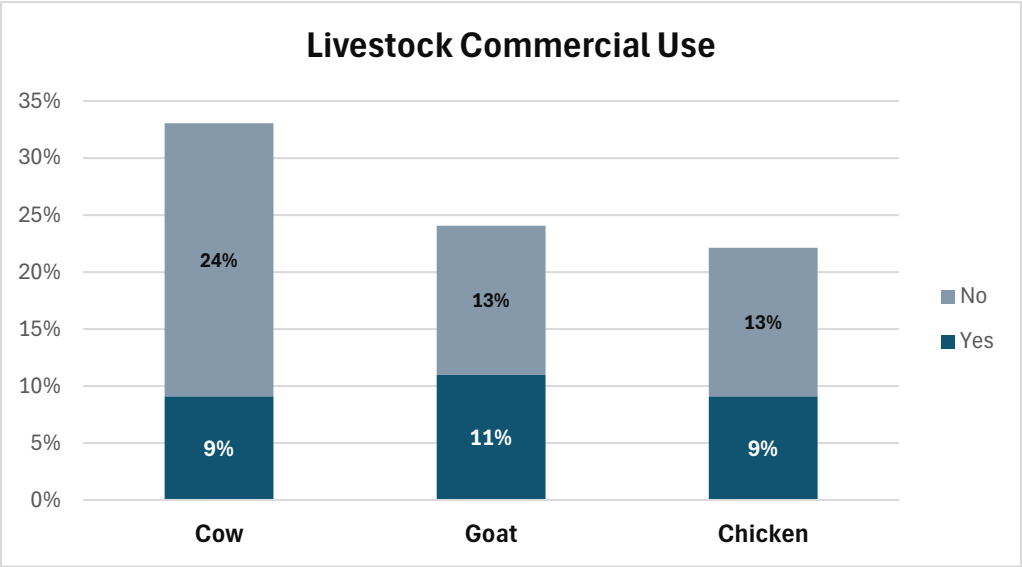

Figure 3.11 Percentage of people using livestock for commercial use

The limited commercialization of animal husbandry can be attributed to poor veterinary services, the absence of veterinary hospitals, and the lack of cooperative infrastructure. These factors restrict the growth of cattle farming, reduce dairy production potential, and limit opportunities for income generation through livestock trade. The establishment of veterinary healthcare facilities, livestock cooperatives, and access to modern animal husbandry techniques could enhance productivity, improve the commercial viability of dairy and livestock farming, and provide a sustainable source of income for rural households.

3.2.2.2. Secondary Sector Profile/Activities

3.2.2.2.1. Household level Industries

Sal leaf plate making

Sal leaves are collected and sold at INR 50 per 1000 leaves, and leaf platemaking is a notable household-level activity specially in tribal area. Currently there are two leaf pasting machines present in the gram panchayat.

Puffed Rice mill

Currently there are two puffed rice mills in Ektal village which employes people and produce puffed rice.

Iron pin and galvanized iron net making

In Netura and Aguibani village people household involved in iron pin and galvanized iron net making for income opportunities.

3.2.2.2.2. Artisanal Economy

Aguibani is known for its traditional artisanal economy, specifically goldsmith craftsmanship, which has sustained families across three to four generations. The region serves as a hub where gold shops from Odisha, Kolkata, and Jharkhand outsource their goldwork. However, this traditional economic activity is facing a decline due to increased competition from Punjab and urban goldsmith units in Kolkata, leading to reduced market share for local artisans.

Additionally, silver and brass craftsmanship was historically a part of the local industrial base, but brass work has become defunct due to dwindling demand and industrial decline. As a result, artisans are migrating to industrial hubs like Gujarat and Chennai in search of alternative livelihood opportunities.

3.2.2.3. Tertiary Sector Profile/Activities

Shops and small vendors operate in village markets and along NH49, selling groceries, clothing, and household goods. Transport-related services, such as cycle vans, shared autos, and small goods carriers, provide connectivity within the GP and to nearby towns like Jhargram and Kharagpur.

The service sector is primarily dominated by private-sector employment, The service sector comprises of workers, government employers, drivers, teachers, railway workers, tailors, and nurses.

3.2.3. Workforce Participation Rate

Workforce participation rate (WFPR) refers to the percentage of the total number of workers to the total population. The total workers' population is the sum of the main and marginal workers. As per the Census of India, in 2011 44% of the population is working population.

Table 3-6 Workforce Participation

Workforce Participation	Census of India, 2011	Census of India, 2011 (%)
Total population	10184	

Total worker	4181	44%
Total Non-workers	5292	56%
Total Main Worker	2699	28%
Total Marginal Worker	1482	16%

Employment structure refers to the reference period for determining a person as a worker or non-worker is one year preceding the date of enumeration. Based on the reference period work is divided into two categories- Main Workers and Marginal Workers. Main workers are who are employed for at least for six months, and the rest are marginal workers. As per the Census of India, 2011, Out of 44% of workers, 28% are main workers and 16% are marginal workers in Aguibani GP.

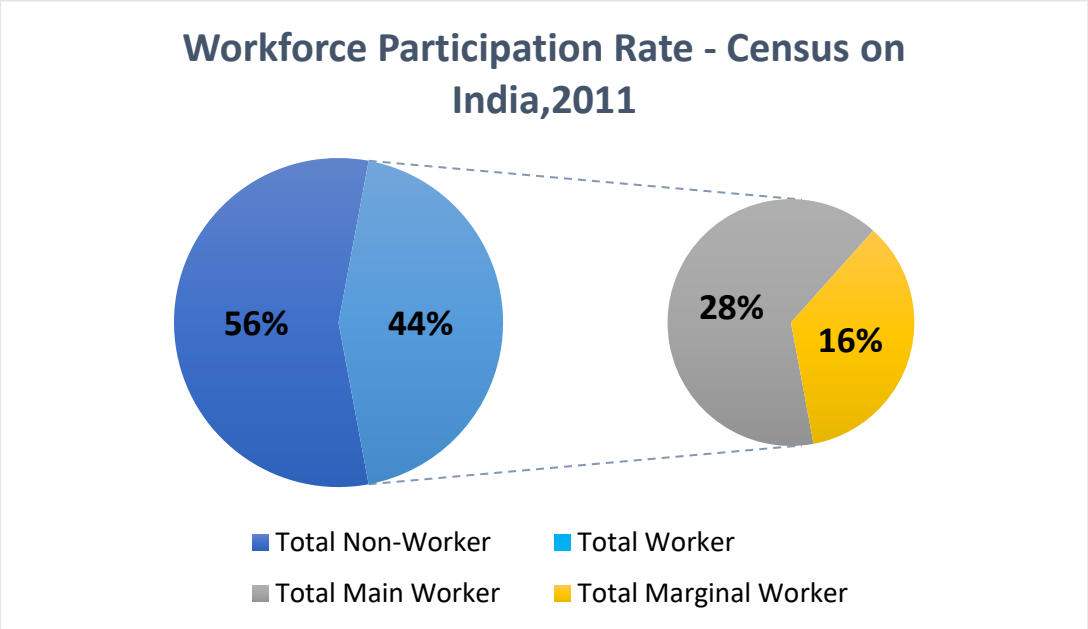

Figure 3.12 Workforce Participation Rate

The occupation for living for the surveyed population in Aguibani GP is shown in Figure 2 Occupation for living. For the households surveyed in Aguibani GP, the major occupations for living were labour and agriculture, at 52% and 36%, respectively. Only 5% of households earn from business, and 7% are engaged in service.

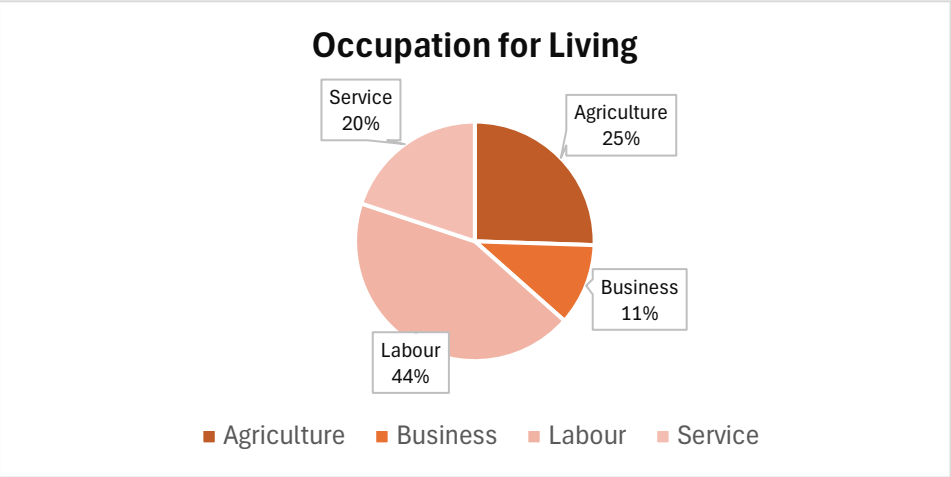

Figure 3.13 Occupation for living

3.2.3.1. Primary Sector

According to the survey, 44% of the working population is engaged in labor work, with 22% working as Raj Mistri (skilled masons), 21% as daily wage laborers, 17% in construction, 14% as company laborers, and 8% each in rice mills and the Rashmi Group. This data indicates a heavy reliance on labor-intensive jobs, with a significant portion engaged in construction-related activities. The presence of industrial employment, such as in rice mills and the Rashmi Group, suggests some diversification, but the high share of daily wage labor highlights economic instability.

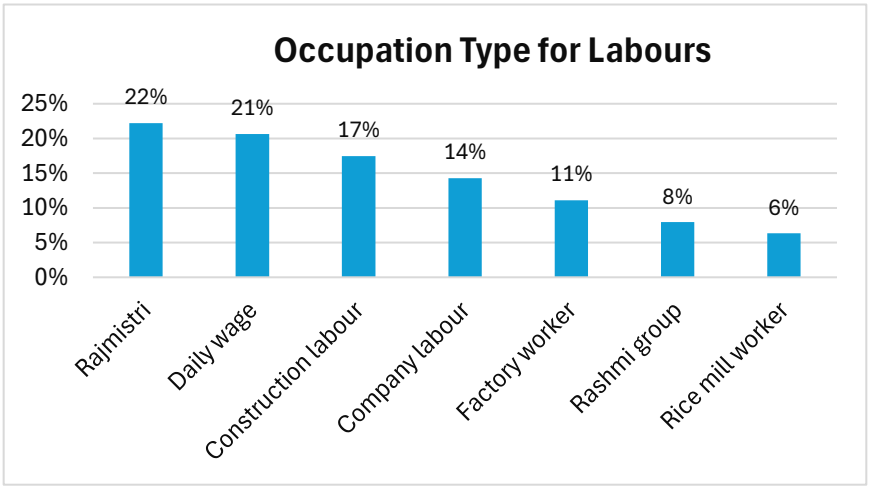

Figure 3.14 Occupation type for labours

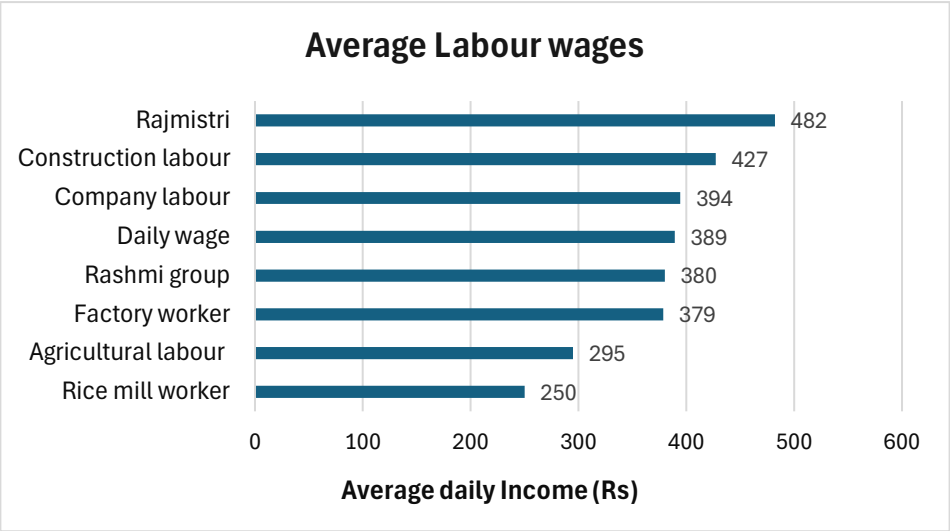

Figure 3.15 Average Labour wages

The average daily income varies across labor categories, with Raj Mistri earning the highest at ₹482, followed by construction laborers at ₹427. Company laborers and daily wage workers earn around ₹390, while Rashmi Group and factory workers receive ₹380-₹379. Agricultural laborers earn ₹295, and rice mill workers the lowest at ₹250. This wage disparity highlights the advantage of skilled labor, particularly in construction, while agricultural and rice mill workers face economic vulnerability.

3.2.3.2. Secondary Sector

Only 11% of the population is engaged in business, with nearly half (49%) running their own shops, followed by 15% in goldsmithing and 7% in salons. Other businesses, including fishing, carpentry (5% each), food shops, bamboo businesses, and agricultural aggregators (4% each), have lower representation. Tailoring, handicrafts, cooking businesses, and photography studios each account for just 2%. The

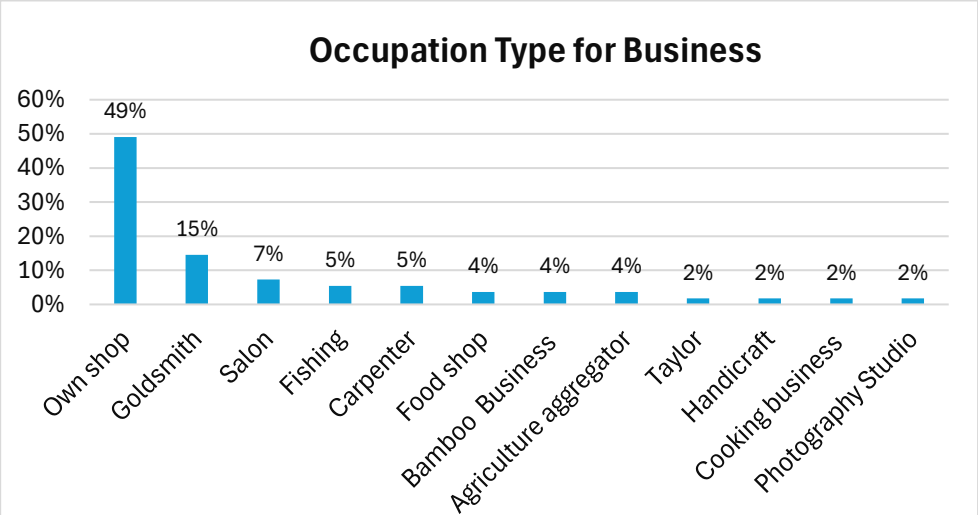

Figure 3.16 Occupation Type for Business

dominance of retail and goldsmithing suggests a preference for established trades, while the limited presence of specialized businesses indicates a lack of diversification. Goldsmiths earn the highest average monthly income at ₹1,11,000, followed by own shop owners at ₹81,000 and ₹61,000. Handicraft businesses earn between ₹43,333 and ₹40,000, while food shops make ₹35,000-₹27,500. Cooking businesses earn ₹21,000, whereas salons have the lowest income at ₹10,000. The data highlights significant income disparities, with skilled trades like goldsmithing being highly profitable, while small businesses such as salons and cooking ventures generate lower earnings.

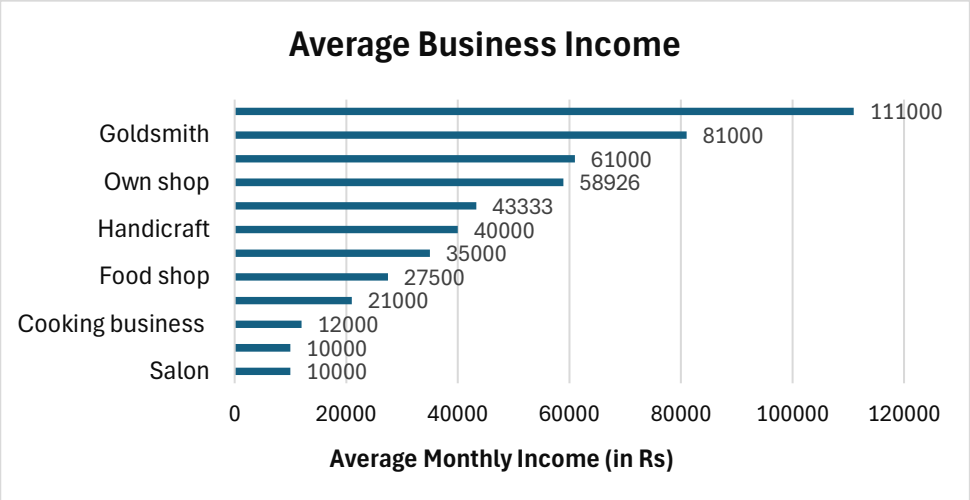

Figure 3.17 Average Business Income

3.2.3.3. Tertiary Sector

The service sector is primarily dominated by private-sector employment, accounting for 41% of workers, followed by government jobs at 26%. Drivers make up 16%, while teachers represent 13% of the workforce. Other occupations, including railway workers

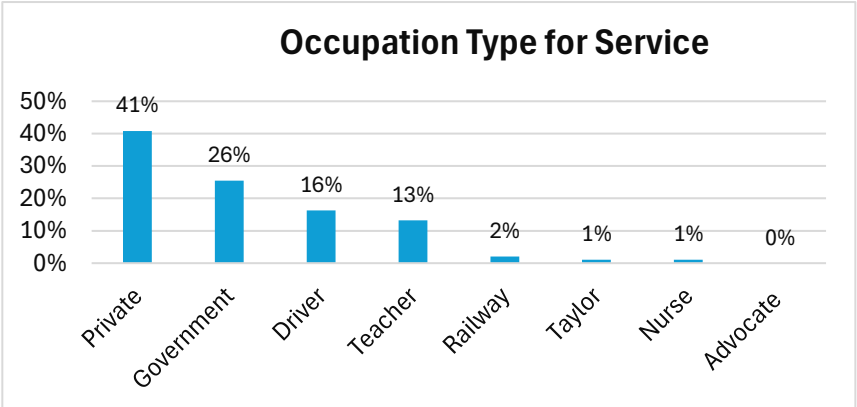

Figure 3.18 Occupation Type for Service

(2%), tailors (1%), and nurses (1%).The data indicates a strong reliance on private and government jobs, with limited participation in specialized professions. The lower presence of skilled roles like nursing and tailoring suggests a need for vocational training and employment diversification to enhance opportunities in the service sector. Teachers and railway employees earn the highest in the service sector at ₹23,115 and ₹22,500 per month, respectively, while drivers (₹16,250) and private sector workers (₹14,595) earn more than government employees (₹13,530). Tailors and nurses have the lowest income at ₹12,000. The data highlights better pay in structured jobs like teaching and railways, while lower wages in tailoring and nursing indicate limited demand or wage constraints. Enhancing skill development and wage structures could improve earnings in the sector.

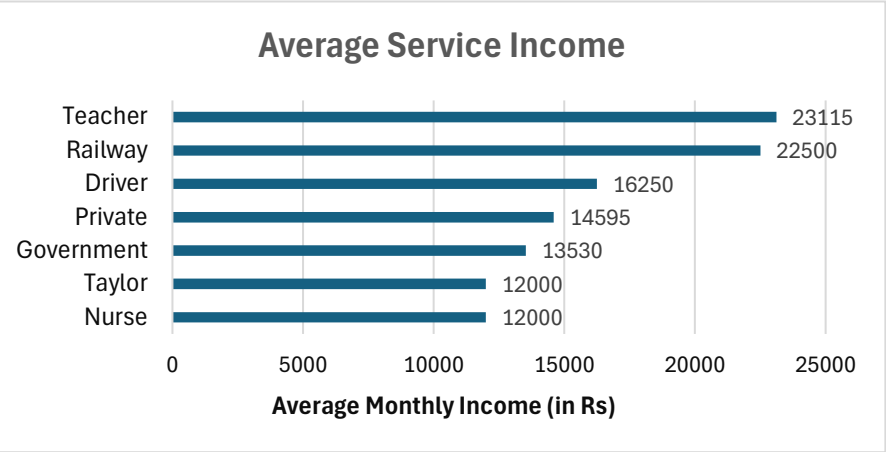

Figure 3.19 Average Service Income

3.2.4. Workforce depending on the Economic activities outside the Gram Panchayats (nearby Urban Areas, Industrial Areas, SEZ, etc.) and interdependencies.

According to the survey on the working population, 57% of individuals are employed within the Gram Panchayat, while 16% commute to a nearby city and another 21% travel to neighbouring Gram Panchayats for work. The data indicates that a significant portion of the workforce seeks employment outside the Gram Panchayat, primarily due

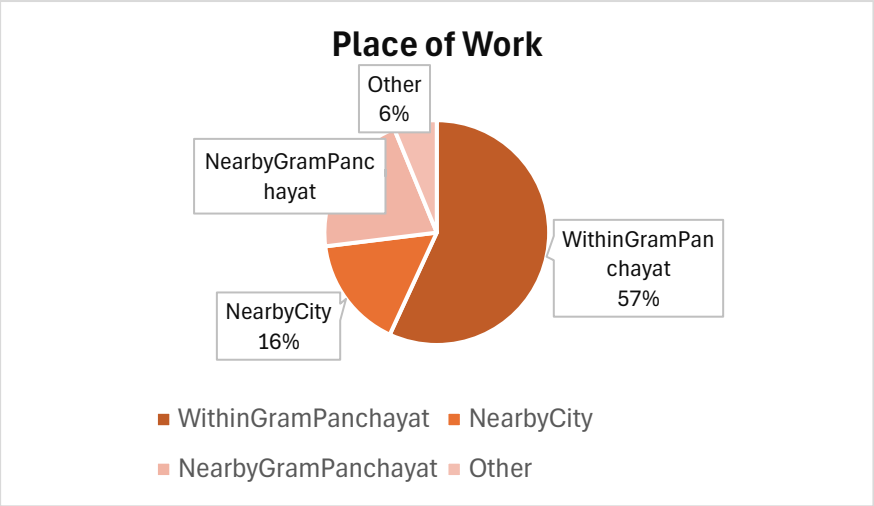

Figure 3.20 Place of Work

to limited local job opportunities, highlighting the issue of out-migration.

3.2.5. Key Observations & Recommendations (from Regional Economic Profile or nearby areas that can Contribute to and Strengthen the GP Economic Profile/Activities)

3.2.5.1. Infrastructure Improvement (Skill Development Centre that can be established at Cluster Level within GP based on the assessment of the nearby areas (Rural & Urban))

There is a clear need to establish Skill Development Centres at the cluster level within Aguibani GP. Given the traditional goldsmithing skills and existing agro-based activities, training programs in jewellery design, agro-processing, tailoring, bamboo craftsmanship, and animal husbandry should be introduced. These centres can collaborate with nearby urban centres like Jhargram and industrial hubs in Jharkhand to ensure market-relevant skill enhancement. Mobile training units or satellite centres from institutions like ITIs or Rural Self Employment Training Institutes (RSETIs) can bridge the rural-urban skill gap.

3.2.5.2. Facilitating Technology and Market Access

The lack of exposure to modern agricultural and artisanal technologies is a barrier. Introducing solar-powered irrigation systems, agro-advisory services via mobile apps, and low-cost processing units (e.g., mini cashew processors, puffed rice dryers) will

enhance productivity. Creating local market linkages and connecting producers with e-NAM (National Agriculture Market), SHGs with online marketing platforms, and artisans with urban retailers will reduce dependency on middlemen and improve income.

3.2.5.3. Organization of the informal sector

The informal sector including agricultural labourers, artisans, and micro-entrepreneurs lacks institutional support. Formation of cooperatives and producer groups, especially for cashew growers, bamboo traders, puffed rice producers, and goldsmiths, is essential. These bodies can negotiate better prices, access subsidies, and avail government schemes. Registration under MSME and linking with self-help groups can offer financial and social security support.

3.2.5.4. Adoption of a cluster-based approach

Aguibani GP can benefit from a **cluster-based development strategy** focusing on:

- **Goldsmithing and artisanal cluster**, with common facility centres (CFCs) for polishing, design, and marketing.
- **Agro-based cluster** for rice, cashew, puffed rice, and bamboo with processing, branding, and packaging units.
- **Animal husbandry cluster** for goatery, dairy, and poultry, supported with veterinary services and cooperative-based marketing.

Such clusters can help in leveraging scale, attracting investment, and ensuring integrated development.

3.2.5.5. Any Other

- Promotion of **farmers' markets** and **weekly haats** to ensure direct sales.
- Introducing **farm-to-school and farm-to-institution** programs for stable demand.
- Encouraging eco-tourism through tribal culture, handicrafts, and natural resources could generate alternative employment.

3.2.6. Key issues

3.2.6.1. How is the loss of fertile agricultural land due to unregulated development leading to food insecurity?

Unregulated and fragmented development like scattered housing, unauthorized mining, or road expansion can reduce cultivable land and threaten food security. In the absence of land use planning and awareness, valuable paddy fields and orchards are being lost. This necessitates **zoning regulations** at the GP level, **community-based land monitoring**, and promotion of **land-saving practices** like vertical housing or agri-based livelihoods on non-fertile land.

3.2.6.2. Other issues

- Irrigation dependency on private players is economically unsustainable.
- Youth migration due to lack of non-farm opportunities.
- Poor veterinary services limiting commercialization of livestock farming.
- Gender gap in income generation, especially in the informal sector.
- Limited financial literacy and access to affordable credit, affecting entrepreneurship.

3.2.7. Identified Feasible & Bankable Projects/Activities which can help in the enhancement of the Gram Panchayat Economy

1. **Solar-Powered Irrigation Projects -** Community-managed solar pumps with SHG participation to reduce irrigation cost and increase cropping intensity.
2. **Cashew Processing Unit -** Small-scale processing and packaging unit to retain value within the village and create employment.
3. **Goldsmith Common Facility Centre (CFC) -** Shared workspace with tools, design training, and direct market linkages.
4. **Veterinary Sub-centre & Mobile Clinics -** Essential for commercialising dairy and poultry sectors.
5. **Sal Leaf Plate Production Unit -** A mechanised unit supported by SHGs for better productivity and income.
6. **Agro-Marketing Cooperative -** For direct marketing of rice, vegetables, and bamboo.
7. **Skill Training cum Business Incubation Centre -** Focusing on rural entrepreneurship, particularly for women and youth.
8. **Mobile App-based Advisory Services -** Covering agriculture, weather, veterinary care, and market prices.

3.3. Social Profile

3.3.1. Education Facilities

3.3.1.1. Types of Education Facilities

Table 3-7 Education Facility assessment according to RADPFI guidelines

Type of School	Population 2011	Existing No. Facility (Census 2011)	Existing No. Facility (Report)	Required	Surplus/ Deficit
Pre-Primary School(Anganwadi)	10184	-	20	13	+7
Primary Schools		12	14	2	+12
High School with Primary school		3	3	1	+2

Pre-Primary School (Anganwadi)

The Integrated Child Development Services (ICDS) guidelines stipulate that there should be one Anganwadi Center (AWC) for every 800 people. According to the 2011 Census, Aguibani Village has a population of 10,184. Based on this population, there should be approximately 13 AWCs to adequately serve the community. However, currently, there are 20 ICDS in the village.

Primary Schools

As per the RADPFI Guidelines one Primary school is require for every 5000 population, Aguibani Gram Panchayat should have at least two primary schools to cater to the educational needs of its population. However, the reality surpasses this requirement as Aguibani GP hosts 14 government primary and nursery schools. Despite the numerical adequacy, these schools' infrastructure and overall conditions are far from satisfactory. Many schools face issues such as inadequate classrooms, a lack of proper sanitation facilities, insufficient teaching aids, and poorly maintained buildings. These shortcomings hinder the delivery of quality education and affect the learning environment for the children. To address these issues, it is crucial to undertake significant improvements in the infrastructure and resources of these primary schools, ensuring they meet the educational standards and provide a conducive learning atmosphere.

Figure 3.21 Banksal Primary School

Figure 3.22 Aguibani Primary School

High School with Primary section

According to the RADPFI Guidelines, one High school is required for every 15000 population. Aguibani Gram Panchayat should have at least one high school with primary sections to serve the educational needs of the community adequately. Fortunately, the village exceeds this requirement, with three such institutions currently in place. These schools offer a continuum of education from primary to secondary levels, essential for maintaining educational consistency and reducing dropout rates as students transition from primary to high school. The infrastructure in many of these schools is inadequate, with limited laboratory facilities and a lack of libraries. Furthermore, the maintenance of the school buildings and facilities often falls short, impacting the overall learning environment.

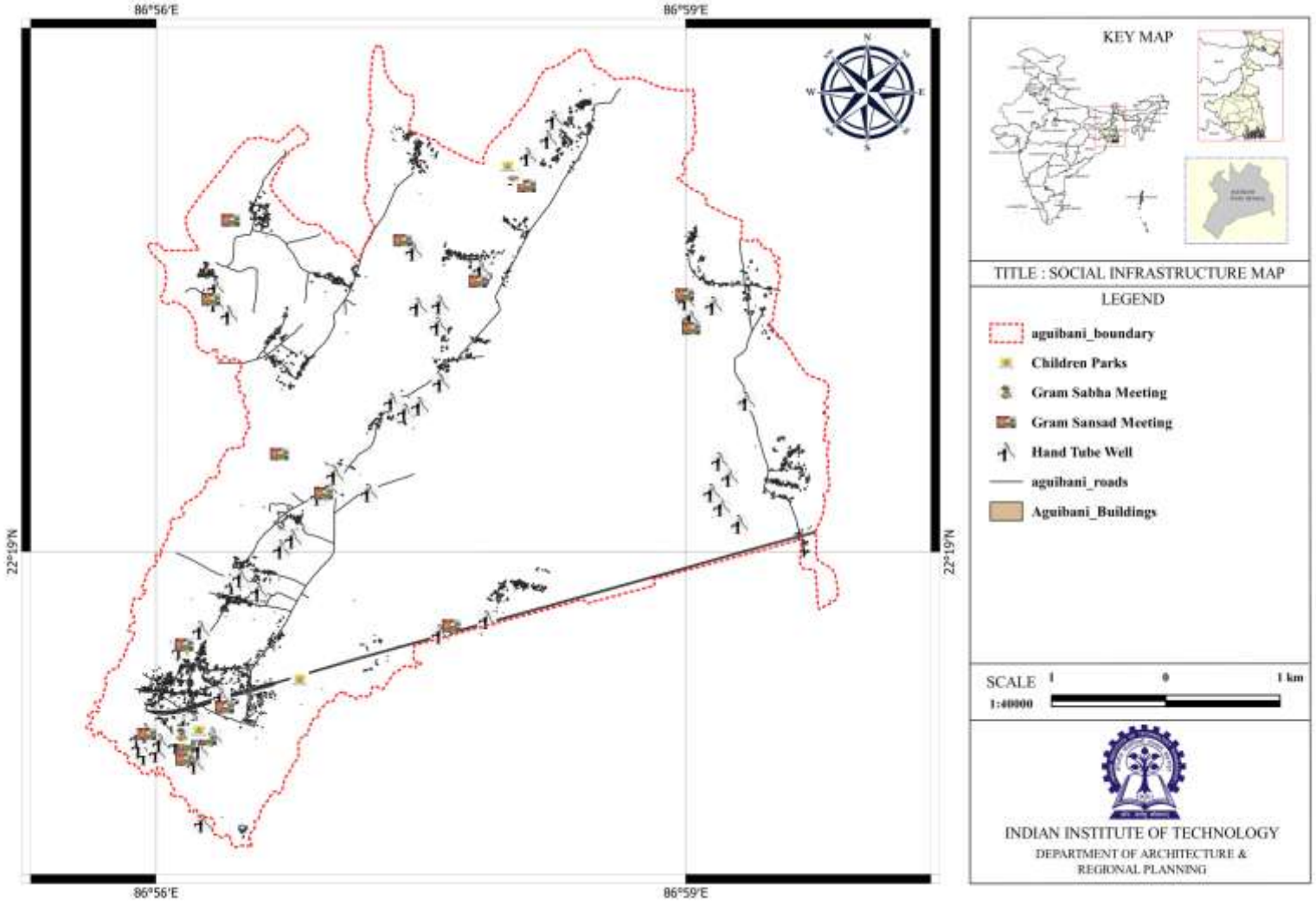

Figure 3.23 Social Infrastructure Map

3.3.1.2. Key Observations

Educational facilities form the cornerstone of community development, especially in rural areas such as Aguibani Village. These facilities provide primary education and play a crucial role in shaping the community's future by empowering the younger generation with knowledge and skills. According to the Aguibani Report compiled by IIT, the village has 14 government primary and nursery schools. However, these schools face significant challenges, including inadequate infrastructure and poor conditions. A few secondary/middle schools (3 in number) also require substantial improvement. The village lacks senior secondary schools and colleges, which limits higher education opportunities for the youth. Addressing these gaps is essential for fostering an environment conducive to learning and growth.

3.3.1.2.1. Facilities that can be established at the Cluster Level within the GP based on the assessment of nearby areas (Rural & Urban)

Given the current educational facility scenario in Aguibani GP and the assessment of surrounding rural and semi-urban areas, certain institutions can be developed at the cluster level to fill existing service gaps and enhance educational access:

- **Senior Secondary School**: As Aguibani lacks any senior secondary institutions, establishing a higher secondary school at the cluster level would serve not only the GP but also nearby villages. This would reduce student dropouts after secondary education due to distance and accessibility issues.

- **Vocational Training Center**: Considering the rural context and lack of higher education or skill-based learning opportunities, a vocational training centre focusing on agriculture, handicrafts, tailoring, and basic computer literacy can be introduced. This will cater to school dropouts and youth seeking skill development.

- **Model Primary School**: A cluster-level model school with adequate infrastructure, sanitation, digital classrooms, and learning resources could serve as a benchmark for educational quality and cater to students from multiple habitations.

- **Teacher Training Resource Centre**: A small resource and training centre for teachers can be initiated at the GP cluster to improve teaching quality and pedagogical methods through regular workshops and support.

3.3.1.3. Identified Issues

Based on the assessment, the following key issues in educational infrastructure and service delivery have been identified in Aguibani GP:

- **Infrastructure Deficiency**: Many schools lack basic infrastructure such as sufficient classrooms, separate toilets for boys and girls, drinking water, electricity, libraries, and playgrounds.

- **Overcrowding in Anganwadi Centres**: Although the number of Anganwadi centres exceeds the required count, many are under-resourced and overcrowded, limiting the quality of early childhood education and nutrition services.

- **Absence of Higher Educational Facilities**: The GP lacks senior secondary schools and colleges, forcing students to travel long distances, which discourages continued education, especially among girls.

- **Shortage of Trained Teachers**: Many schools operate with a limited number of teachers, affecting the student-teacher ratio and the quality of instruction.

- **Poor Maintenance and Monitoring**: Several school buildings and facilities are in poor condition due to a lack of maintenance. There is also an absence of regular monitoring and community participation in school management.

- **Lack of Digital Learning Infrastructure**: Most schools lack access to digital education tools and smart classrooms, which are essential in bridging the urban-rural education gap.

3.3.2. Healthcare Facilities

3.3.2.1. Types of Healthcare Facilities

Table 3-8 Health Facility assessment according to RADPFI guidelines

Type of Facility	Population of 2011	Existing No. Facility (Census 2011)	Existing No. Facility (Report)	Required	Surplus/ Deficit
Sub-Health Centre	10184	0	2	2	Adequate
Primary Health Center (PHC)			1	1	Adequate
Community Health Center (CHC)			0	1	-1
Maternity & Child Welfare Center			0	1	-1

Sub-Health Centre

A Sub-Health Centre (SHC) is the first point of contact between the primary health care system and the community. It plays a crucial role in delivering basic health services and implementing national health programs. Based on the population data from the 2011 Census, Aguibani Village requires 2 Sub-Health Centres to meet the healthcare needs of its residents. Initially, the census data indicated a lack of SHCs, but the current report shows that two SHCs have since been established at Aguibani and Sonamukhi. This meets the recommended requirements, ensuring that basic health services are accessible to the population

Maternity and Child Welfare Center

As per the standards, one such center is required for a population of 15,000 people, which means that with 10184 a total population of 1 center is required in the village. Currently, there is no such center located in the village.

Primary Health Center

As per the Indian Public Health Standards (by Ministry of Health and Family Welfare (MoHFW)), one sub-center is required for a population of 30,000 people, which means, with 10184 population of total 1 PHC is required in the village. Currently, there is 1 PHC located in the village.

Community Sub-Center

As per the Indian Public Health Standards (by Ministry of Health and Family Welfare (MoHFW)), one Community Center (CHC) is required for a population 1 lakh people,

which means, with 10184 of population, presence of the CHC within the panchayat jurisdiction is not required. Currently, no CHC is located in the village.

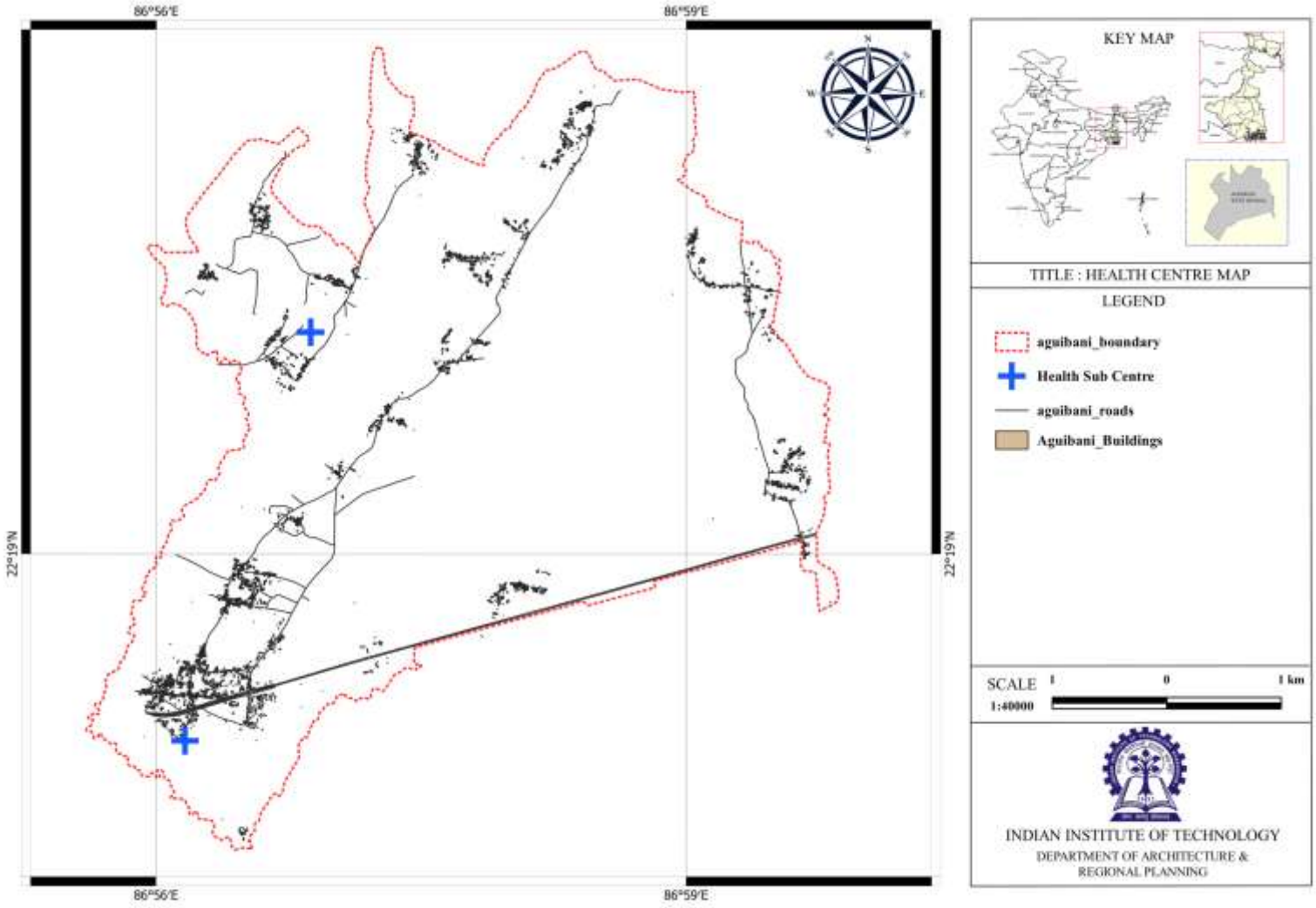

Figure 3.24 Locations of Health Sub Centres

(Souce: Author)

3.3.2.2. Key Observations

Health facilities are vital for ensuring the well-being and development of any community. They provide essential services such as medical care, preventive healthcare, and health education, contributing to the overall quality of life. In Aguibani Village, the current status of health facilities reflects a mixed scenario in terms of availability and adequacy.

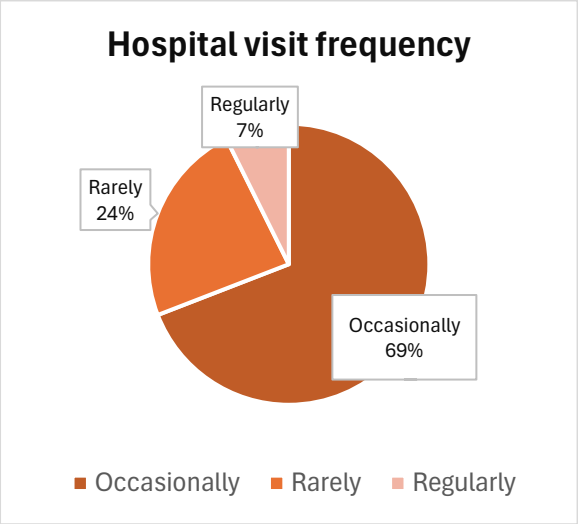

Figure 3.25 Frequency of hospital visit

As per the 450 household survey, 69% of households visit the hospital occasionally, while 7 % of households visit the hospital regularly. About 53 % of households cited the availability of hospitals as a major barrier for health facilities, while 37 % households felt cost was a major barrier, and 10% of households said that transportation was a major barrier for health facilities. Only 28 % households opted for health insurance.

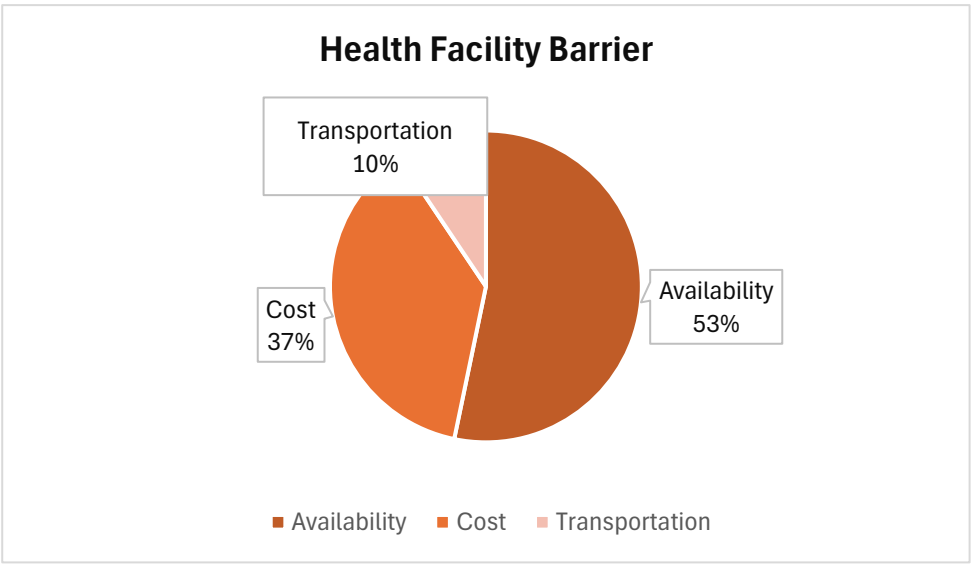

Figure 3.26 Health facility barrier

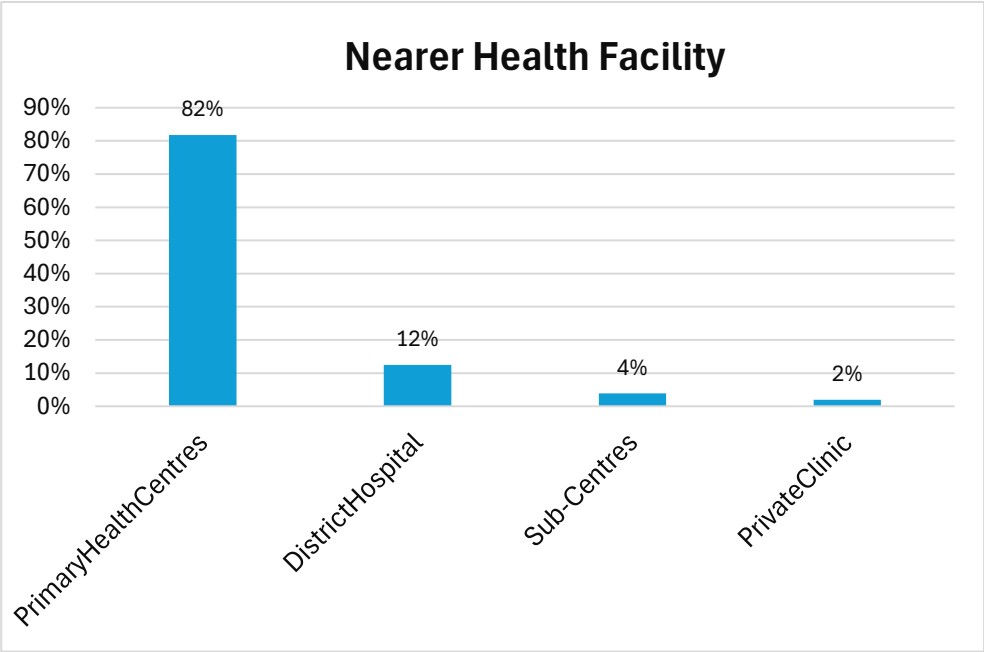

Figure 3.27 Nearest health facility

As per a survey, 82 % households rely on the primary health centre (PHC) for emergency health services, highlighting the importance of PHC in the gram panchayat. While accessibility for health facilities remains a concern, as 30 % households have to travel 5-10km for the nearest health facility, and for 21% households, it is about 15-20km travel distance.

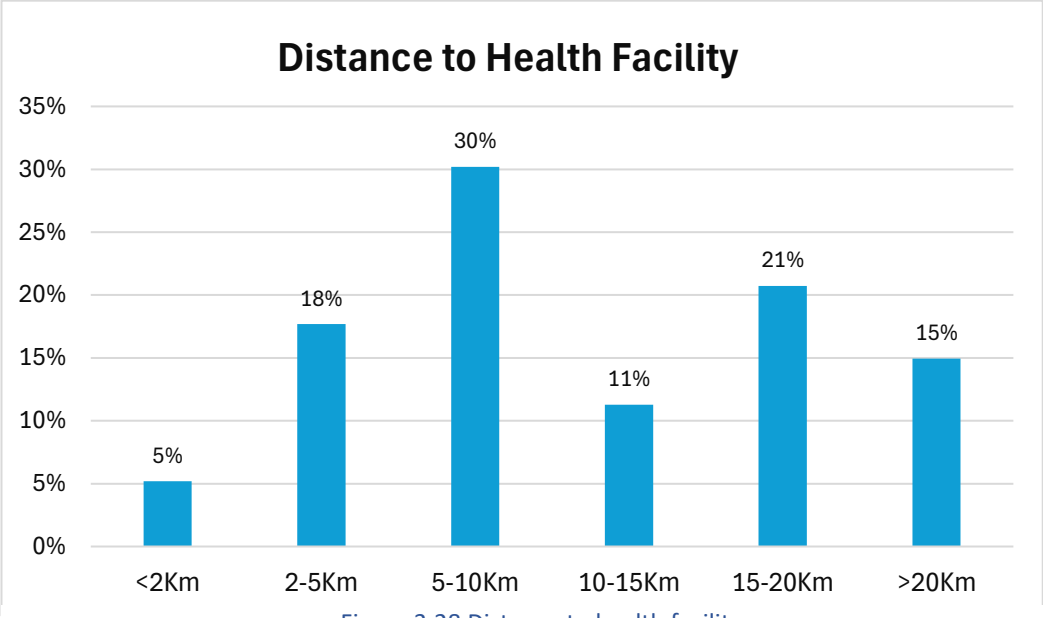

Figure 3.28 Distance to health facility

3.3.2.2.1. Facilities that can be established at Cluster Level within GP based on the assessment of nearby areas (Rural & Urban)

Given the current distribution and access to healthcare services, the following facilities can be proposed at the cluster level within Aguibani GP:

- **Maternity and Child Welfare Center**: Establishing one such center is crucial to address maternal and child health needs. It would reduce the dependence on distant facilities and improve institutional delivery, antenatal care, and immunization coverage.

- **Trauma Care Facility**: As Aguibani GP lies along a National Highway, the absence of a nearby trauma care center poses a serious risk during road accidents and emergencies. A trauma stabilization unit or emergency care center should be proposed to provide immediate care for accident victims.

- **Mobile Medical Unit (MMU)**: A mobile health service operating at the cluster level can serve remote and underserved hamlets, especially where permanent facilities are not feasible. This unit can provide basic diagnosis, treatment, and health awareness services.

- **Health Awareness and Insurance Facilitation Centre**: Given the low percentage of households availing health insurance (only 28%), a community health facilitation center can be set up to spread awareness and assist people in enrolling under government schemes like Ayushman Bharat.

3.3.2.3. Identified Issues

Based on the field survey and secondary data analysis, several key issues in the healthcare delivery system of Aguibani GP have been identified:

- **Inadequate Maternity Services**: The absence of a dedicated Maternity and Child Welfare Centre limits access to maternal and child healthcare services.

- **Accessibility Challenges**: A significant proportion of households (over 50%) face accessibility issues, with 30% travelling 5-10 km and 21% travelling 15-20 km for healthcare. This delays timely medical intervention, particularly in emergencies.

- **Lack of Trauma Care**: Despite the village's strategic location on a National Highway, there is no trauma centre or emergency facility nearby. This poses a serious risk during road traffic accidents, which require immediate medical attention.

- **Limited Insurance Coverage**: Only 28% of surveyed households have opted for health insurance, indicating a lack of awareness or affordability in accessing financial protection for healthcare.

- **Barriers to Access**: The main barriers cited by households include the unavailability of nearby hospitals (53%), cost of treatment (37%), and transportation difficulties (10%), reflecting systemic gaps in healthcare provisioning and affordability.

3.3.3. Socio-Cultural Facilities (Parks, Grounds, Recreational Areas, etc.)

3.3.3.1. Types of Socio-Cultural Facilities

Playgrounds/Ground for Fair & Festivals

As per RADPFI guidelines, one playground/Ground for Fair & Festivals is required for every 5000 of population. The panchayat has 10 Football grounds/grounds for Fair & Festivals at present. The Football Ground in Kumari hosts an annual tournament in September, with a coach training children. As per standards, 2 Playgrounds/grounds for fairs & Festivals are required, which means the panchayat has a surplus of 8 Playgrounds/grounds for fairs & Festivals.

Open Space/Parks

As per RADPFI guidelines, one Open Space/Park is required for every 5000 of population. The panchayat has 3 Open spaces/Parks at present. As per standards, 2 Open Spaces/Parks are required, which means the panchayat has a surplus of 1 Open Space/Park.

Cremation Ground

As per RADPFI guidelines, one Cremation Ground is required for every 5000 of population. The panchayat has 2 Cremation grounds at present. As per standards, 2 Cremation Grounds are required, which means the panchayat has sufficient Cremation Grounds.

Samsads/Booth

Aguibani gram panchayat have 8 Samsads/Booths which serve as key locations for democratic processes, public consultations, and community meetings.

3.3.3.2. Key Observations

Socio-cultural facilities in Aguibani GP play a vital role in promoting community well-being, fostering social cohesion, and supporting traditional and recreational activities. The Panchayat is well-equipped in terms of grounds for fairs and festivals, with a total of 10 such grounds against a required 2. Notably, the football ground in Kumari stands out as a center for sports promotion, hosting annual tournaments and training sessions. Similarly, there are three parks/open spaces available, slightly exceeding the required standard. Cremation grounds are also adequate, ensuring access to culturally important end-of-life services. The presence of 8 Samsads/Booths supports grassroots-level democratic engagement and local administration. Overall, the Panchayat has a relatively strong socio-cultural infrastructure, especially in terms of quantity.

3.3.3.2.1. Facilities that can be established at Cluster Level within GP based on the assessment of nearby areas

While Aguibani GP has a surplus of recreational grounds and adequate basic socio-cultural infrastructure, the following facilities can be considered for cluster-level development to enhance quality and multi-functional use:

- **Multipurpose Community Hall**: Establishing a well-equipped hall at the cluster level can support community functions, indoor gatherings, disaster relief operations, skill training sessions, and public meetings, especially during monsoons or extreme weather.

- **Cultural Resource Centre**: A centre promoting local tribal and folk art, culture, and music could help preserve and promote regional identity while providing space for exhibitions, workshops, and performances.

- **Children's Park with Play Equipment**: While open spaces are available, many lack structured recreational amenities. A dedicated children's park with

safe play equipment can enhance recreational opportunities for younger children.

3.3.3.3. Identified Issues

Despite a numerical surplus of socio-cultural facilities, several issues persist:

- **Quality and Maintenance**: Many grounds and open spaces lack proper maintenance, seating arrangements, sanitation, and lighting, reducing their usability and safety, especially after dark.

- **Lack of Multipurpose Use**: Existing facilities are often single-use and lack infrastructure to support multiple community needs, such as indoor activities, cultural programs, or training sessions.

- **Inadequate Recreational Infrastructure for Children and the Elderly**: While general open spaces exist, structured recreational infrastructure specifically for children and the elderly is lacking.

- **Limited Access to Cultural and Learning Spaces**: There is no designated facility that supports cultural education, arts, or community learning, which could help strengthen local identity and youth engagement.

3.3.4. Fire Fighting Services

3.3.4.1. Types of Fire Fighting Facilities available near GP

Category	Population Served per unit (As per RADPFI)	Closest Facility	Surplus/ Deficit
Firestation	2 lakh population or 10 Km Radius	Jhargram Fire Station, 18 Km away Kharagpur Fire Brigade, 45 Km away Medinipur Fire Station, 54 Km away	0

3.3.4.2. Key Observations

Jhargram Fire Station is the closest firefighting service available near the GP. Although it is outside the 10 km radius norm, however, it is well within the limits of 2 lakh population served.

3.3.5. Panchayat Bhawan

3.3.5.1. Panchayat Bhawan Facilities

Community Hall/centre

As per RADPFI guidelines, one community Hall is required for every 5000 of population. The panchayat has 7 community halls at present. Kaliam village hosts a Mahila Kirtan Dal Office, which could be leveraged to empower women and promote SHG activities. As per standards, 2 community halls are required, which means the panchayat has a surplus of 5 community halls.

3.3.5.2. Key Observations

GP has surplus facilities available, which are being actively used by the SHGs.

3.3.6. Sports Facilities

3.3.6.1. Types of Sports Facilities

Playgrounds/Ground for Fair & Festivals

As per RADPFI guidelines, one playground/Ground for Fair & Festivals is required for every 5000 of population. The panchayat has 10 Football grounds/grounds for Fair & Festivals at present. As per standards, 2 Playgrounds/grounds for fairs & Festivals are required, which means the panchayat has a surplus of 8 Playgrounds/grounds for fairs & Festivals.

3.3.6.2. Key Observations

Aguibani GP has a surplus of sports grounds, with 10 football fields serving the community. These grounds also double as spaces for fairs and festivals. The availability of multiple fields indicates strong community interest in sports, particularly football, which is the most actively played sport in the region.

3.3.6.2.1. Any Sports prominent in the area, and any selection of players in the Past at the National, State, and District levels.

Football is the most popular sport in the GP. The Kumari Football Ground is notable for hosting an annual tournament every September. A local coach regularly trains children, and several players from the area have participated in district-level competitions, showing potential for higher-level representation. Ground in Kumari hosts an annual tournament in September, with a coach training children.

3.3.6.2.2. Any Other Facilities that can be established at the Cluster Level within GP based on the assessment of nearby areas (Rural & Urban)

Considering the strong presence of football and existing grounds in Aguibani GP, the following practical facilities can be developed at the cluster level:

- **Mini Sports Complex**: A small multi-sport facility with provisions for kabaddi, volleyball, and athletics can be developed using existing open spaces, especially in central locations like Kumari or Sonamukhi.

- **Indoor Sports Hall**: A basic covered hall with equipment for indoor games like carrom, table tennis, and yoga can be set up in the panchayat office area or near schools for year-round use.

- **Football Training Centre**: Building on the popularity of football, a structured training centre with coaching support and goalpost infrastructure can be introduced at the Kumari ground.

- **Open Gym/Fitness Area**: A low-cost open gym with exercise equipment can be installed in one of the parks or school grounds to promote fitness among youth and adults.

- **Spectator Amenities**: Basic amenities like shaded seating, drinking water, and toilets should be added to the main grounds to support local tournaments and increase community participation.

3.3.6.3. Identified Issues

- Lack of structured sports training programs and facilities.
- Grounds lack basic amenities like seating, lighting, and sanitation.
- Absence of indoor sports space limits year-round sports activities.
- No formal sports complex to support talent development and multi-sport engagement.
- Limited financial and institutional support for promising athletes.

3.3.7. Financial Facilities (Banks, ATMs, etc.)

3.3.7.1. Types of Financial Facilities

Financial services are provided by a single bank, which caters to the entire population's banking needs. Punjab National Bank is present in the Netura village.

3.3.7.2. Key Observations

Aguibani Gram Panchayat has limited access to formal financial services, with only one Punjab National Bank branch located in Netura village serving the entire GP population. The bank provides basic banking services such as savings accounts, withdrawals, and government scheme disbursals. However, there are no ATMs within the panchayat, and most villagers rely on the branch for all transactions. Mobile banking awareness remains low, and digital transactions are minimal due to limited digital literacy.

3.3.7.3. Identified Issues

- Only one bank branch is available for the entire GP, causing overcrowding and long wait times.
- No ATMs in the panchayat, limiting access to cash, especially in emergencies.
- Limited awareness and use of mobile or digital banking services.

3.4. Heritage, Cultural and Tourism Profile

3.4.1. Heritage Profile (Tangible/Intangible)

3.4.1.1. Status of the Heritage

Aguibani GP possesses a modest yet diverse set of tangible heritage assets, primarily comprising temples and mandirs such as the Maa Sitala Mandir, Maharudra Mandir, Kalidebi Mandir, and Hari Mandir across different villages. These religious sites, though not monumental in scale, hold significant value for the local population and reflect indigenous religious practices. Additionally, tribal heritage is represented through clubs like the Adibasi Sidhu Kanhu Club and Adarsha Adibasi Club, indicating the presence of cultural spaces for the tribal communities.

3.4.1.2. Key Observations

- Temples are the most common heritage structures, particularly Sitala Mandirs found in multiple villages (e.g., Chhota Didiha, Bara Didiha, Sonamui, Mura Bani, Simli, Purna Pani, and Agaibani).
- No officially designated heritage monuments exist within the GP.

- Tribal cultural clubs and community-based organisations contribute to the intangible cultural fabric.
- There are no recorded tourist or monument heritage centres within the panchayat.

3.4.1.3. Identified Issues

- Lack of documentation and protection for existing religious structures.
- Absence of formal recognition or promotion of tribal cultural heritage.
- No conservation plans or funding mechanisms for temple maintenance.
- Heritage sites are not integrated into local development or tourism plans.

3.4.2. Cultural Profile

3.4.2.1. Any changes observed in the Cultural Profile

Cultural practices remain deeply rooted in traditional customs. However, the emergence of clubs, sanghas, and community halls in villages like Baraektal, Purna Pani, and Baghjhapa indicates a gradual shift toward organized cultural and recreational activities. There is also a growing prominence of community-based events around temples and playgrounds.

3.4.2.2. Key Observations

Aguibani Gram Panchayat exhibits a diverse caste composition with a balanced distribution among various social categories. The demographic breakdown reveals that Other Backward Classes (OBC) constitute the largest segment at 37% of the total population. General category residents represent 26%, while Scheduled Tribes (ST) account for 22%, and Scheduled Castes (SC) comprise 15% of the population.

The Scheduled Tribe communities primarily include Lodha, Munda, and Bhumij tribes, while the Scheduled Caste population consists predominantly of Dome, Tati, and Bhagal communities. This multi-caste composition contributes to the cultural diversity of the region.

Bengali serves as the primary language of communication, while Santali is also widely spoken, particularly among the tribal communities.

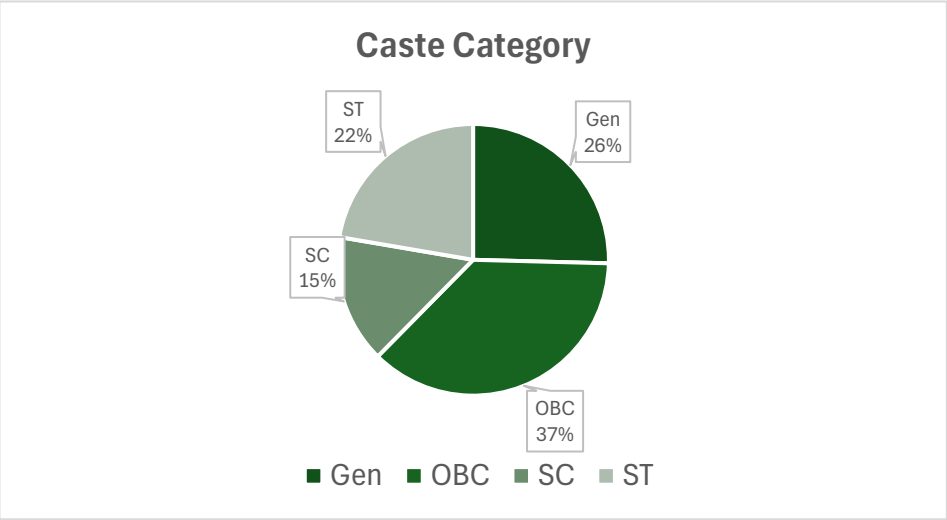

Figure 3.29 Caste Category

Table 3-9 Cultural Profile

Cultural Profile	
% of the population following Religion	Caste distribution (OBC 37%, General 26%, ST 22%, SC 15%)
Type of Castes	ST (Lodha, Munda, Bhumij); SC (Dome, Tati, Bhagal)
Languages Spoken	Bengali
Tourist Centers	No
Monument Places of Heritage	No
Pilgrimage Centers	Yes
Source: Primary Survey, Household Survey and FGDs	

3.4.2.3. Identified Issues

- Limited support for the preservation and promotion of tribal cultural practices.
- Lack of structured platforms for cultural expression beyond religious institutions.
- Insufficient infrastructure for community-led cultural development.

3.4.3. Tourism Spots/Facilities

3.4.3.1. Major Tourist Spots

There are currently no recognised tourist spots within Aguibani GP. Religious sites such as Sitala Mandirs and the Jyotirmoy Linga Mahadeb Temple serve local religious tourism but have limited external visibility.

3.4.3.2. Tourist Arrivals Season

No official data on tourist footfall is available. Religious sites experience minor surges in local visitation during specific religious festivals.

3.4.3.3. Existing tourist-supported infrastructure

- Basic infrastructure exists around temples and playgrounds, but there are no formal tourist amenities.
- Villages like Baraektal and Purna Pani, with relatively higher public place counts, show potential for tourism-related development.

3.4.3.4. Fairs and Festivals

Birhandi village in Aguibani GP is known for its Durgapuja Mela, which is a popular cultural event in the area. People from nearby villages also join the celebrations. The event includes traditional worship, local food stalls, and cultural programs.

In addition, Sitala Puja is observed in several villages like Aguibani, Sonamui, and Simli, where Sitala Mandirs are present. These festivals are important for the local community and often include small gatherings and fairs.

3.4.3.5. Key Observations

- Religious and tribal places offer opportunities for cultural tourism.
- Clubs and community halls can be leveraged to host cultural events that attract visitors.

3.4.3.5.1. Bigger Facilities that can be established at the Cluster Level within the GP based on the assessment of nearby areas (Rural & Urban)

Based on the assessment of surrounding areas, the following facilities are recommended to enhance eco-tourism and community development:

- **Eco-Tourism Center**

  The proposed site, located in Kanpur village of Aguiboni Gram Panchayat, offers a strategic opportunity for establishing an eco-tourism center. This location is characterized by its natural landscapes and proximity to tribal communities, making it suitable for promoting sustainable tourism that highlights local ecology and culture.

Figure 3.30 Identification of site for Eco Tourism center

Key Features of the Proposed Eco-Tourism Centre:

- **Nature Trails and Guided Tours:** Development of pathways through nearby forests to facilitate guided walks, educating visitors about local flora and fauna.

- **Cultural Exhibitions:** Dedicated spaces to showcase the traditions, crafts, and performances of indigenous tribes such as the Lodha, Munda, and Bhumij.

- **Community-Run Stalls:** Establishment of marketplaces for local artisans to sell handicrafts and traditional foods, supporting the local economy.

- **Eco-Friendly Accommodations:** Construction of sustainable lodging options, like cottages made from local materials, to provide authentic experiences for visitors.

- **Workshops and Interactive Sessions:** Organizing activities where tourists can engage in traditional handicrafts, cooking, and agricultural practices.

Benefits:

- **Economic Development:** Creation of employment opportunities for local residents in various capacities such as guides, performers, and entrepreneurs.

- **Cultural Preservation:** Encouragement of the continuation and documentation of traditional practices and knowledge.

- **Environmental Conservation:** Promotion of awareness and education on local ecosystems, fostering community-led conservation efforts.

- **Cultural Resource Center:** A facility dedicated to preserving and promoting tribal heritage through exhibitions, libraries, and performance spaces.

- **Community Event Grounds:** Open spaces designated for hosting local festivals, fairs, and markets, such as the Birhandi village Durga Puja Mela, to attract visitors and celebrate cultural events.

- **Sports and Recreation Facilities:** Development of existing football grounds in villages like Chhota Didiha, Bara Didiha, and Kumari to encourage sports tourism and local engagement.

- **Handicraft Workshops and Sales Outlets:** Spaces where artisans can create and sell traditional crafts, providing both a source of income and a cultural experience for tourists.

3.4.3.6. Identified Issues

- **Lack of Recognised Tourist Spots: Aguibani GP currently does not have any officially recognised** or developed tourist destinations, limiting its visibility in the tourism sector.

- **Inadequate Infrastructure:** There is limited infrastructure to support tourism activities, such as accommodation, sanitation facilities, and wayfinding signage.
- **Underutilization of Cultural Assets:** Cultural and religious events like the Durgapuja Mela and Sitala Pujas have tourism potential but remain underpromoted and lack supporting facilities.

- **Limited Connectivity:** Some interior villages with cultural or recreational importance have poor road access and transport connectivity, affecting potential tourist movement.

- **Lack of Community Awareness:** Local communities are not fully aware of the benefits of rural or eco-tourism, which limits participation and initiative.

3.5. Physical Infrastructure Profile

3.5.1. Road Network & Transportation System

3.5.1.1. Road Hierarchy

For R1 (Link Roads), the prescribed minimum width is 6.0 metres, which matches the existing width in the Gram Panchayat (GP). This indicates that link roads are adequately maintained and meet the required standards for inter-village connectivity and connections to highways. However, for R2 (Major Through Roads), the prescribed width is 7.5 metres, while the existing width is only 6 metres. This shortfall can hinder efficient traffic flow, particularly as these roads serve as main village roads with drainage systems on both sides. The reduced width may also compromise drainage efficiency during heavy rains.

For R3 (Minor Through Roads), the prescribed width is 4.5 metres, but the existing width is only 3.5 metres. This gap can create challenges in accommodating vehicular movement and pedestrian traffic simultaneously, especially during peak usage times. Lastly, R4 (Minor Through Lanes) has a prescribed width of 3.75 metres, but the existing width is only 2 metres. Such narrow lanes are insufficient for smooth movement within village lanes and may lead to congestion or difficulty in accessing certain areas.

Table 3-10 Norms for Village Roads

Village Road Type	Road Description	Prescribed Minimum width (in metres)	Existing Minimum width in GP (in metres)	Functions
R1	Link Roads	6.0	6	Inter-village, ODR, highway connectors.
R2	Major Through Roads	7.5	6	Main village roads with a drain on both sides to facilitate the drainage system of the village
R3	Minor Through Roads	4.5	3.5	Other village roads
R4	Minor Through Lanes	3.75	2	Village lanes

(Source: Draft NBC, Doc: CED 46 (8064) WC, Nov 2015; Rural Road Manual, 2002, Indian Road Congress)

An analysis of the prescribed and existing roadway widths for different road classifications highlights significant gaps in the infrastructure, especially for village and district roads. National and State Highways, with a prescribed width of 12.0 metres, meet the standard as the existing width is also 12.0 metres. Similarly, Major District Roads adhere to the prescribed standard of 9.0 metres, ensuring smooth traffic flow and connectivity.

However, discrepancies are evident in other road categories. For Other District Roads, the prescribed width is 7.5 metres for single-lane roads and 9.0 metres for two-lane roads. The existing widths are only 3.5 metres for single-lane roads and 6.0 metres for two-lane roads, which fall significantly short of the required dimensions. This reduction can lead to congestion, hindered vehicular movement, and safety issues, especially during peak hours or emergencies.

The most concerning gap is observed in Village Roads, where the prescribed width is 7.5 metres for single-lane roads, but the existing width is only 2.0 metres.

3.5.1.2. Important Junctions

Key traffic junctions within the Gram Panchayat include the Fasitala Bus Stop, which serves as a major local transit hub, and the Netura-Aguibani Road Junction, an

important intersection facilitating intra-village connectivity. Refer Figure 3.31 and Figure 3.32.

Figure 3.31 Fasita Bus Junction

(Source: Google Earth Pro)

Figure 3.32 Netura Bazaar Junction

(Source: Google Earth Pro)

3.5.1.3. Bridges, Flyovers, and Interchanges

A prominent infrastructure element is the bridge on NH-49 / AH-46 near Fasitala Bus Stop, which plays a crucial role in ensuring the uninterrupted flow of regional and long-distance traffic, while also providing connectivity to local road networks via service lanes.

3.5.1.4. Intermediate Public Transport

Public transport is largely absent across the Gram Panchayat, with shared autos being the only available option. However, these shared autos operate at intervals of 1-2 hours based on passenger demand and are unavailable after 7 PM, leaving residents without reliable transportation during late hours. Additionally, there is no bus infrastructure in the villages, further exacerbating the issue. As a result, residents are heavily reliant on private transport, which is often expensive. Bicycles and motorbikes are the dominant modes of private transportation, while autos and totos are used primarily for emergencies. Women depend heavily on bicycles due to the lack of affordable and reliable alternatives.

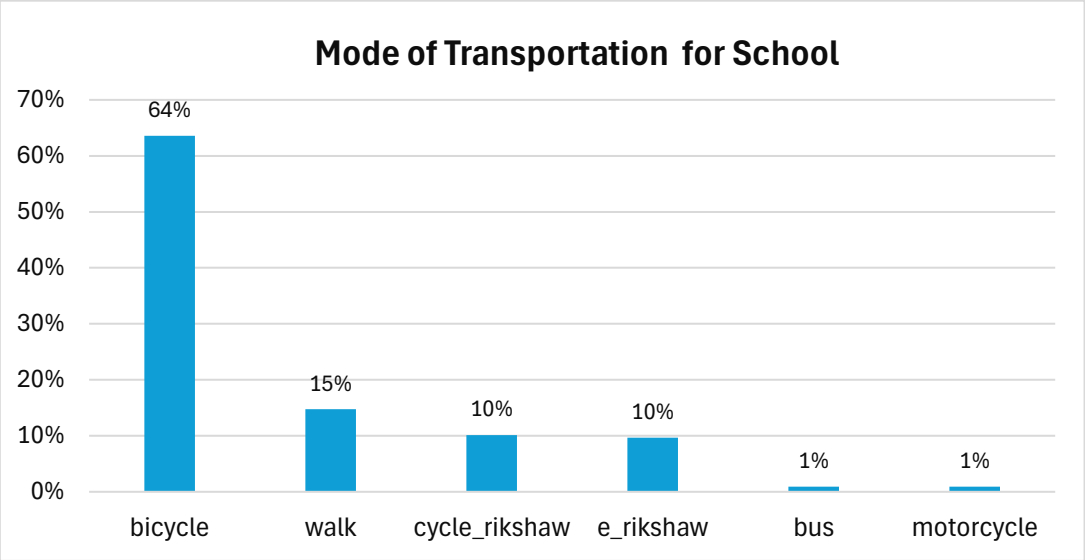

Figure 3.33 Mode of transportation for school

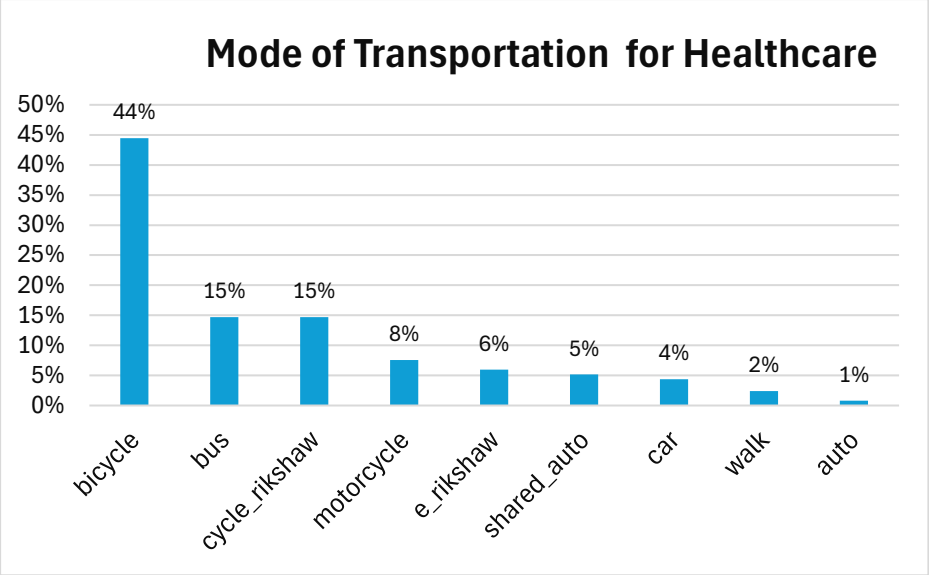

Figure 3.34 Mode of transportation for healthcare

3.5.1.5. Characteristics of Traffic and Transportation

The majority of traffic is of two-wheelers and cycles at the GP level, which indicates low cost and a personal mode of travel..

Locations such as the Fasitala Bus Stop serve as key transit points and are regularly used by bus commuters.

The NH-49 / AH-46 overbridge facilitates the smooth movement of through traffic, bypassing the GP area itself. Additionally, the adjoining service lanes and slip roads provide efficient access for local traffic, enabling seamless entry and exit from the city.

3.5.1.6. Existing Transportation Infrastructure

The internal road network within the Gram Panchayat is predominantly composed of earthen roads, many of which are in poor condition and require upgradation to asphalt or concrete surfaces. The road width varies significantly across different locations, often limiting accessibility and vehicle movement.

Several tribal hamlets within the area lack proper road connectivity, highlighting the need for focused infrastructure development to ensure inclusive access.

Furthermore, a motor vehicle check post with a dedicated by-lane has been established at Kismat Dhagri, contributing to improved traffic regulation and monitoring along the regional transport corridor. Refer Figure 3.35.

Figure 3.35 Motor Vehicle Check Post at Kismat Dhagri

(Source: Google Earth Pro)

Refer to the existing road network in the given Figure 3.36.

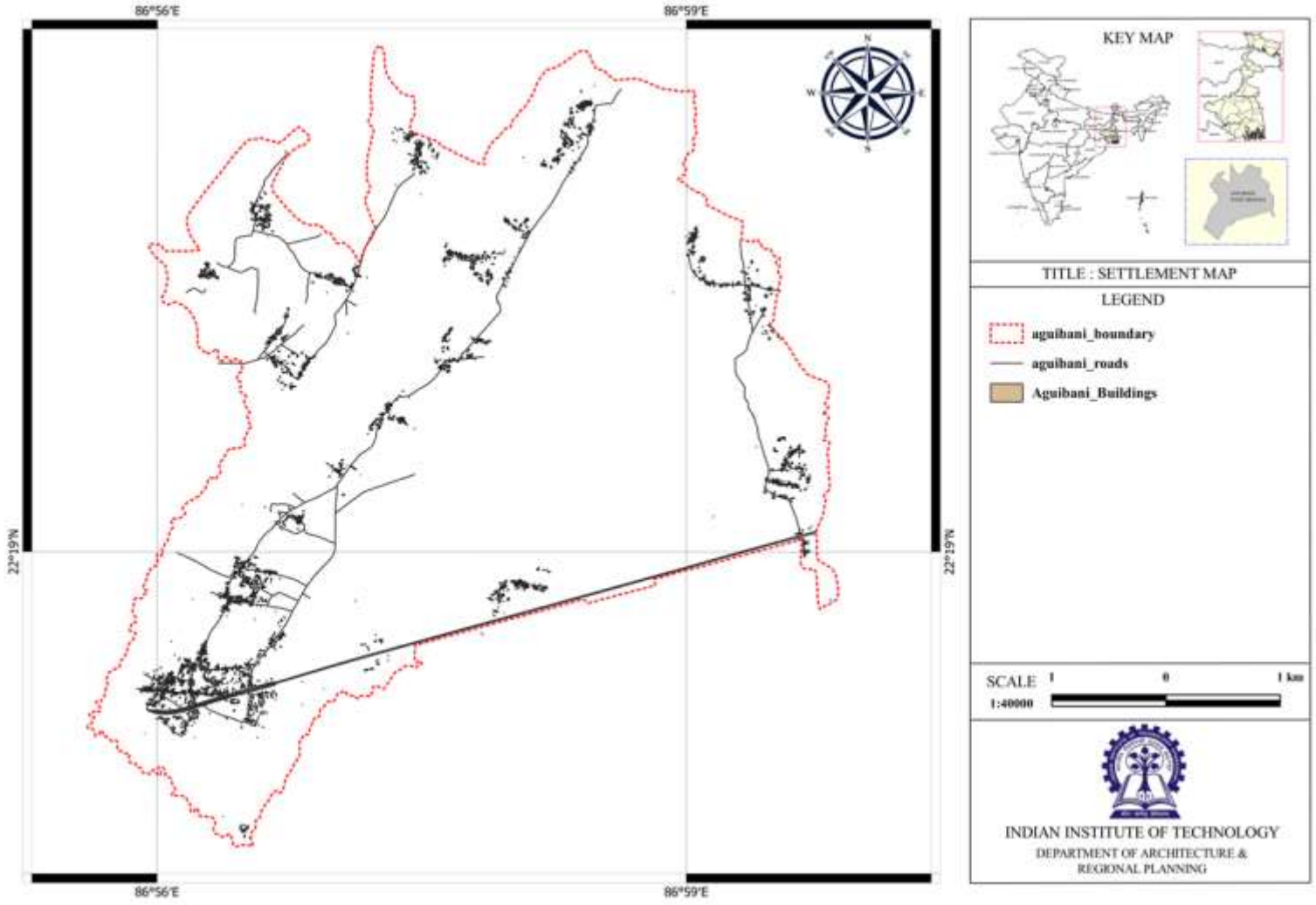

Figure 3.36 Existing Transportation Network

(Source: Author)

3.5.1.7. Freight Movement

There are no established freight routes in the village. Only trucks access the Krishi Mandi for loading and unloading agricultural products. A road connecting to the nearby highway has been constructed using funds from the PMGSY (Pradhan Mantri Gram Sadak Yojana).

3.5.1.8. Key observations

- Significant variation in road width exists across different road categories, with major shortfalls observed in village roads and minor through lanes, which hampers smooth vehicular and pedestrian movement.

- Link roads (R1) meet the prescribed standards and provide adequate inter-village and highway connectivity, whereas major and minor through roads (R2 & R3) fall short of minimum width requirements, affecting traffic flow and drainage performance.

- Internal roads are mostly earthen and require urgent upgradation to all-weather surfaces such as asphalt or concrete to improve connectivity and resilience.

- Several tribal hamlets lack road connectivity, indicating spatial inequality and the need for inclusive infrastructure planning.

- The absence of reliable public transport, especially during evening hours, leads to heavy dependence on bicycles and motorbikes, particularly among women and economically weaker sections.

- Key transit nodes like Fasitala Bus Stop and Netura Junction act as critical local mobility hubs but lack supporting infrastructure such as shelters, signages, and lighting.

- The NH-49/AH-46 overbridge and adjacent service roads effectively support regional traffic while enabling local access, yet freight movement is limited to occasional trucks servicing the Krishi Mandi.

- A motor vehicle check post at Kismat Dhagri strengthens regional transport regulation, but last-mile infrastructure within villages remains underdeveloped.

Overall, there is a clear need for systematic road widening, surfacing, and provision of basic road amenities, particularly in underserved and interior village pockets.

3.5.1.9. Identified Issues

The approach roads in Aguibani Gram Panchayat are predominantly composed of concrete (51%) and earthen (34%) roads, with gravel roads accounting for 12% and bitumen roads being the least common at 4%. This distribution reflects a focus on durable infrastructure through concrete roads but also highlights significant reliance on earthen roads. These earthen roads pose challenges during the rainy season, becoming muddy and slippery, which severely impacts accessibility. During floods, villages often lose connectivity due to the deterioration of earthen roads, creating hardships for transportation and access to essential services. Upgrading these roads to more weather-resistant materials, such as bitumen, could mitigate these issues and enhance rural connectivity and resilience.

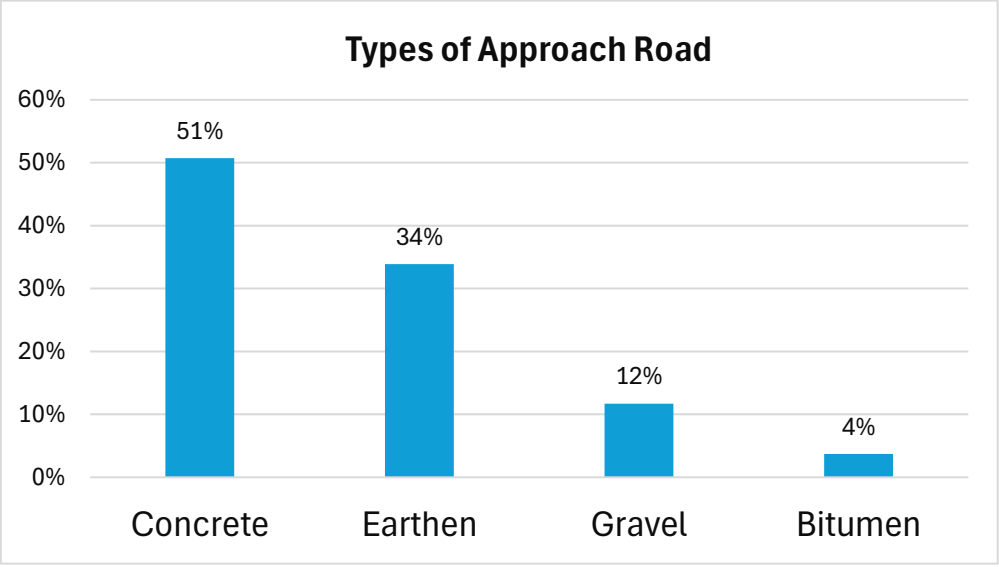

Figure 3.37 Types of road approach

3.5.2. Water Supply

3.5.2.1. Key observations

The water supply infrastructure in Aguibani Gram Panchayat relies primarily on public taps, submersible pumps, and handpumps. The primary water supply agency is the Panchayat, supported by the Jal Jeevan Mission and potentially other state government agencies.

Table 3-11 Water

Water supply infrastructure	
Capacity of Sump	5
No of ESR	7
Total No. Household (as on 01/04/2023, as per JJM report)	2552
No. of tap connections provided under JJM	1272
Water supply timing	4-5 hours a day
Age of network	ongoing
No. of Borewells	To be filled
Source: Primary Survey, 2025	

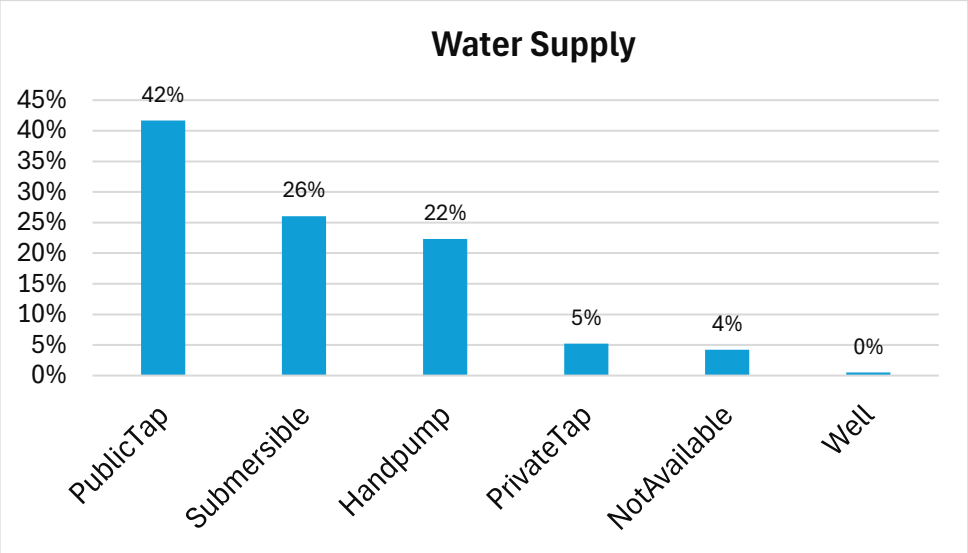

Figure 3.38 Source of water supply

3.5.2.2. Demand assessment for 2035 (as per RADPFI Guidelines)

As per RADPFI Guidelines, rural water supply norms recommend a minimum availability of 70-100 litres per capita per day (LPCD) for domestic use. For planning purposes, a mid-value of 85 LPCD is considered reasonable.

Based on the current Jal Jeevan Mission data for Aguibani Gram Panchayat, only 1272 houshold have received tap water connection it means obout 50% of households have tap water connections, infrastructure expansion is essential. Projected future household numbers can guide the required tap connection targets

Basis of Calculation:

- Per capita water demand: 85 LPCD
- Population projections: Based on historical growth and Housing demand.
- Household size: Average of 4.7 persons/household from 2026 onwards

Table 3-12 Tap Connection Projection and Requirement

Year	Projected Population	Water Demand (LPCD)	Total Demand (MLD)	Projected Households	Required Tap Connections	Additional Connections Needed
2026	11,627	85	0.99	2,453	2,453	1,181
2031	12,108	85	1.03	2,554	2,554	1,282
2035	12,849*	85	1.09	2,605**	2,605	1,333
2036	12,589	85	1.07	2,656	2,656	1,384
2041	13,070	85	1.11	2,757	2,757	1,485

**2035 population estimated by linear interpolation between 2031 and 2036*

3.5.2.3. Identified Issues

The water supply infrastructure in Aguibani Gram Panchayat displays a diversified system with a dependency on groundwater sources.

Water table depths fluctuate, ranging from 40-70 ft in the rainy season to 50-100 ft in the dry season, depending on the seasons. Water is supplied once or twice daily limited to 4-5 hours. The existing infrastructure is relatively new, approximately one year old. While there is no metering system is in place, coverage percentages require further assessment. The water quality is generally acceptable for drinking, with some iron content present below 100 ft depth. The water supply graph reveals that public taps are the most prevalent source of water for drinking purposes, serving 42% of households. Submersible pumps are the secondary most utilized water source for household works and irrigation, serving 26% of households, hand pumps are also significant, catering to 22% of the households. Private taps are limited, serving only 5% of households. A small percentage (4%) of households' report that water is not available. This indicates a heavy reliance on public infrastructure.

Dependence on public water sources like taps, submersible pumps and hand pumps highlights the strain on shared resources during peak demand, emphasizing the need for robust infrastructure and management. Limited private tap access, which is only near main roads, often due to inadequate infrastructure, calls for expanding

connections to reduce pressure on public systems and improve household convenience. promary survey reflects Maximum houses lack of drinking water facility and usung water form nearby groundwater sources. Situations become worsen when dry season comes. Seasonal groundwater fluctuations further complicate supply reliability, necessitating adaptive strategies like controlled ground water utilisation and public drinking water facility network.

Key gaps include detailed information about the treatment plant's type, capacity, and operational efficiency to ensure compliance with water quality standards. Similarly, evaluating sump storage adequacy for peak demand is essential. Comprehensive planning, technological integration, and proactive maintenance are critical for sustainable water management.

3.5.3. Sewerage System

3.5.3.1. Key observations

The drainage infrastructure in Aguibani GP is largely composed of open drains, which make up almost half of the existing systems. This heavy reliance on open drains can lead to several challenges, including potential health hazards due to exposed waste and stagnant water, increased risk of waterborne diseases, and environmental pollution. The limited presence of covered drains, at just 16%, further exacerbates these issues, as covered drains offer a more hygienic and efficient method of wastewater management. A considerable proportion of the village has no drains, representing 36%. This could imply a lack of proper planning, maintenance, or even awareness regarding drainage systems in certain areas, necessitating a comprehensive survey and strategic development of these essential facilities.

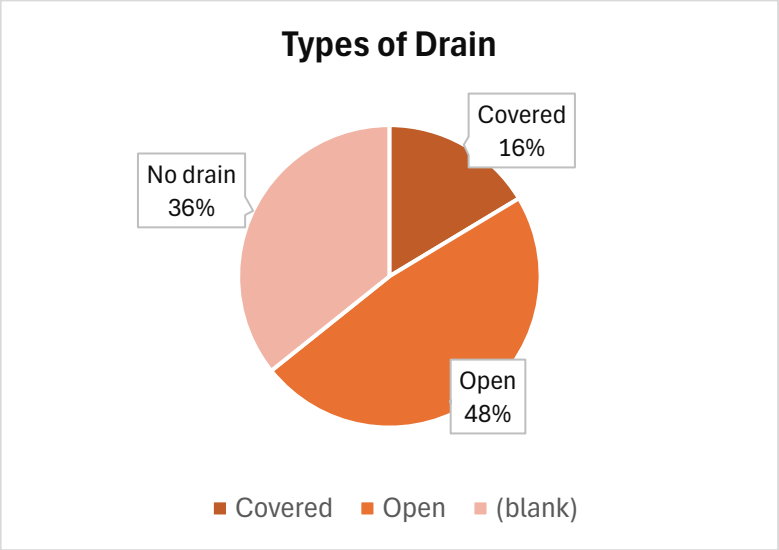

Figure 3.39 Types of drain present

3.5.3.2. Demand assessment for 2035 (as per RADPFI Guidelines)

As per the RADPFI Guidelines, it is essential to provide safe sanitation access to 100% of households by 2035. This would require upgrading existing sanitation systems and introducing decentralized wastewater treatment options. Given the projected population growth, the Gram Panchayat will require low-cost, environment-friendly solutions such as community-managed soak pits, twin-pit toilets, and the establishment of greywater reuse systems for irrigation or household utility use.

For wastewater generation 80% of the total water used is taken into consideration.

Table 3-13 WasteWater Generation Projection

Year	Projected Population	Water Demand (LPCD)	Total Water Demand (MLD)	Wastewater Generation (MLD) (80%)
2026	11,627	85	0.99	0.79
2031	12,108	85	1.03	0.82
2035	12,849	85	1.09	0.87
2036	12,589	85	1.07	0.86
2041	13,070	85	1.11	0.89

The RADPFI Guidelines (2021) highlight the importance of integrated liquid waste management to achieve total sanitation in rural areas. Emphasis is placed on low-cost, decentralized systems for grey and black water treatment, with reuse in agriculture and

horticulture wherever feasible. Infrastructure planning must consider land availability, soil type, and population size while selecting suitable technologies like DEWATS, stabilization ponds, or root zone systems, ensuring treated effluent meets environmental discharge standards.

- **Sewage Collection System**
  - By 2035, ~0.87 MLD of wastewater to be managed.
  - A small bore sewer system is ideal to collect grey and black water.
  - Interceptor tanks at source recommended for cost-effective decentralized collection.

- **Treatment Technology Option: DEWATS (Decentralized Wastewater Treatment System)**
  - Suitable for wastewater flow <1 MLD.
  - Can treat both black and grey water.
  - Treated water can be reused for agriculture and horticulture.
  - Land Requirement: Low (less than 0.1 hectare for ~0.87 MLD)
  - Capital Cost: Low to moderate
  - O&M Cost: Manageable by local manpower or SHGs

Alternatively, for slightly higher capacity or future expansion:

- **Stabilization Pond System (SPS)**
  - Land required: 0.8 - 2.3 hectares/MLD → For 0.87 MLD, approx. 0.7 to 2 hectares
  - Suitable due to:
    - Low operational cost
    - Simplicity in design and operation
    - Feasibility in low-density rural areas
- **Reuse of Treated Wastewater**
  - Use for non-potable purposes like irrigation, tree plantation, and fish farming.
  - Requires storage tanks and piped distribution for reuse.

3.5.3.3. Identified Issues

Concerning water logging, a notable 34% of the area is affected, suggesting deficiencies in the existing drainage capabilities to effectively manage rainwater and

prevent accumulation. This can result in damage to infrastructure, disruption of daily life, and potential breeding grounds for disease-carrying vectors like mosquitoes. Although the majority (66%) of the area does not currently experience water logging, the substantial portion that does highlights the urgency of addressing the underlying causes. This could involve improving existing drainage channels, constructing new drainage systems, promoting water conservation practices, and implementing effective waste management strategies to minimize blockages and ensure proper water flow.

3.5.4. Solid Waste Management

3.5.4.1. Household Waste Management

Gram Panchayat currently lacks a dedicated solid waste management system. There is no door-to-door waste collection service available at the GP level. As a result, most households dispose of their waste in nearby informal dumping sites or within their own backyard premises. Organic waste is typically managed by individual composting, but non-biodegradable waste often remains uncollected, leading to localized environmental degradation.

3.5.4.2. Agricultural Waste Management

In Aguibani Gram Panchayat, West Bengal, where rice mono-cropping dominates, farmers manage rice residues through sustainable practices. Rice straw serves as livestock feed for cows and buffaloes after treatment with urea to improve its nutritional value. It also functions as bedding material for cattle, reducing the need for synthetic alternatives. Farmers sell surplus straw in nearby markets, generating additional income. By adopting these sustainable waste management methods, Aguibani Gram Panchayat can transform agricultural waste into valuable resources while minimizing environmental pollution and improving overall productivity.

3.5.4.3. Dairy/Poultry Waste Management

In Aguibani GP, small-scale poultry farming generates various types of waste, including poultry droppings, litter materials (such as straw or wood shavings), excreta collected under cages (cage layer waste, It is rich in nutrients like nitrogen, phosphorus, and potassium) feathers, broken eggs, and dead birds. Many farmers currently burn these wastes, leading to air pollution and the loss of valuable resources. Additionally, wastewater from poultry operations is often discharged directly into nearby water sources, contributing to environmental pollution and potential health hazards.

3.5.4.4. Key observations

The lack of an organized waste management system has resulted in improper disposal practices across the GP. Household, agricultural, and livestock wastes are managed informally, often through dumping or burning. The situation worsens during local events like weekly markets and fairs, where large amounts of waste accumulate with no systematic cleanup. Despite individual efforts like composting, there is no collective or institutional mechanism to manage waste efficiently at the GP level.

3.5.4.5. Demand assessment for 2035 (as per RADPFI Guidelines)

As per RADPFI Guidelines, 2021 solid waste generation rate of 150 gm/capita/day (as a moderate estimate for rural areas) is taken. So, demand assessment for soild waste is as follows :

Table 3-14 Projected Total Solid Waste

Year	Projected Population	Per Capita Solid Waste (g/day)	Total Solid Waste (kg/day)	Total Solid Waste (tonnes/day)
2026	11,627	150	1,744.05	1.74
2031	12,108	150	1,816.20	1.82
2035	12,849	150	1,927.35	1.93
2036	12,589	150	1,888.35	1.89
2041	13,070	150	1,960.50	1.96

As per the RADPFI Guidelines (2021), solid waste management in rural areas must follow the principles of Reduce, Reuse, Recycle, and Recover (4Rs). The guidelines emphasize decentralized systems led by Gram Panchayats, promoting source segregation, composting of biodegradable waste, and channeling recyclables into the scrap trade. Infrastructure planning must cater to efficient collection, treatment, and scientific disposal of residual waste with active community participation, especially through SHGs and local youth groups.

Infrastructure Requirement for Solid Waste Management

- **Waste Segregation and Collection System**
  - Segregation at source into biodegradable and non-biodegradable waste must be ensured.
  - Household-level bins: At least 2 per house (wet and dry waste).
  - Door-to-door collection using pushcarts/tricycles for approx. 2,600 households by 2035.

- **Composting Infrastructure**
  - Biodegradable waste (approx. 60% of 1.93 TPD in 2035 ≈ 1.16 TPD) can be treated through composting.
  - Required land for composting :
    - 1 hectare can handle 83.33 TPD.
    - Required land for Aguibani: (1.16 / 83.33) = ~0.014 hectares (~140 sq.m).
  - Recommended method: Vermicomposting or NADEP method based on ease of use and resource availability.
  - Site should be:
    - Away from habitation and water bodies.
    - Near agricultural land for direct compost use.

- **Dry Waste Collection Centre**
  - For non-biodegradable waste (approx. 0.77 TPD), establish a dry waste collection and sorting shed.
  - Items like plastic, metal, glass can be sold via scrap dealers.
  - Collection shed: 100-150 sq.m with storage bins, weighing machines, and balers.

- **Final Disposal Site (Landfill)**
  - For residual inert waste post recycling and composting.
  - Land requirement: Based on remaining 5-10% of total waste.
  - Estimated requirement: ~0.02 hectares near the outskirts, following location criteria:
    - Outside the main habitation
    - Accessible by collection vehicles
    - Slightly sloped, low-lying, uncultivated land

3.5.4.6. Identified Issues

The problem becomes particularly severe after public gatherings such as melas or weekly markets, where large amounts of litter are left behind due to the absence of a structured cleanup process. While kitchen waste is managed individually by residents through composting, the overall lack of an integrated waste management strategy has led to environmental degradation and potential health hazards for the community.

Immediate action is required to develop institutional capacity, infrastructure, and community involvement for effective waste management.

3.5.5. Storm Water Management

At present, Aguibani Gram Panchayat does not have a formal storm water drainage system. The area relies on natural slopes and seasonal channels for surface runoff during monsoon months. One notable site near coordinates 8XG2+95H (as shown in the image below) serves as a natural storm water collection point, where rainwater accumulates during heavy rainfall, helping in localized water percolation and reducing runoff pressure.

While this site plays a minor role in managing excess rainwater, the absence of a structured storm water management system leads to waterlogging in certain low-lying and residential areas.

Figure 3.40 Natural Storm Water Collection Site

(Source: Google Earth Pro)

3.5.5.1. Key observations

No engineered stormwater drainage network exists within the GP boundaries. One natural, low-lying depression area functions as an informal stormwater collection zone.

3.5.5.2. Identified Issues

Water stagnation is reported by villagers in several parts of the GP, particularly after heavy rainfall.

3.5.6. Electricity and Solarization

3.5.6.1. Key observations

The West Bengal Power Development Corporation ensures a 24-hour electricity supply to the village, including provisions for agricultural connections.

Table 3-15 Electricity infrastructure

Electricity infrastructure	
Particulars Availability **Is the village electrified?**	Yes
Number of connections for industrial purposes	Nil
Does the village get three-phase electricity?	Yes
Does the village get 24 hours of electricity for residential purposes?	Yes
Is the streetlight electrified?	Yes (mostly solar)
Does the village have solar streetlights?	Yes
Source: Village Survey, 2025	

Solar energy is extensively utilised at Aguibani High School (H.S.) through solar pumps and lights, promoting sustainability. Solar-powered streetlights and submersible pumps operate independently, reducing the electricity cost burden on the gram panchayat. Additionally, the availability of three-phase electricity supports the expansion of renewable energy projects, particularly solar installations.

3.5.6.2. Identified Issues

Aguibani Village exhibits a robust electrification rate, with 97% of the area having access to electricity. However, the duration of the electric supply varies, with 80% of the area receiving power for 24 hours daily, while a significant 18% experiences a shorter supply duration of 8-15 hours. A smaller fraction of the area receives only 0-7 hours (1%) or 16-23 hours (2%) of power per day. Submersible pumps, which serve as the primary water source for irrigation, rely entirely on electricity.

3.5.7. Street Lights

3.5.7.1. Key observations

Street lights are already installed along the flyover bridge on NH49/AH46.

3.5.7.2. Demand assessment for 2035 (as per RADPFI Guidelines)

Sr. No	Street/ Road Type	Road Length	Number of Street Lights
1	External Road	4515	118
2	Access Internal Roads	3500	92

3.5.7.3. Identified Issues

Interior roads and most of the panchayat roads do not have street lights installed.

3.5.8. Communication Facilities (Phone line, Mobile Tower, Internet, etc)

There are two mobile towers located in the GP.

3.5.9. LPG & alternate Fuel (Gas) Facilities

3.5.9.1. Key observations

One LPG distributor is present in the Aguibani gram panchayat, which facilitates access to clean cooking fuel. As per a field survey, 63 % households in the panchayat use LPG facilities. The remaining household still uses firewood and cow dung as cooking fuel.

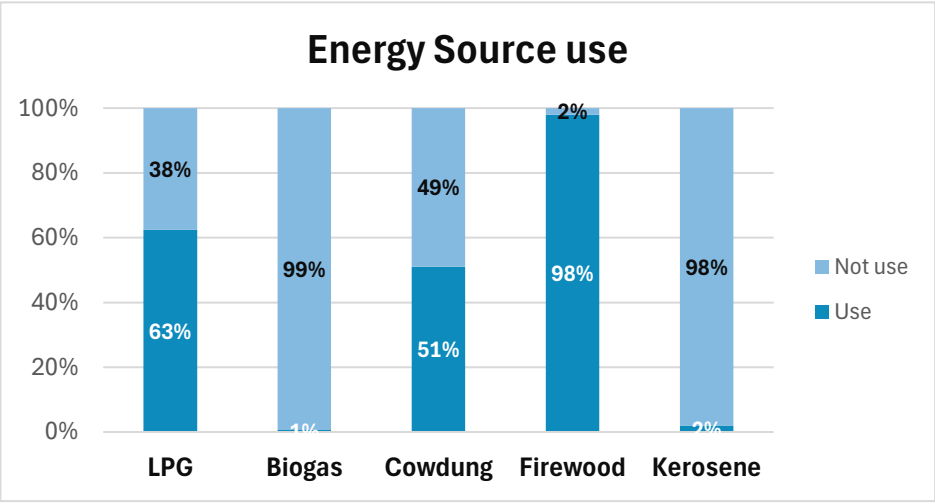

Figure 3.41 Use of an energy source as fuel

3.5.10. Postal Service

3.5.10.1. Key observations

The Gram Panchayat is served by one post office, ensuring that postal services and communication needs are met. One post is present in Aguibani village.

3.5.11. ICT Services and its adaptation in GP

3.5.11.1. Key observations

The adoption of Information and Communication Technology (ICT) in Aguibani Gram Panchayat (GP), located in Jhargram Block, Jhargram District, West Bengal, has been aimed at enhancing transparency, efficiency, and accessibility in governance. The implementation of the West Bengal Panchayat Management System (WBPMS) and various digital platforms has enabled better service delivery, record-keeping, and citizen engagement.

Panchayat Management System

The Department of Panchayats and Rural Development, Government of West Bengal, has introduced an integrated workflow system for all Panchayati Raj Institutions (PRIs). The WBPMS is a cloud-based platform that ensures 24/7 accessibility and enables seamless coordination among different tiers of the Panchayati Raj system. This system facilitates:

- Digital record keeping
- Workflow automation
- Stakeholder information sharing
- Instantaneous decision-making through data availability

Aguibani GP has access to several digital services under WBPMS, including:

- Online GP Certificates: Citizens can apply for birth, death, and other essential certificates digitally.
- Property Tax Collection: Online payment system for efficient tax management.
- Building Plan Approvals: Digital submission and tracking of approvals.
- Grievance Redressal Mechanism: Online portal for lodging and tracking complaints.

- E-Governance Platforms: Integration with state-level financial and administrative systems like SARAL iFMS, Karmashree, and the Tour & Inspection Management System.

3.5.11.2. Demand assessment for 2035 (as per RADPFI Guidelines)

3.5.11.3. Identified Issues

Despite the availability of digital platforms, the adoption of ICT in Aguibani GP faces several challenges:

- **Digital Literacy:** A significant portion of the rural population lacks awareness and skills to utilize online services effectively. As per primary survey only 7% people are digitally literate.
- **Willingness of GP Officials:** Some Gram Panchayat officials and staff still prefer traditional, paper-based processes due to familiarity and reluctance to transition fully to digital methods.
- **Infrastructure Gaps:** While digital services are available, issues such as internet connectivity and lack of adequate hardware hinder smooth implementation.

3.6. Housing Profile

3.6.1. Housing Stock

According to the 2011 Census, Aguibani GP has 2,328 houses accommodating a population of 10,184, resulting in an average household size of 4.37. Currently, 30% of the houses are in good or liveable condition, while 26% are in a dilapidated state. Most houses are single-story earthen structures, followed by ground-plus-one-story buildings. A stratified sampling survey covered 450 households, representing 13.43% of all households in Aguibani GP.

The most significant finding is that a large majority, 70%, of the houses are in the 20-50 year age bracket. This suggests a period of significant construction activity a few decades ago. Furthermore, a notable 26% of the houses are relatively new, being less than 10 years old, indicating more recent development in the area. Conversely, only a small percentage, 3%, of the houses are over 50 years old, implying that very few

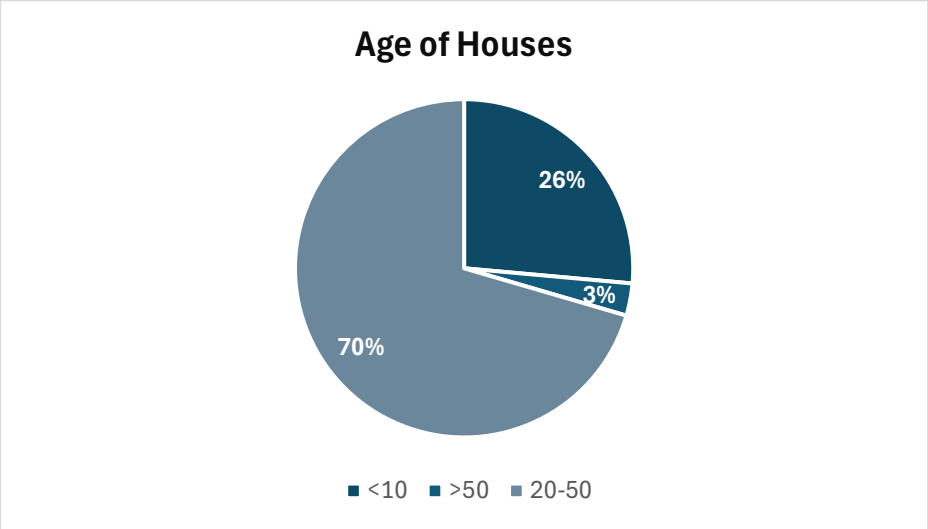

Figure 3.42 Age of houses

original structures remain or have been maintained over a long period. The data suggests that Aguibani GP has seen considerable housing development in the last half-century, with a recent uptick in construction.

Government schemes at both central and state levels have significantly contributed to housing development, particularly in building pucca houses. Analysis reveals that nearly half of the pucca houses constructed were supported by these schemes, showcasing their effectiveness in improving housing conditions for economically weaker sections. Programs like Pradhan Mantri Awas Yojana (PMAY) have been instrumental in achieving this, with millions of pucca houses delivered under rural and urban initiatives However, the impact of government assistance diminishes for other

housing types. The percentage of semi-pucca houses built under these schemes remains minimal, indicating limited focus or eligibility criteria for this category.

Table 3-16 Housing stock

Spatial Unit	Population	No. of HH	HH Size
Jhargram (District Rural)			
Aguibani GP (Taluka Rural)			
Aguibani GP	17,994	3,452	

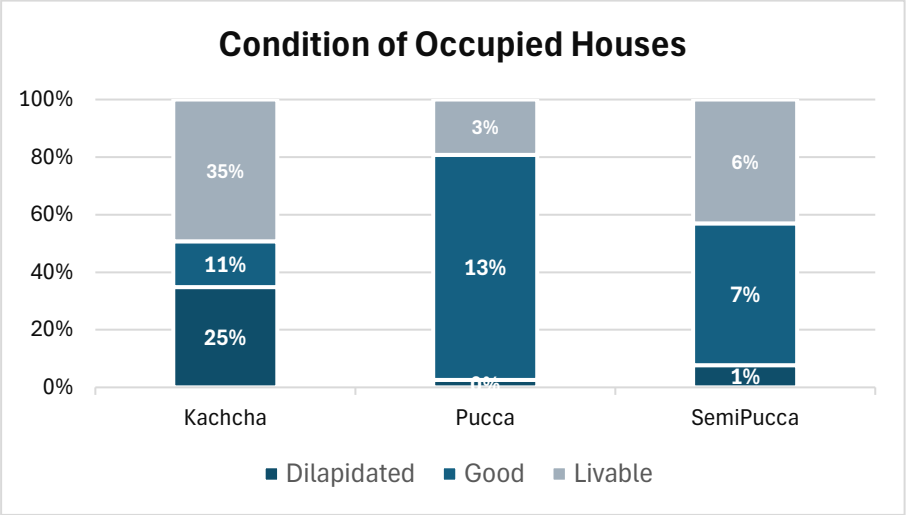

Figure 3.43 Condition of occupied houses

The graph depicting the condition of occupied houses in Aguibani GP, key findings reveal variations across different housing types. Among Kachcha houses, a significant 25% are in dilapidated condition, 11% are in good condition, and 35% are livable. In contrast, Pucca houses show a stark difference, with none being dilapidated, 13% in good condition, and 3% considered livable. Semi-Pucca houses present a mixed scenario, with 1% dilapidated, 7% in good condition, and 6% deemed livable. These figures highlight the varying states of housing infrastructure within Aguibani GP, emphasising the need for targeted interventions based on housing type and condition.

3.6.2. Construction Material of Houses

The data from primary survey presented in the graph highlights a significant reliance on mud as the dominant construction material for walls in Aguibani GP, with an overwhelming 77% of walls being constructed from it. This indicates a potential prevalence of traditional building practices and/or limited access to more modern or durable materials. Following mud, Pakka bricks are the next most utilized material,

accounting for 16% of wall construction, suggesting some presence of more conventional brick-building techniques. The use of unburned bricks is notably lower at 5%, while bamboo is used sparingly, making up only 1% of wall construction. Concrete blocks and stone with mortar are virtually absent, each representing 0% of the materials used for walls, pointing towards a near-total lack of these construction methods in the area. Overall, the construction landscape in Aguibani GP, as reflected by wall materials, is heavily dominated by mud, with lesser adoption of other materials like Pakka bricks and minimal use of more modern or robust alternatives.

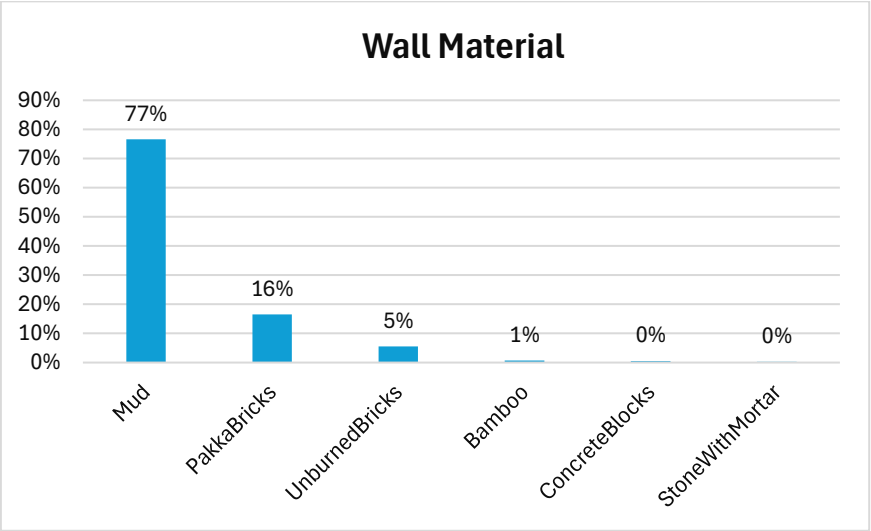

Figure 3.44 Construction material for wall

The data from Aguibani GP reveals a significant reliance on asbestos sheets for roofing, with 82% of homes using this material. This dominance suggests potential concerns regarding health and safety due to the known risks associated with asbestos. Concrete roofs, while the second most prevalent, only account for 11% of the total, indicating a considerable gap between the primary and secondary roofing materials.

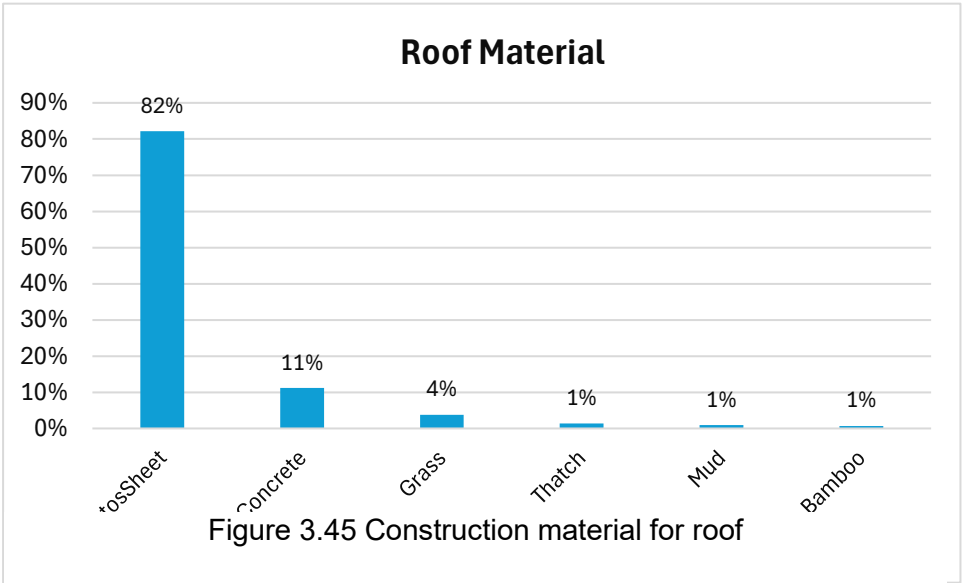

Figure 3.45 Construction material for roof

Traditional materials like grass, thatch, mud, and bamboo are used in a very small percentage of homes (4% and 1% each, respectively), highlighting a shift away from these traditional methods, likely due to factors such as durability, availability, or cost. The near absence of these materials could also reflect changing preferences and access to modern building materials. Overall, the roofing material distribution in Aguibani GP points to a need for further investigation into the reasons behind the widespread use of asbestos and whether there are opportunities to promote safer and more sustainable alternatives.

3.6.3. Ownership Status

As per the Census of India, 2011, approximately 96.7% of households in Aguibani Gram Panchayat own their homes, indicating a high level of residential ownership. This reflects the traditional rural settlement pattern, where families reside on ancestral or self-acquired land. The remaining households may reside in rented or employer-provided accommodations or may be living in informal housing arrangements.

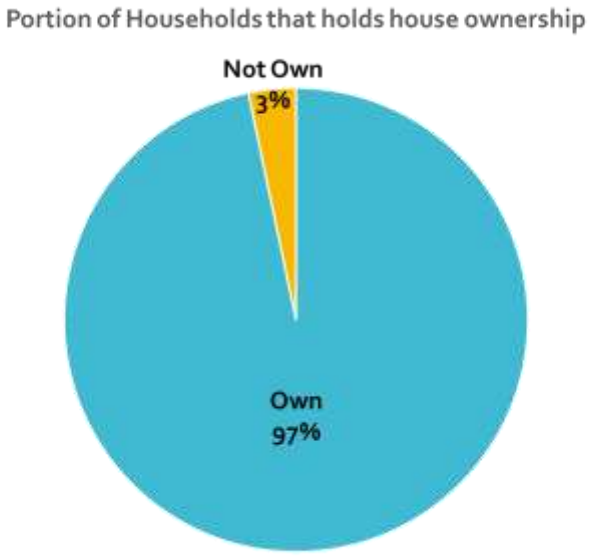

Figure 3.46 House Ownership

3.6.4. Housing Demand Assessment for 2035 (as per RADPFI Guidelines)

Housing is one of the necessities of human sustenance deserves special attention in any kind of planning and policy level intervention. This section foresees the housing demand for the planning area. For this exercise, the following assumptions are adopted with the reference to the Census 2011 Housing Profile and primary survey for Aguibani GP:

- According to the primary survey, dilapidated houses account for 22%. However, for future housing demand planning, only 10% of these were considered.
- Average Household size taken as 4.7.

Table 3-17 Household size

Year	1991	2001	2011
Population	8260	9392	10184
No of Household	1686	1902	2328
HH size	4.90	4.94	4.37
Avg. HH size		**4.74**	

Source: Census data

For 2041 projection, 4.74 household size is considered, based on the historical data. The projected housing strokes for 2041 is 3,033 for the planning area. As per census 2011 data, total housing stock in the GP is 2328 out of which 605 are dilapidated, which means additional residential area required accommodate additional 1,310 houses by the year 2041.

Table 3-18 Housing demand

Year	2011	2021	2026	2031	2036	2041
Population	10184	11146	11627	12108	12589	13070
Average HH size	4.37	4.74	4.74	4.74	4.74	4.74
No of Houses	2328	2351	2453	2554	2656	2757
Dilapidated House	605	611	245	255	266	276
Total No. of house required	2933	2963	2698	2810	2921	3033

Source: Census 2011, Primary survey, 2025

3.6.5. Supporting Housing Services

The data reveals that households residing in well-maintained (Good condition) Semi-Pucca houses have the highest average monthly expenditure, standing at Rs 10,600, suggesting a relatively higher economic status within this group. In contrast, Pucca houses in good condition show an average monthly expenditure of Rs 7,951, while Kachcha houses in good condition have an average of Rs 7,148.Livable houses reflect a moderate expenditure range, with Semi-Pucca at Rs 6,768, Kachcha at Rs 6,649 and Pucca at Rs 6,067, indicating a similar economic capacity among these households, irrespective of the house type. The lowest expenditures are observed in

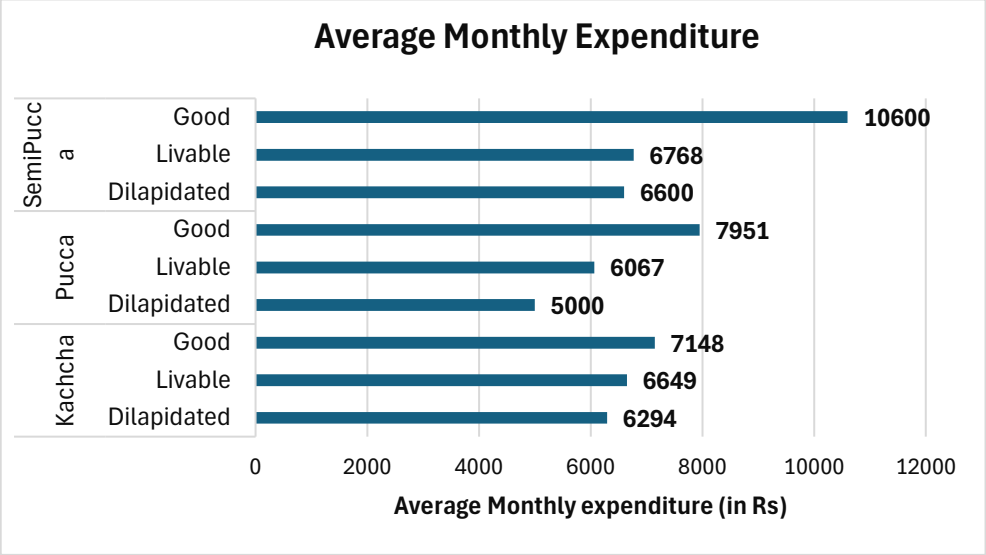

Figure 3.47 Average monthly expenditure

dilapidated houses, with Pucca houses at Rs 5,000, Kachcha at Rs 6,294 and Semi-Pucca at Rs 6,600. This suggests that households living in poorly maintained houses, regardless of the type, generally have lower economic resources.

Monthly loan instalment : Households residing in Kachcha houses bear the highest average loan instalment burden, amounting to ₹3,208 per month. This suggests that economically weaker sections, often living in less durable housing, may be struggling with higher loan repayment obligations, potentially due to unfavourable loan terms or higher dependency on credit for basic needs. In contrast, households in Semi-Pucca houses have a comparatively moderate average monthly instalment of ₹1,444, indicating a slightly better financial situation but still a substantial repayment load.

Meanwhile, households in Pucca houses, typically associated with better socio-economic conditions, have the lowest average monthly instalment at ₹850. This reflects their ability to access more favourable loan terms or lesser reliance on loans.

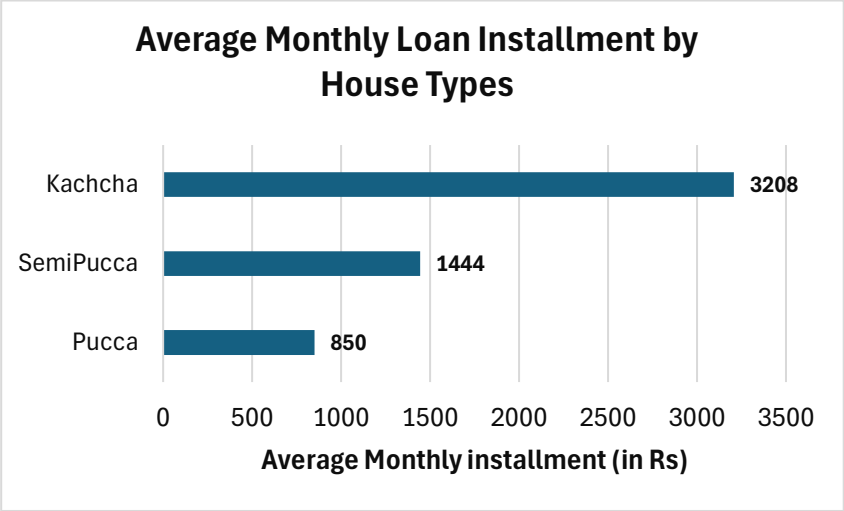

Figure 3.48 Monthly Average loan installment

Status of Toilets: While a significant 80% of the population has access to toilets, a notable 20% still lacks this essential facility, indicating a persistent gap in sanitation coverage. An examination of construction types reveals that the majority (56%) were

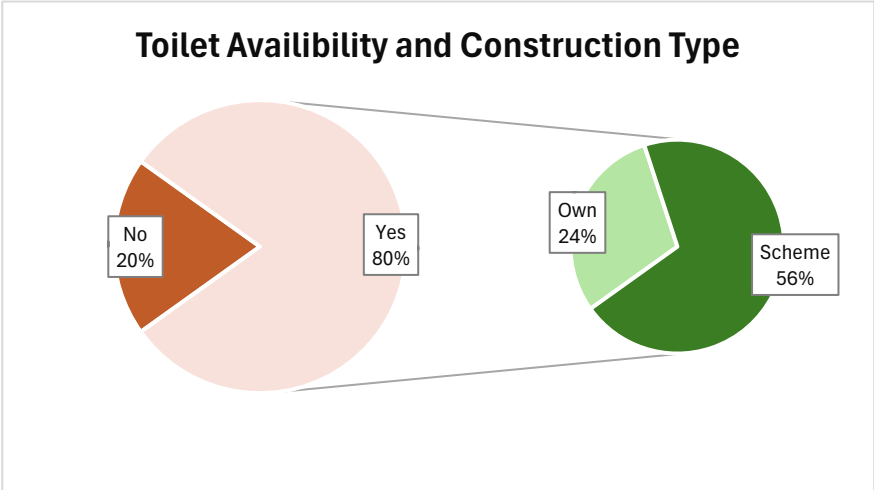

Figure 3.49 Toilet availability and construction type

built under government schemes, highlighting the crucial role of these initiatives. However, individual efforts also contribute, accounting for 24% of toilet construction, pointing to a combination of top-down and bottom-up approaches. Mainly latrine facility has two pit system. Absence of septic tank or soak pits. It's concerning that a portion of the population, particularly within the Lodha community, continues to practice open defecation in forest areas despite toilet availability. Focused interventions addressing the specific reasons behind this behaviour within the Lodha community, coupled with

strategies encouraging toilet usage and further individual construction, are necessary to achieve comprehensive sanitation coverage in Aguibani GP.

Table 3-19 Type of Bathroom and Drainage Connectivity

Wastewater outlet connected to			Number of households having latrine facility	
Closed drainage	Open drainage	No drainage	Yes	No
16%	48%	36 %	80%	20%
Source: primary survey				

Table 3-20 List of Additional Services and Facilities Available at HH Level

Type of Services	Level of Availability	Source
Additional List of Services Available at HH Level		
Main Source of Light	100% HH- Electricity	Primary Survey
Cooking Fuel	98% HH-firewood Remaining LPG and cow dung	HH survey, Primary Survey & FGDs
2 Wheeler	64 % HH	HH survey,
Mobile and Telephone	98 % HH	HH survey,
Television	54 % HH	HH survey,
Source: HH Survey, Primary Survey, FDGs.		

Vehicles and Means for Local Commute: The primary mode of transportation for work in Aguibani Gram Panchayat (GP) is the bicycle, accounting for 47% of commuters. This suggests a reliance on personal, non-motorized transport, possibly due to affordability or accessibility reasons. Buses are the second most common means of transport, used by 24% of the working population, indicating the importance of public transportation in the area. Motorcycles are used by 15% of the population. Walking is also a significant mode of transportation, with 12% of people walking to work. This could point to the proximity of workplaces for some residents. Cycle

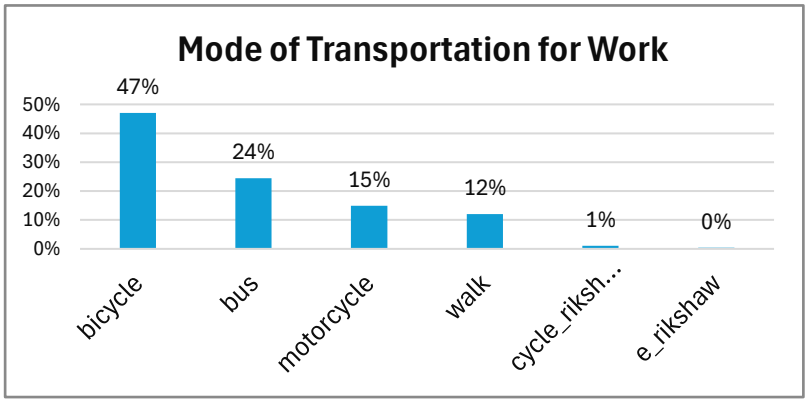

Figure 3.50 Means of commute

rickshaws are used by only 1% of the population, while e-rickshaws are almost non-existent, with 0% usage, suggesting that these modes are not popular or well-established in the area.

3.6.6. Housing Services Demand Assessment for 2035 (as per RADPFI Guidelines)

In accordance with the RADPFI (Rural Area Development Plan Formulation and Implementation) Guidelines, a housing services demand assessment has been carried out for Aguibani Gram Panchayat. The projections are based on household data from the Census of India, 2011, with assumed growth trends and standard land allocation norms.

As per the analysis, the projected residential area requirement for the year 2026 is estimated to be 0.10 sq.km (10 hectares). The average area allocated per housing unit has been considered as 80 sq.m, in alignment with rural development norms. In addition to housing, provisions have been made for 10% open space and 15% area for circulation and roads.

The following table presents the projected housing demand and corresponding land requirements up to the year 2041:

Table 3-21 Demand of Residential Area

Year	2026	2031	2036	2041
Additional no. of Houses required	976	1087	1199	1310
Area per housing unit (sq.mt)	80.0	80.0	80.0	80.0
Total Residential Area required (sq.mt)	78042	86972	95902	104832
Additional 10 % Open Area Required**	7804	8697	9590	10483
Assumed Additional 15% circulation area (Roads)**	11706	13046	14385	15725
Net Area Requirement	97553	108715	119878	131040
Required Residential Area (sq.km)	0.10	0.11	0.12	0.13
Required Residential Area (ha)	10	11	12	13.1

Associated Service Demands for 2035:

To support the additional housing demand of 1199 houses by 2036, the following complementary infrastructure and service provisions must be addressed:

- **Drainage & Sewerage Networks:** Extension of underground drainage systems and decentralized sewerage networks across emerging residential zones.
- **Street Lighting Infrastructure:** Installation of energy-efficient lighting in all habitation clusters to enhance public safety and urban mobility.
- **Rainwater and Greywater Management Systems:** Promotion of dual plumbing systems and rooftop rainwater harvesting, particularly for areas with high runoff.
- **Affordable Construction Material Access:** Establishment of Sanitation Hardware Marts to support low-cost, durable building components and hygienic sanitary fittings.
- **Community Sanitation Facilities:** Provision of shared toilet blocks and bathing units for households lacking plot space or financial ability to construct individual facilities.

3.6.7. Identified Issues

Based on the analysis of existing housing stock, services, and primary data, the following key issues have been identified in Aguibani GP:

- High proportion (26%) of houses in dilapidated condition indicates poor housing durability.
- Predominant use of mud for wall construction and asbestos for roofing poses risks to structural safety and public health.

Figure 3.51 Housing Condition and Material

- Limited access to modern construction materials and sustainable technologies.
- High loan burdens for households in weak housing conditions reflect financial stress.
- Inadequate sanitation infrastructure, particularly for the Lodha community, needs targeted behavioral and infrastructural interventions.
- Absence of proper drainage and solid waste management systems.
- Lack of awareness and underutilization of government housing support schemes for semi-pucca and kachcha houses.

3.6.8. Possibility of Village Planning Scheme (As per RADPFI Guidelines)

As per RADPFI, to formulate Village Planning Scheme it would be essential to onboard all the stakeholders and land owners to consolidate a land area for a certain project. The Porposaed Ecoturism Center may perhaps be the first to be implemented by the GP.

3.7. Environment, Disaster Management and Climate Change

3.7.1. Pollution in Gram Panchayat

3.7.1.1. Drainage Pattern, Catchment Areas and Water Bodies

3.7.1.1.1. River

Aguibani Gram Panchayat, located in the Jhargram district of West Bengal, is traversed by several natural streams and canals that play a vital role in the local ecosystem and agricultural practices. The region's undulating terrain and forested areas give rise to numerous seasonal streams, which contribute to groundwater recharge and provide essential water sources for irrigation and domestic use.

One notable watercourse in the vicinity is the Dulung River, situated approximately 4 kilometres west of Aguibani. Originating near Dulungdiha in the Ergoda Gram Panchayat, Binpur Block, close to Chakuliya in Jharkhand, the Dulung River flows from north to south, eventually joining the Subarnarekha River near Rohini in West Bengal. While the Dulung River itself does not flow directly through Aguibani Gram Panchayat, its proximity influences the area's hydrology, and its tributaries may traverse the region, supporting local agriculture and daily water needs.

3.7.1.1.2. Ponds

Historically, village ponds have been integral to local water resource management, serving as essential sources for irrigation, domestic use, and ecological balance. In recent years, however, many of these ponds have suffered from neglect, leading to unclean conditions that render them unsuitable for community needs. Notably, areas such as Kismat Bhagjhapa and Bara Didiha lack common ponds entirely, underscoring the urgent need for the creation and rejuvenation of these water bodies. In contrast, Bhagjhapa possesses 2-3 ponds; however, they require significant maintenance and enhancement of their water storage capacities to effectively serve the community.

Figure 3.52 Ponds at Aguibani gram panchayat

3.7.1.2. Forests, National Parks, Wildlife Sanctuaries, important migratory corridors, reserved forests or mangrove plantations

3.7.1.2.1. Forest

Aguibani, situated in the Jhargram district of West Bengal, is a vital forested region that falls under the Chandri-I and parts of Chandri-II forest beats within the Lodhasuli Forest Range, managed by the Jhargram Forest Division. The forest is primarily dry deciduous, with sal (Shorea robusta) and bamboo being the dominant species. These forests provide essential resources to the local communities, who rely on them for sal leaves, firewood, bamboo, and other minor forest produce.

In Aguibani, Khas Jangal and Jangal Khas refer to different categories of forest land ownership and management under the West Bengal forest administration system:

- **Khas Jangal:** This refers to government-owned forest land that is not classified as Reserved or Protected Forest. It is under state ownership but may not always be

actively managed by the Forest Department. In some cases, local communities may use it for grazing, fuelwood collection, or other minor forest-based activities.

- **Jangal Khas:** This term typically denotes degraded or partially encroached forest land that is under dispute or transition in terms of ownership. In many cases, Jangal Khas

Figure 3.53 Sal tree and bamboo plants at Aguibani forest

land has been used by communities for agriculture, settlements, or resource extraction, sometimes leading to conflicts between the Forest Department and local inhabitants.

The Forest Department regulates resource extraction and claims 50% of the revenue from forest produce, impacting local livelihoods. The extensive dependence on forest resources presents various socioeconomic and environmental challenges, including deforestation, degradation due to over-harvesting, human-wildlife conflicts, limited livelihood alternatives, and disputes over revenue-sharing policies.

To promote sustainable management of the Aguibani forest, community-based conservation programs should be strengthened, along with the promotion of alternative livelihoods such as agroforestry, sustainable farming, and vocational training. Additionally, reforestation and afforestation initiatives should be undertaken to restore degraded areas, while fair revenue-sharing mechanisms should be implemented to ensure equitable benefits for local communities. By integrating these strategies, the Aguibani forest can be preserved as both an ecological asset and an economic resource for future generations.

3.7.1.2.2. Biodiversity

Aguibani Gram Panchayat, located in the Jhargram district of West Bengal, is part of a region recognised for its biodiversity.

Floral Diversity:

The area is characterised by tropical dry deciduous forests, with sal (Shorea robusta) being the dominant tree species. Accompanying flora includes species such as Piasal, Arjun, Asan, Mahua, Kendu, Bahera, Dhaw, and Challa. These forests also harbor a variety of medicinal plants, contributing to the region's ecological and ethnobotanical significance.

Faunal Diversity:

The avifaunal diversity is notable, with studies documenting 37 bird species across 24 families and 10 orders in areas like Chilkigarh. This diversity is attributed to the region's varied habitats, including dense forests, riverbanks, and grasslands. Mammalian species such as elephants and wolves are also present, reflecting the forest's capacity to support large fauna.

3.7.2. Identified Disaster Risks and Disaster Management Strategies

Aguibani Gram Panchayat is susceptible to various natural disasters, including floods, droughts, and cyclones. The geographical and climatic conditions of the region contribute to these hazards, necessitating an effective disaster management framework. While specific disaster records for Aguibani Gram Panchayat are limited, the broader Jhargram district has experienced significant natural calamities. For instance, in 2013, heavy rainfall and dam discharge led to severe flooding in several areas, affecting livelihoods and infrastructure. Given these risks, a structured disaster preparedness and mitigation strategy is crucial for the panchayat.

According to the survey, 24% of respondents reported experiences of past disaster events, such as floods and cyclones.

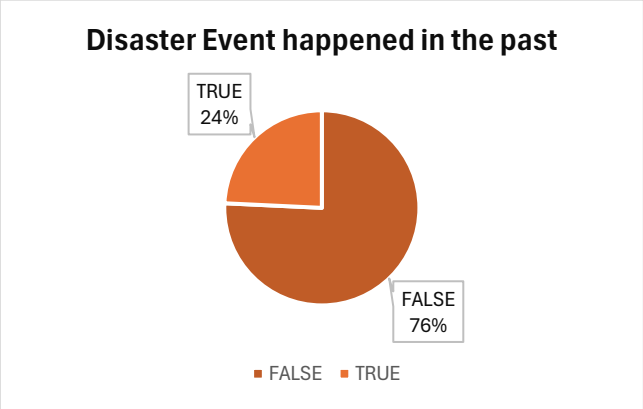

Figure 3.54 Disaster events happened in the past

The disaster management framework for Aguibani Gram Panchayat aligns with the broader District Disaster Management Plan (DDMP) of Jhargram. The Ministry of Panchayati Raj has introduced a Disaster Management Plan (DMP) to strengthen resilience at the grassroots level by integrating disaster preparedness with the Gram Panchayat Development Plan (GPDP). Aguibani Gram Panchayat, as part of this initiative, is expected to establish Disaster Management Committees responsible for:

- Early warning dissemination
- Evacuation and shelter management
- Coordination with district authorities

3.7.2.1.1. Human-Animal Conflict

The Gram Panchayat area has experienced increasing elephant activity over the past 4-5 years, with approximately 36 elephants currently in the surrounding forest area. Elephants pose a significant threat to human life and property, with attacks being frequent, especially at night. Tiger sightings have also been reported.

Villagers require training and awareness programs on mitigating human-wildlife conflict. Solar-powered streetlights along roads and village peripheries are urgently needed to reduce nighttime elephant encounters, as poor visibility exacerbates the risk of attacks. Some solar lights exist but suffer from poor maintenance, highlighting the need for capacity building on solar equipment upkeep.

3.7.2.1.2. Disaster preparedness

The disaster preparedness survey for Aguibani Gram Panchayat reveals significant gaps in community readiness for emergencies. While 52% of respondents indicated awareness of disaster risks, only 39% had received any form of disaster training, highlighting a critical need for capacity-building initiatives. The availability of designated disaster shelters is also low, with only 33% of respondents aware of their locations, suggesting inadequate infrastructure or a lack of community communication. Emergency contact preparedness remains a concern, as 83% of the surveyed population lacks knowledge of emergency contact protocols. The most concerning finding is that 86% of respondents do not possess an emergency kit, indicating a severe deficiency in household preparedness measures. These findings suggest that while there is some level of disaster awareness, there is an urgent need for targeted interventions, including training programs, awareness campaigns, and improved disaster response infrastructure, to enhance resilience in the community.

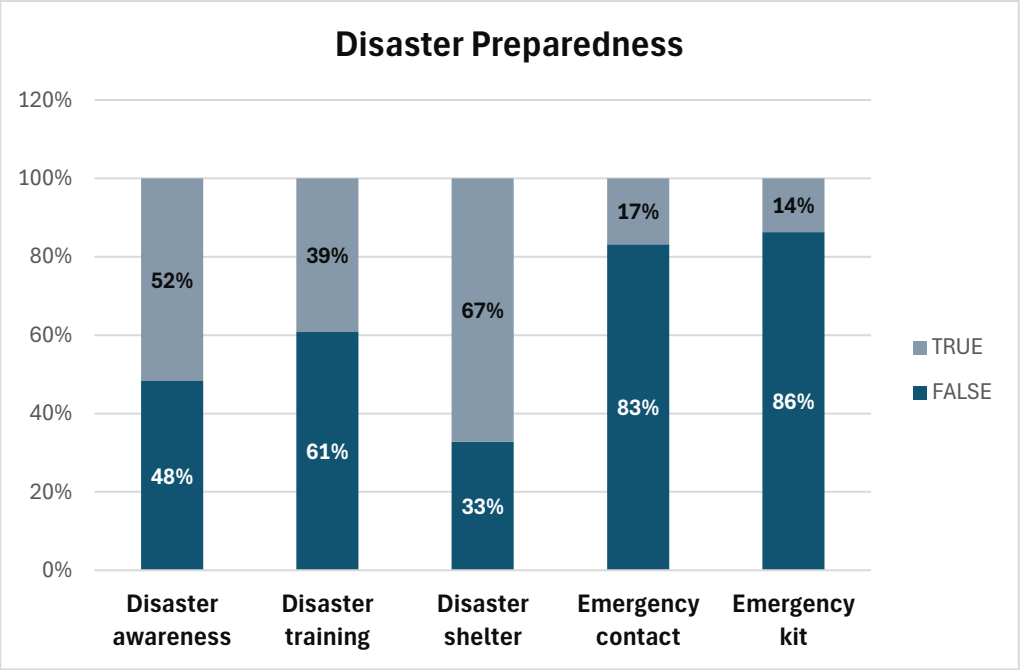

Figure 3.55 Disaster preparedness

3.7.3. Climate Change Resilient Strategies for Gram Panchayats

Given the tribal heritage, several families from each of the panchayat villages are dependent on the forest for work and livelihood. The Forest Produce Aggregation & Branding Hub has been proposed to provide vocational training to the people in and around the village, while they can also sell their produce to the travellers on the highway. Given the richness of

natural resources and the abundance of forests in the Jhargram district, several nature-based tourist spots are near the panchayat. The next section on localization of SDG also higlighs the initiatives under taken by the state government.

3.8. Localisation of Sustainable Development Goals (SDG)

The state of West Bengal has formulated a comprehensive action plan for the Localisation of Sustainable Development Goals (LSDGs), integrating the 17 United Nations SDGs into its local governance framework through the Panchayat Development Plans (PDPs).

The Department of Planning, Statistics & Programme Monitoring is the nodal department for the Sustainable Development Goals (SDGs) in West Bengal. The state's core strategy for localising these goals involves systematically incorporating the nine themes, which are derived from the 17 SDGs, into the existing process of preparing Panchayat Development Plans for Gram Panchayats (GPs), Panchayat Samitis (PSs), Zilla Parishads (ZPs), and the Siliguri Mahakuma Parishad. The Society for Training & Research on Panchayats & Rural Development (STARPARD) acts as the nodal agency for LSDGs. Institutional Arrangements and Key Nodal Officers. The plan establishes a multi-tier institutional structure to facilitate SDG localisation:

- State Level: The Member Secretary of STARPARD is designated as the State Nodal Officer for LSDGs.
- District Level: The Additional Executive Officer (ZP) / Additional District Magistrate (Panchayat) leads initiatives, with the District Panchayats & Rural Development Officer serving as the District Nodal Officer.
- Block Level: The Block Development Officer (BDO) is the lead, supported by the Joint Block Development Officer (Jt. BDO) as the Block Nodal Officer. Other Extension Officers at this level are appointed as Facilitator Cum Charge Officers (FCCOs) for Gram Panchayats.
- Gram Panchayat Level: The Pradhan, Upa-Pradhan, Executive Assistant, and Secretary take the primary leadership roles. All Elected Representatives (ERs) and employees are actively engaged in the preparation and implementation of the GPDP.
- Committees: The framework includes five Sub-Committees at the Gram Panchayat level and ten standing committees at the Block Panchayat and District Panchayat levels. These committees are assigned roles and responsibilities in accordance with the 29 subjects specified in the 11th Schedule of the Constitution of India and are tasked with preparing draft plans aligned with their activities.

Localisation of SDG (LSDG) Themes and 'Sankalp' Prioritisation. The 17 SDGs have been converged into nine LSDG themes:

1. Poverty Free and Enhanced Livelihoods Village
2. Healthy Village
3. Child-Friendly Village
4. Water Sufficient Village
5. Clean and Green Village
6. Self-Sufficient Infrastructure in a Village
7. Socially Secured Village
8. Village with Good Governance
9. Woman-Friendly Village

Gram Panchayats are required to select at least one, but no more than two, of these themes as their "Sankalp" (resolution or commitment) for a particular year, based on local needs, gaps, and priorities. Historically, most GPs have focused on Theme-6 (Self-sufficient Infrastructure), Theme-5 (Clean & Green), and Theme-4 (Water sufficiency), with minimal adoption of the other six themes, and notably, no GP previously selected the "Woman-Friendly" Theme-9. To address this imbalance and promote holistic development, the Panchayats & Rural Development Department now emphasises motivating GPs and PSs to adopt the underrepresented six themes on a rotational basis. It is also recommended that all Gram Panchayats within a particular Block adopt the same "Sankalp" Theme to ensure focused development.

For each theme chosen as "Sankalp," GPs must earmark 25% of the relevant activities listed under that theme and dedicate 25% of their total untied funds (including grants from the 15th Finance Commission, State Finance Commission, and Own Source Revenue). If two themes are selected, 50% of the untied funds are to be allocated

3.8.1. Current SDG Theme(s) GP is adapting

Following the implementation of LSDG in West Bengal, for the past two years, Aguibani GP has been focused on activities under Theme 4 - Water Sufficient Village, Theme 5 - Clean and Green Village, and Theme 6 - Self-sufficient Infrastructure in Village. From 2024-25 onwards, Agubani GP has been diversifying its SDG Localisation activities into other themes as shown in the table below.

Table 3. 3-22. LSDGs Theme-based activities as undertaken at Aguibani GP

S.No.	Output Type	2023-24	2024-25	2025-26
1	Theme 1 - Poverty Free and Enhanced Livelihoods Village	0	2	0
2	Theme 2 - Healthy Village	0	0	1

3	Theme 3 - Child-Friendly Village	0	8	24
4	Theme 4 - Water Sufficient Village	6	10	8
5	Theme 5 - Clean and Green Village	79	12	11
6	Theme 6 - Self-sufficient Infrastructure in Village	13	42	34
7	Theme 7 - Socially Just and Socially Secure Village	0	1	0
8	Theme 8 - Village with Good Governance	1	10	1
9	Theme 9 - Women-Friendly Village	0	3	11

3.8.2. Progress towards SDG

The following matrix outlines key SDG linkages based on proposed activities:

Table 3-23 Themes and proposed activites and projects

S.No.	Theme Types	Proposed Projects and Activities
1	Theme 1 - Poverty Free and Enhanced Livelihoods Village	Creation of community run stalls, skill based workshops, mobile oil extraction unit, Branding Hub, Eco-tourism center and artisan outlets enhancing rural livelihoods
2	Theme 2 - Healthy Village	Upgradation of football grounds and sanitation infrastructure
3	Theme 3 - Child-Friendly Village	Community event grounds including Birhandi Durga Puja Mela and multi-purpose playground
4	Theme 4 - Water Sufficient Village	Water body rejuvenation and piped water supply proposals
5	Theme 5 - Clean and Green Village	Nature trail development, plantation drives, Solid waste management provisions under SBM and drain construction proposals
6	Theme 6 - Self-sufficient Infrastructure in Village	Piped water supply, water tanks at hilly areas, borewells, Upgraded internal roads and Footpath
7	Theme 7 - Socially Just and Socially Secure Village	Tribal representation through cultural spaces, fair (event) space
8	Theme 8 - Village with Good Governance	Use of GIS in zoning and Transparent budgeting structure
9	Theme 9 - Women-Friendly Village	Economic spaces for women-led enterprises and Inclusion in workshops and capacity-building sessions

3.8.3. Identified Roadblocks/Gaps in achieving the SDG

Key roadblocks identified are:

- Skewed Theme Prioritisation: There has been a significant imbalance in the selection of "Sankalp" (resolutions or commitments) by Gram Panchayats at the State Level.
- Over-emphasis on Infrastructure and Basic Services: The majority of Gram Panchayats have predominantly focused on just three of the nine LSDG themes. At the state level, approximately 92% of GPs selected "Sankalp" themes related to Infrastructure (Theme-6), Clean & Green (Theme-5), and Water Sufficiency (Theme-4). Specifically, 74% of GPs emphasised "Self-sufficient Infrastructure" (Theme-6), while 10% focused on "Clean & Green Village" (Theme-5), and 8% on "Water Sufficient Village" (Theme-4). This selection pattern was also true in the case of Aguibani GP.
- Neglect of Social and Governance Themes: A very small percentage of GPs, only 8%, adopted the remaining six LSDG themes as their "Sankalp." These neglected themes include Poverty-free (Theme-1), Healthy (Theme-2), Child-friendly (Theme-3), Socially Secured (Theme-7), Good Governance (Theme-8), and Women-friendly (Theme-9).
- Complete Omission of "Woman-Friendly Village" Theme: Notably, no Gram Panchayat had previously selected the "Woman-Friendly Village" (Theme-9) as a "Sankalp" at the state level. This indicates a significant gap in addressing gender-specific development at the local level. Aguibani GP has proactively selected Theme-9 in 2024-25 onwards.
- Modification of "Sankalp": It has also been observed that the "Sankalp" (commitment) taken by Gram Panchayats is sometimes modified at a later stage, suggesting potential challenges in consistent implementation or adherence to initial plans.

To address these issues and promote holistic development with equitable distribution of "Sankalp" themes, the Panchayats & Rural Development Department now emphasises motivating Gram Panchayats and Panchayat Samitis to adopt the underrepresented six themes on a rotational basis. It is also suggested that all Gram Panchayats within a particular Block adopt the same "Sankalp" Theme to ensure focused development. Further, there is a need for capacity building and training initiatives for activity planning.

3.9. Gram Panchayat Finance Profile

This section analyzes Aguiboni GP's financial management across six fiscal years (2020-21 to 2025-26), including fund allocation, revenue sources, expenditure trends, and implementation capacity. All data is derived directly from (egramswaraj.gov.in).

3.9.1. Assessment of Gram Panchayat Finance

3.9.1.1. Accounting and budgeting system

The financial profile of Aguibani GP reveals a scheme-linked budgeting approach spanning both central and state allocations alongside minimal own fund mobilization. Analysis spans FY 2020-21 to FY 2025-26, covering budgeting practices, income and expenditure dynamics, and fund utilization.

Key Characteristics: Multi-Scheme Integration.

Budget estimates and actual allocations are disaggregated across over 29 schemes as listed in the table below.

Table 3-24 Fund Allocation Schemes List

	S.No.	Scheme Name
Aguiboni, Jhargram, Jhargram	1	XV Finance Commission
	2	4th State Finance Commision(West Bengal)
	3	5th State Finance Commision(West Bengal)
	4	Grant for Five Year Plan(West Bengal)
	5	Grant In Aid Establishment(West Bengal)
	6	Institutional Strengthening of Gram Panchayats Project (ISGPP)(West Bengal)
	7	Integrated Development of Small and Medium Towns
	8	MG National Rural Employment Guarantee Act
	9	National Social Assistance Programme
	10	Own Funds
	11	SAHAY(West Bengal)
	12	Swarn Jayanti Sahari Rojgar Yojana (SJSRY)
	13	Miscellaneous GIA(West Bengal)
	14	National Food Security Mission - NFSM
	15	National Rural Health Mission - NRHM
	16	Rashtriya Gram Swaraj Abhiyan
	17	Calamity Relief Fund

	18	Integrated Child Development Services
	19	Khelo India Erstwhile Rajiv Ghandi Khel Abhiyan Erstwhile PanChayat Yuva Krida Aur Khel Abhiyan
	20	Mid-Day Meal Scheme
	21	National Rural Drinking Water Programme - NRDWP
	22	National Rural Livelihood Mission
	23	National Rurban Mission
	24	Pradhan Mantri Krishi Sinchayi Yojna
	25	Prime Minister Gramin Awaas Yojana
	26	Rashtriya Krishi Vikas Yojana - RKVY
	27	SANSAD ADARSH GRAM YOJANA
	28	Swachh Bharat Mission
	29	Strengthening Rural Decentralisation (West Bengal)

For each scheme, allocations were recorded separately for every financial year, indicating the Panchayat's use of a disaggregated and traceable budgeting model.


6
5
4
3
2
1
0
Sum of 2020-2021
Sum of 2021-2022
Sum of 2022-2023
Sum of 2023-2024
Sum of 2024-2025
Sum of 2025-2026
XV Finance Commission
Upa Samiti Sanchalak Honorarium(West Bengal)
Swachh Bharat Mission
Strengthening Rural Decetrlization(West Bengal)
SANSAD ADARSH GRAM YOJANA
SAHAY(West Bengal)
Rashtriya Krishi Vikas Yojana - RKVY
Rashtriya Gram Swaraj Abhiyan
Rajiv Gandhi Grameen Vidyutikaran Yojana - RGGVY
Prime Minister Gramin Awaas Yojana
Pradhan Mantri Krishi Sinchayi Yojna
Pradhan Honorarium(West Bengal)
Own Funds
National Rural Livelihood Mission
National Rural Health Mission - NRHM
National Rural Drinking Water Programme - NRDWP
National Food Security Mission - NFSM
Miscellaneous GIA(West Bengal)
Mid-Day Meal Scheme
MG National Rural Employment Guarantee Act
Khelo India Erstwhile Rajiv Ghandi Khel Abhiyan Erstwhile PanChayat Yuva Krida Aur Khel Abhiyan
Integrated Child Development Services
Institutional Strengthening of Gram Panchayats Project (ISGPP)(West Bengal)
Incentive Grant(West Bengal)
Grant In Aid Establishment(West Bengal)
Grant for Five Year Plan(West Bengal)
GP Staff Salary(West Bengal)
CALAMITY RELIEF FUND
5th State Finance Commision(West Bengal)
4th State Finance Commision(West Bengal)

Figure 3.56 Comparison of Schemewise Fund Allocation

Table 3-25 Schemewise Fund Allocation

		Actual Allocation(In Crore)					
S.No.	Scheme Name	2020 - 2021	2021 - 2022	2022 - 2023	2023 - 2024	2024 - 2025	2025 - 2026
1	XV Finance Commission	0.6721	0.6896	0.9412	0.7571	0.6371	0.6371
2	4th State Finance Commision(West Bengal)	0.092	0.0585	0.326	0.052	0	0
3	5th State Finance Commision(West Bengal)		0	0	0	0.19	0.2
4	Grant for Five Year Plan(West Bengal)	0.006	0	0	0	0	0
5	Grant In Aid Establishment(West Bengal)	0.3812	0	0	0	0	0
6	Institutional Strengthening of Gram Panchayats Project (ISGPP)(West Bengal)	0.125	0	0	0	0	0
7	MG National Rural Employment Guarantee Act	3.6328	0	0	0.01	0	0
8	National Rural Health Mission - NRHM	0.002	0.002	0	0.01	0	0
9	Own Funds	0.052	0.101	0.06	0.0775	0.075	0.0505
10	Rajiv Gandhi Grameen Vidyutikaran Yojana - RGGVY	0.0005	0	0	0	0	0
11	SAHAY(West Bengal)	0.009	0	0	0	0	0
12	GP Staff Salary(West Bengal)	0	0.43	0	0	0	0
13	Incentive Grant(West Bengal)	0	0.1025	0	0	0	0
14	Miscellaneous GIA(West Bengal)	0	0.0158	0	0	0	0
15	National Food Security Mission - NFSM	0	0.009	0	0.03	0	0
16	National Rural Drinking Water Programme - NRDWP	0	0	0	0.01	0	0
17	Pradhan Honorarium(West Bengal)	0	0.006	0	0	0	0
18	Rashtriya Gram Swaraj Abhiyan	0	0.005	0	0	0	0
19	Upa Samiti Sanchalak Honorarium(West Bengal)	0	0.0137	0	0	0	0
20	CALAMITY RELIEF FUND	0	0	0	0.01	0	0
21	Integrated Child Development Services	0	0	0	0.01	0	0
22	Pradhan Mantri Krishi Sinchayi Yojna	0	0	0	0.01	0	0
23	Prime Minister Gramin Awaas Yojana	0	0	0	0.01	0	0
24	Rashtriya Krishi Vikas Yojana - RKVY	0	0	0	0.01	0	0

25	SANSAD ADARSH GRAM YOJANA	0	0	0	0.01	0	0
26	Swachh Bharat Mission	0	0	0	0.1367	0	0
27	National Rural Health Mission - NRHM	0	0	0	0.01	0	0
28	National Rural Livelihood Mission	0	0	0	0.01	0	0
29	Khelo India Erstwhile Rajiv Ghandi Khel Abhiyan Erstwhile PanChayat Yuva Krida Aur Khel Abhiyan	0	0	0	0.01	0	0
30	Mid-Day Meal Scheme	0	0	0	0.01	0	0
31	Strengthening Rural Decetrlization(West Bengal)	0	0	0.0439	0	0	0

Annual Budget Preparation

- The Gram Panchayat prepares its annual budget across Plan Outlay and Establishment Grants.
- Budgeting distinguishes between allocations for Asset Creation, Maintenance, Operational Activities, and Capacity Building.

Fund Source Integration

- Budgets include inflows from central schemes like XV Finance Commission, MG-NREGA, Swachh Bharat Mission, Rashtriya Gram Swaraj Abhiyan, as well as state-specific grants such as ISGPP (West Bengal) and State Finance Commission allocations.
- Own Funds are also reflected separately, which is in smaller proportions, indicating limited local revenue mobilization.

Functional Classification

- The Panchayat maintains functional mapping across 30+ schemes and 23 sectors, including Agriculture, Drinking Water, Sanitation, Women & Child Development, and GP Office Infrastructure.

3.9.1.2. Panchayat Fund Statement

Over the six-year planning period (FY 2020-2021 to FY 2025-2026), Aguibani Gram Panchayat has mobilized financial resources through a diversified portfolio of central, state, and local funding channels.

Scheme-Wise Financial Sources:

The GP's fund base draws from over 30 centrally and state-sponsored schemes as shown in Figure 3.56 Comparison of Schemewise Fund Allocation and Table 3-25 Schemewise Fund Allocation , which include:

- Central Finance Commission Transfers: Notably, the **XV Finance Commission remains the largest and most consistent annual inflow**, averaging over ₹0.69 Cr per year.
- State Finance Commission (SFC) Funds: Initially received through the 4th SFC, and subsequently by the 5th SFC beginning 2024-25 onward, these allocations support core infrastructure and service delivery.
- Centrally Sponsored Schemes (CSS): These include allocations under schemes such as MGNREGA, Swachh Bharat Mission, PMAY-G, NRDWP, and National Rural Health Mission (NRHM).
- Own Source Revenues (OSR): Recorded separately across all years, these funds average ₹0.06 Cr/year, reflecting collections from taxes, user charges, leases, and minor penalties.

Total Fund Position (2020-2026)

- Total Cumulative Allocation (across schemes): ₹10.45 Cr
- Cumulative Expenditure (reported till 2025): ₹1.71 Cr
- Utilization Rate: ~16.4%

Key Features of the Fund Structure

- Yearly Variability: Several schemes are episodic (e.g., RKVY, ICDS, SBM), appearing in selected years based on demand-based releases or thematic planning alignment.
- Dominance of a Few Schemes: Roughly 60% of the GP's six-year allocation comes from the XV Finance Commission and MGNREGA (2020-21 only).
- Minimal Institutional Grants in Later Years: Schemes like ISGPP and GIA have largely phased out or been superseded post-2021, indicating a need for renewed convergence efforts.

3.9.1.3. Annual Financial Demand Estimated by the Gram Panchayat

The annual financial demand of Aguibani Gram Panchayat during the period 2020-2026 has been interpreted based on actual allocations made across 25 development sectors. These allocations represent the realized fiscal outlay for implementing local projects under centrally sponsored, state-assisted, and own-funded schemes. Rather than being projected, the estimates reflect actual budgeted commitments that signify the Gram Panchayat's functional and thematic priorities in real financial terms.

Table 3-26 Total Cumulative Allocations by Sector (2020-2026)

Sector	Cumulative Allocation (₹ Cr)	Share (%)
Agriculture	**3.64**	33.33%
Sanitation	1.74	15.94%
Drinking Water	1.17	10.73%
Roads	0.85	7.78%
Rural Electrification	0.37	3.37%
Women & Child Development	0.35	3.20%
Maintenance of Community Systems	0.36	3.29%
Health	0.14	1.28%
Education	0.09	0.86%
Others (16+ sectors)	2.21	20.22%
Total	**₹10.92 Cr**	**100.00%**

The unusually high allocation to **Agriculture** is attributed to a one-time inflow of ₹3.61 Cr under **MGNREGA in 2020-21**, which was primarily utilized for farm-related and land development assets.

Year-on-Year Sectoral Allocation Trend:

This view emphasizes consistency of funding by showing how allocations have shifted across years revealing emerging or sustained priority sectors.

Table 3-27 Year-on-Year Sectoral Allocation Trend

Year	Top Allocated Sectors
2020-21	Agriculture > MGNREGA-dominant
2021-22	Sanitation, Roads, Drinking Water
2022-23	Sanitation, Drinking Water, Community Infra
2023-24	Sanitation, Health, Roads
2024-25	Drinking Water, Education, Sanitation
2025-26	Women & Child Development, Drinking Water

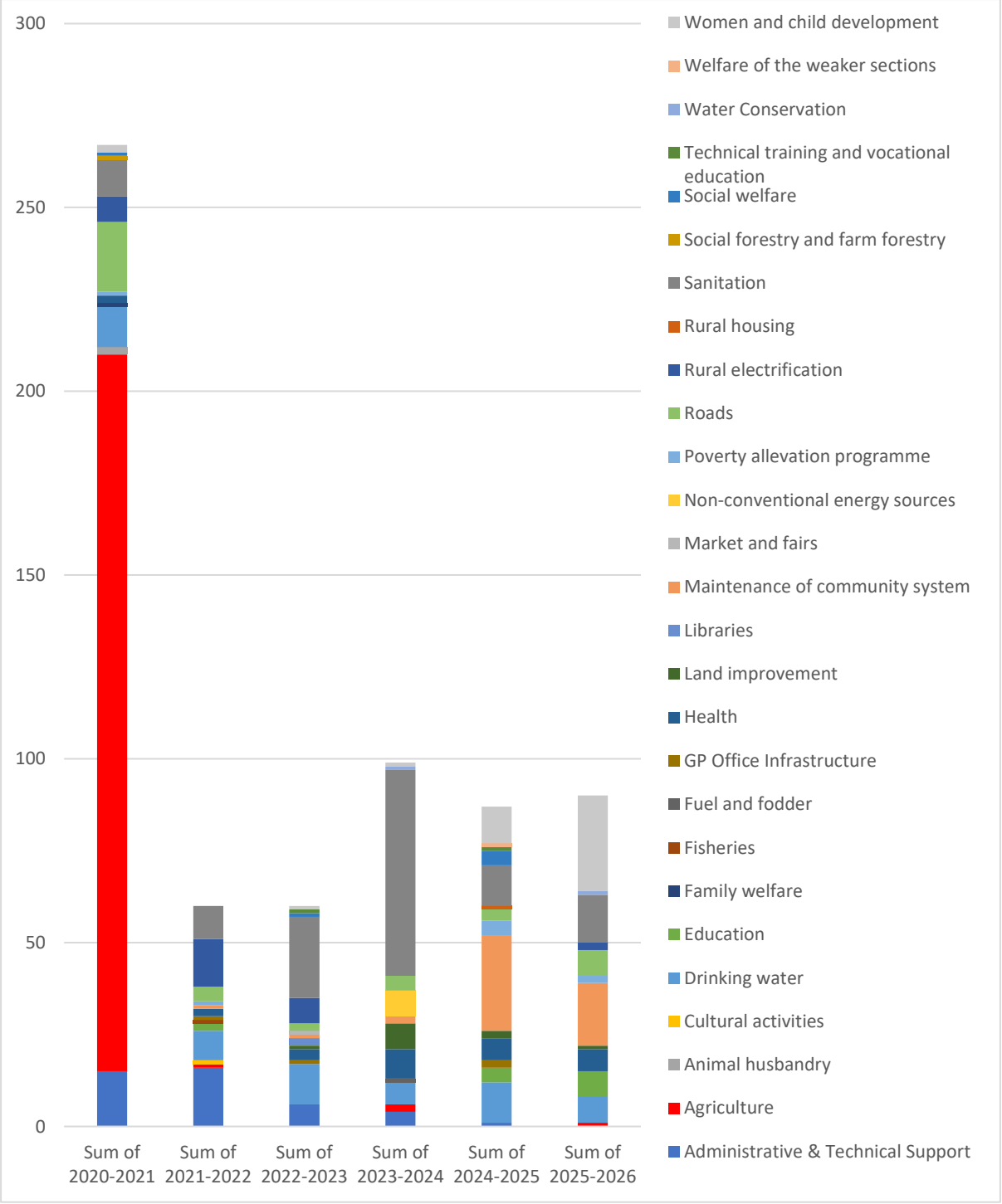

Figure 3.57 Sector Wise Plan Outlay

3.9.1.4. Panchayat Capital & Revenue Income (including collection efficiency)

Aguibani Gram Panchayat's income over the period 2020-2026 demonstrates a heavy reliance on capital grants from central and state schemes, with marginal contribution

from internal revenue sources. The income structure is primarily categorized into **capital income** (scheme-based allocations) and **revenue income** (tax and non-tax-based local income).

3.9.1.4.1. Income from Taxes

Tax revenue is recorded under the GP's Own Fund category and might includes: Property Tax, Water Tax, Lighting Tax, Trade License Fees, etc.

Table 3-28 Annual Own fund Allocation

Year	Recorded Own Fund (₹ Cr)
2020-21	0.052
2021-22	0.101
2022-23	0.060
2023-24	0.0775
2024-25	0.075
2025-26	0.0505

It is clearly observed that there is no significant upward trend in Own funds.

3.9.1.4.2. Non-Taxable Income

Non-tax income for Aguibani GP is composed of non-recurring grants, scheme-based allocations, and modest revenue generated through fees, leases, and charges not classified under taxation. These inflows form the dominant share of the Panchayat's income structure and are largely dependent on centrally and state-sponsored development programs.

Key Component of Non-Taxable Income is Scheme-Based Grants and Plan Transfers:

These represent the bulk of the Panchayat's income and are allocated toward capital works, basic services, and programmatic interventions. Major contributors include:

- **XV Finance Commission (XV-FC):**

Most consistent and substantial source of annual receipts. Total allocation: ₹4.33 Cr across FY 2020-21 to 2025-26.

Focus areas: drinking water, sanitation, and basic service delivery.

- **MGNREGA (FY 2020-21 Only):**

One-time peak inflow of ₹3.63 Cr in 2020-21. Primarily directed towards agriculture-related works, including land development and pond construction.

- **4th & 5th State Finance Commission Grants (SFCs):**

Disbursed selectively, with a cumulative outlay of ₹0.64 Cr. Support core infrastructure, road maintenance, and civic service functions.

- **Swachh Bharat Mission, NRDWP, PMAY-G, and others (from FY 2023-24 onward):**

Nominal but symbolic allocations (e.g., ₹0.01-₹0.14 Cr per scheme per year).

3.9.1.5. Panchayat Expenditure (including O&M Expense and Establishment Expense)

The expenditure trend of Aguibani Gram Panchayat over the six-year period from FY 2020-21 to FY 2025-26 reflects low fund absorption rates despite diverse scheme inflows. As of FY 2024-25, total expenditure stood at ₹1.71 Cr, against a total cumulative allocation of ₹10.92 Cr, yielding an average utilization rate of ~15.7%.

Table 3-29 Year-Wise Expenditure Overview

Year	Allocation (₹ Cr)	Expenditure (₹ Cr)	Utilization (%)
2020-21	4.97	0.46	9.3%
2021-22	1.43	0.29	20.6%
2022-23	1.08	0.39	35.9%
2023-24	1.18	0.30	25.2%
2024-25	0.90	0.27	30.2%
2025-26	0.89	0.00 (YTD)	0.0%

Note: FY 2025-26 shows no reported expenditure as of mid-financial year.

Breakdown of Panchayat Expenditure Components:

1. **Establishment Expense**

- Includes honorariums for Pradhan and Upa-Sanchalaks, office administration, and GP staff salary.
- Total identified allocation: ~₹0.43 Cr
- GP Staff Salary (2021-22): ₹0.43 Cr
- Honorariums and incentives (2020-22): ₹0.03 Cr approx.

2. **Operation & Maintenance (O&M) Expense**

- Covers road repairs, drinking water infrastructure maintenance, sanitation, and community asset upkeep.

- Major O&M schemes include:
- Sanitation Sector: Cumulative allocation of ₹1.74 Cr
- Maintenance of Community Systems: ₹0.36 Cr allocated (primarily post-2023)

3. **Capital Expenditure**

- Funds directed toward new infrastructure development (roads, water systems, solar streetlights, education, etc.)
- Notable entries:

Agriculture (2020-21): ₹3.63 Cr (MGNREGA)

Drinking Water: ₹1.17 Cr

Roads: ₹0.85 Cr

Rural Electrification: ₹0.37 C

3.9.1.6. Financial Capacity of the Gram Panchayat to implement the projects each year

Despite high cumulative allocations, Aguibani Gram Panchayat exhibits limited actual financial deployment, suggesting underutilization of available funds. The maximum yearly implementation capacity to date is approximately ₹0.39 Cr, despite allocations reaching up to ₹4.97 Cr in 2020-21.

It is reasonable to estimate that the Gram Panchayat holds the capacity to implement projects worth ₹1 crore per year. This threshold assumes:

- Full scheme convergence.
- If full allocation fund can be used.
- Timely project approval and fund disbursement.
- Active monitoring and staff availability.

Such an estimate can be used to phase capital-intensive modules and prioritize high-impact proposals under the GPSDP framework.

3.9.2. Key observations

Low Fund Utilization: Only ~16% of total allocated funds were utilized from 2020-2026, with peak absorption in FY 2022-23.

Heavily Grant-Dependent: Over 95% of GP income came from external schemes; XV Finance Commission and MGNREGA together contributed ~72%.

Dominant Sector: Agriculture recorded the highest one-time allocation (₹3.63 Cr in FY 2020-21) under MGNREGA.

Emergent Priorities: Sanitation, drinking water, and women & child development sectors show consistent growth in allocations post 2022.

Minimal OSR Contribution: Own Source Revenue (OSR) remained flat at ₹0.05-₹0.10 Cr/year, limiting financial autonomy.

Establishment Costs Stable: Staff salaries and honorariums were limited to approximately ₹0.43 Cr.

3.9.3. Identified Issues

Underutilization of Funds: Significant unspent balances exist across most schemes, especially in FY 2020-21 and 2025-26.

Episodic Scheme Access: Schemes like ISGPP, ICDS, SBM, and PMAY-G were either one-time entries or remained underutilized.

3.10. Capacity Building of the Gram Panchayat

3.10.1. Need for Capacity Building of the GP

The GP SHGs have highlighted the need to update the residents and train them in areas such as:

- Digital awareness and inclusion.
- Skill development and employment support.
- Revival of traditional livelihoods.
- Better irrigation, roads, and healthcare.
- Skilling for Housing and sanitation upgrades.
- Wildlife conflict management.

3.10.2. Current Status & Identified Capacity Building Requirements of the GP

At present, there are initiatives undertaken to upskill people through the GP office.

3.11. Gram Panchayat Development Plan (GPDP) and People's Plan Campaign (please refer to https://gpdp.nic.in/ or kindly discuss with GP)

3.11.1. Record of meetings held under PPC & GPDP preparation

3.11.2. Frequency of meetings held and departments that attended the meetings

3.11.3. Brief Analysis of prepared GPDP

3.11.4. Key observations

3.11.5. Identified Issues

4. NOISE Analysis

4.1. Needs (N)

- **Digital Awareness and Culture**: Programs to enhance digital literacy and promote inclusive cultural development are needed to empower youth and preserve the community's cultural fabric.

- **Employment and Skill Gaps**: Persistent unemployment, limited vocational training, and lack of local capacity-building restrict economic mobility, especially for the youth and women.

- **Decline in Traditional Livelihoods**: The goldsmith and silver-brass artisan community face reduced demand due to urban competition, leading to migration to Gujarat and Chennai.

- **Agricultural Challenges**: Cashew plantation in Kaliam failed due to poor implementation; irrigation in Bhagjhapa is unaffordable (₹3000/bigha); Bara Didiha lacks irrigation entirely. Bamboo cultivation faces a burdensome 50% revenue share with forest authorities.

- **Inadequate Housing and Sanitation**: About 26% of homes are dilapidated, many have asbestos roofs, and toilet coverage remains low, impacting health and dignity.

- **Poor Road Connectivity**: Villages like Kismat Bhagjhapa and Mira Bano lack proper road infrastructure, limiting access to essential services.

- **Insufficient Waste and Water Management**: Open or absent drainage systems cause wastewater stagnation. Household greywater is drained into fields. Solid and liquid waste systems are not implemented as per RADPFI norms.

- **Overburdened Educational Facilities**: Bhagjhapa school runs two classes in one room due to lack of space. Murabani school lacks safe drinking water. ICDS centers have been converted to schools, affecting early childhood services.

- **Limited Healthcare Access**: The nearest hospital is 15 km away. There is no ambulance service or emergency transport within the GP, creating serious medical risks, especially at night.

- **Neglected Water Bodies**: Village ponds are absent or poorly maintained, affecting groundwater recharge and livestock utility.

- **Rising Wildlife Conflicts**: 36 elephants and occasional tigers have been reported near the GP, causing fear and damages. Malfunctioning solar lights worsen night-time risks.

- **Weak Local Governance**: Police inaction on alcohol issues is reported. Inconsistent distribution of old-age pensions and lack of awareness about waste segregation hinder service delivery.

4.2. Opportunities (O)

- **Cultural Cohesion**: Bilingual communities (Bengali and Santali) can be mobilized for cultural preservation and inclusive community programs.

- **Youth Empowerment Potential**: SHGs, digital learning, and vocational programs can be scaled up to harness the energy of the younger population.

- **Revival of Artisan Economy**: Promotion of goldsmith, cashew, and bamboo-based products through training and branding can rejuvenate traditional livelihoods.

- **Affordable Irrigation**: Solar-powered irrigation systems offer sustainable solutions to replace expensive private systems.

- **Housing Support Schemes**: Existing momentum under PMAY can be extended to cover the remaining kutcha or semi-pucca structures.

- **Connectivity Leverage**: The GP's proximity to the Mumbai-Kolkata highway provides scope for better market linkage and public transport development through PMGSY.

- **Green Energy Solutions**: Solar pumps and lighting can enhance public safety, reduce energy costs, and ensure continuity of services.

- **Infrastructure Upgrade Scope**: Surplus community halls and underutilized school buildings can be converted to meet quality standards.

- **Eco-Restoration Initiatives**: Agroforestry, sustainable forest use, and waste-to-compost techniques can be explored for environmental balance and livelihood generation.

4.3. Improvements (I)

- **Promoting Digital Skills**: Digital education drives and structured awareness campaigns can bridge the technology gap.

- **Enhancing Employability**: Youth-centric employment schemes and community-led skilling initiatives can improve local livelihoods.
- **Strengthening Farmer Cooperatives**: Forming cooperatives for cashew and bamboo producers, and facilitating direct market access, can improve profit margins.

- **Sanitation and Housing Upgrades**: Replace asbestos roofing, extend toilet coverage, and promote pucca home conversions under government schemes.

- **Transport Infrastructure**: Improve road surface quality, create footpaths and introduce non-motorised transport (NMT) infrastructure for safety and access.

- **Expanding Water and Sewer Systems**: Extend clean water supply, increase distribution hours, and implement closed drainage networks.

- **Upgrading Schools and Health Units**: Add digital classrooms, science labs, sanitation, and health centers including maternity units. Recruit teachers and health workers.

- **Disaster and Waste Preparedness**: Introduce early warning systems, conduct local training on disaster response, and ensure solar lights are repaired and maintained.

- **Building Governance Capacity**: Train ward members, improve data collection on pensions and entitlements, and promote waste management awareness in all villages.

4.4 Strengths (S)

- **Educated and Young Population**: 66% literacy overall (Male: 82.01%, Female: 70.5%) and a youthful demographic provide a strong human capital base.

- **Active Local Workforce**: The informal economy remains vibrant, supported by strong traditional skills and knowledge.

- **Thriving Cashew and Muri Units**: Local agro-processing units and household cashew farming are contributing to the rural economy.

- **Progress in Housing**: Many households have transitioned to pucca houses under government schemes, improving safety and resilience.

- **Transport Adaptability**: Personal transport such as bicycles and motorcycles are widely used, with decent access to highways.

- **Near-Universal Electrification**: 97% of the GP is electrified, providing a reliable foundation for further energy-linked development.

- **Existing Public Buildings**: Schools, ICDS centers, and community halls offer a base for expansion of educational and social activities.

- **Environmental Assets**: The area retains forest cover and natural water bodies, supporting local livelihoods and ecological health.

4.5 Exceptions (E)

- **Cultural Continuity**: Traditional languages and cultural practices persist, maintaining a strong local identity.

- **Partial Skill Training**: Isolated skill-building and SHG activities exist but need better reach and coordination.

- **Persistent Livelihood Practices**: Despite market access issues, bamboo cultivation and some artisan work continue under regulatory constraints.

- **Improved Homes and Sanitation**: Some homes now have improved roofing and access to toilets, indicating a gradual change.

- **Highway Infrastructure**: State and national highways meet engineering standards, easing movement for regional travel.

- **Reliable Utility Pockets**: Some areas consistently receive clean water and electricity. A few solar lights function well, improving safety.

- **Quality in Select Institutions**: A few schools and healthcare facilities meet basic norms, showing that good models exist within the GP.

- **Local Disaster Experience**: Community members possess traditional knowledge and isolated practices of disaster readiness, such as elephant movement tracking.

5. Development VISION of the GP

Aguibani GP envisions becoming a self-reliant and inclusive rural community by strengthening basic infrastructure, promoting tribal and cultural heritage, enhancing disaster resilience, and enabling sustainable livelihoods through eco-tourism, clean energy, and digital empowerment.

6. Land Suitability Analysis

6.1. Factors/Criteria considered for Land Suitability Analysis

The land suitability assessment was carried out using a multi-criteria evaluation approach, specifically the Analytic Hierarchy Process (AHP). Key factors considered in this analysis include:

- **Proximity to Roads (51.5% weightage):** Critical for access, logistics, and infrastructure development.
- **Proximity to Settlements (33.2%):** Encourages compact and efficient urban expansion, minimizing urban sprawl.
- **Distance from Forests (8.0%):** Avoids encroachment and protects ecological zones.
- **Distance from Waterbodies (7.4%):** Ensures conservation of riparian zones and reduces risk of water pollution and flooding.

Table 6-1 Pairwise Comparison Matrix

Pairwise Comparison Matrix				
	Roads	Water	Settlement	Forest
Roads	1	6	2	6
Water	1/6	1	1/6	1
Settlement	1/2	6	1	4
Forest	1/6	1	1/4	1
Consistency Index: 0.017				

The Consistency Index (CI) for the AHP model was calculated at 0.017, confirming a high level of consistency and reliability in the criteria weighting process.

6.2. Land Suitability Analysis

6.2.1. Identifying Land Environmental/Ecological Sensitive

To protect environmentally significant areas, the following buffer zones were applied:

- 10-meter buffer from all waterbodies
- 500-meter buffer from all forest areas

These areas were designated as environmentally sensitive and non-developable zones. The exclusion of these zones from the suitability analysis helps in preserving critical ecosystems, preventing degradation, and complying with sustainable land-use planning principles.

6.2.1. Identifying Land Suitable for Agriculture and Allied Activities

A land suitability analysis was conducted using GIS-based multi-criteria evaluation methods to determine the areas most suitable for agriculture and allied rural livelihoods within Aguibani Gram Panchayat. This analysis considered factors such as road, land cover, and proximity to water sources and settlements.

As represented in the map, areas have been classified into four suitability categories. The most productive land is concentrated around the central and western parts of the GP, often in proximity to existing agricultural clusters and irrigation sources. These zones are recommended to be preserved and promoted for food production, horticulture, and allied activities.

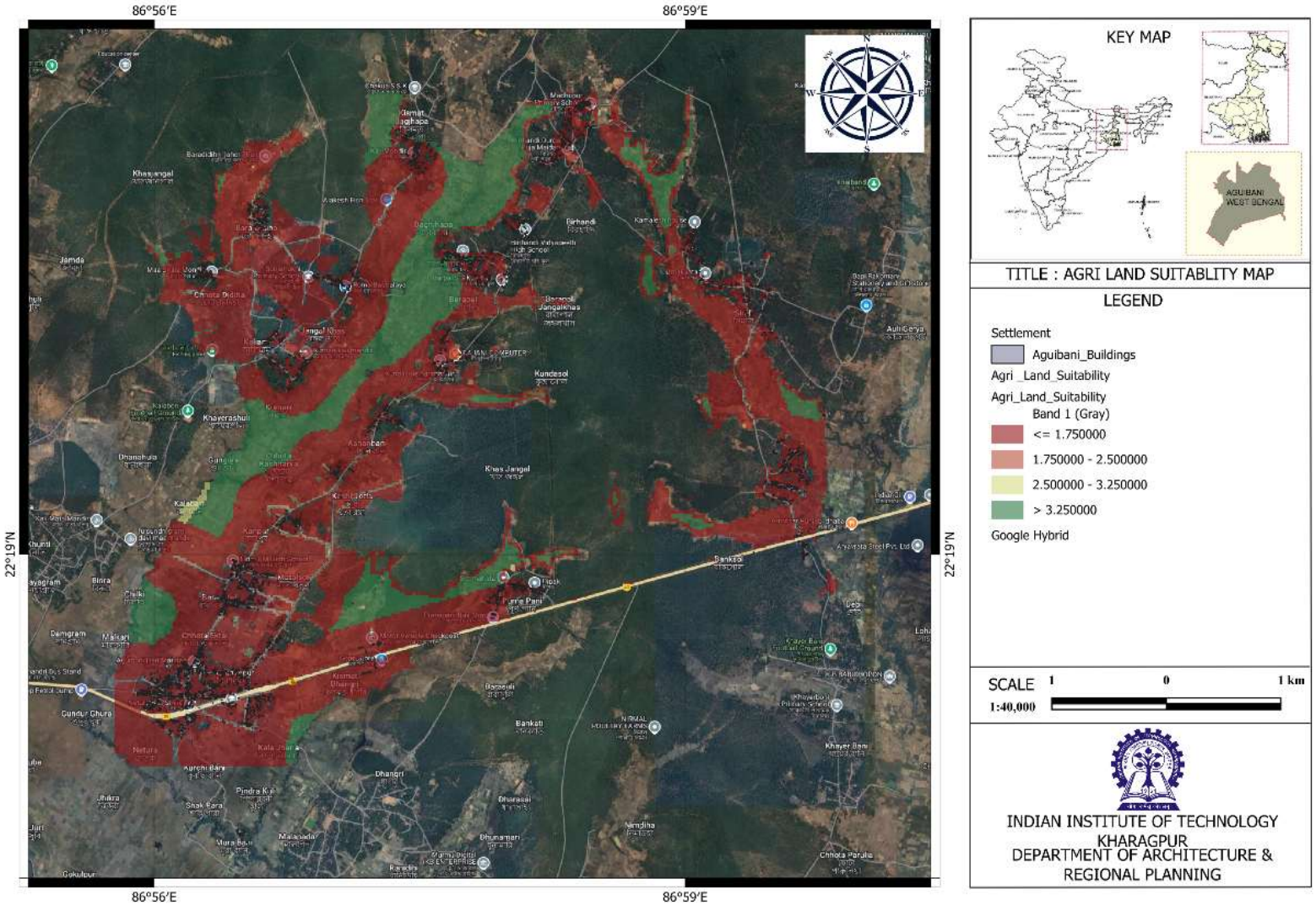

Figure 6.1 Agriculture and Allied Activities Land Suitability Map

6.2.3. Identification of Land Suitable for Development Purposes

The final Land Suitability Map for Development was generated using weighted overlays in GIS, applying the AHP-derived weights.

Key considerations:

- Development suitability increases with proximity to roads and settlements
- Environmentally sensitive areas were excluded to maintain ecological integrity
- Suitable land was categorized into high, moderate, and low potential for development

This map aids in identifying spatial priorities for future urban growth, infrastructure planning, and zoning regulations.

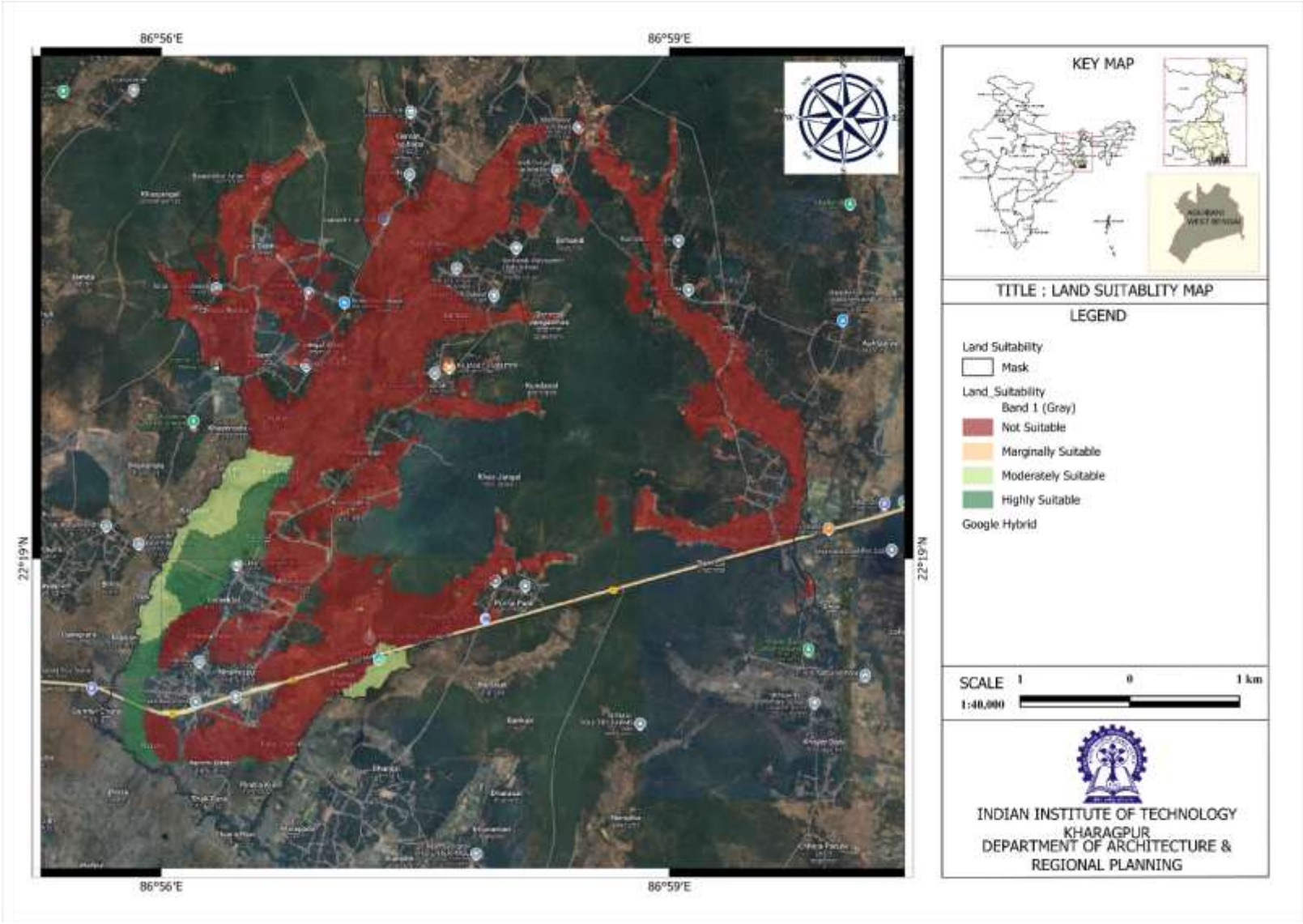

Figure 6.2 Land Suitability for development pattern as per future growth

7. Proposed Land Zoning and Land Use Plan

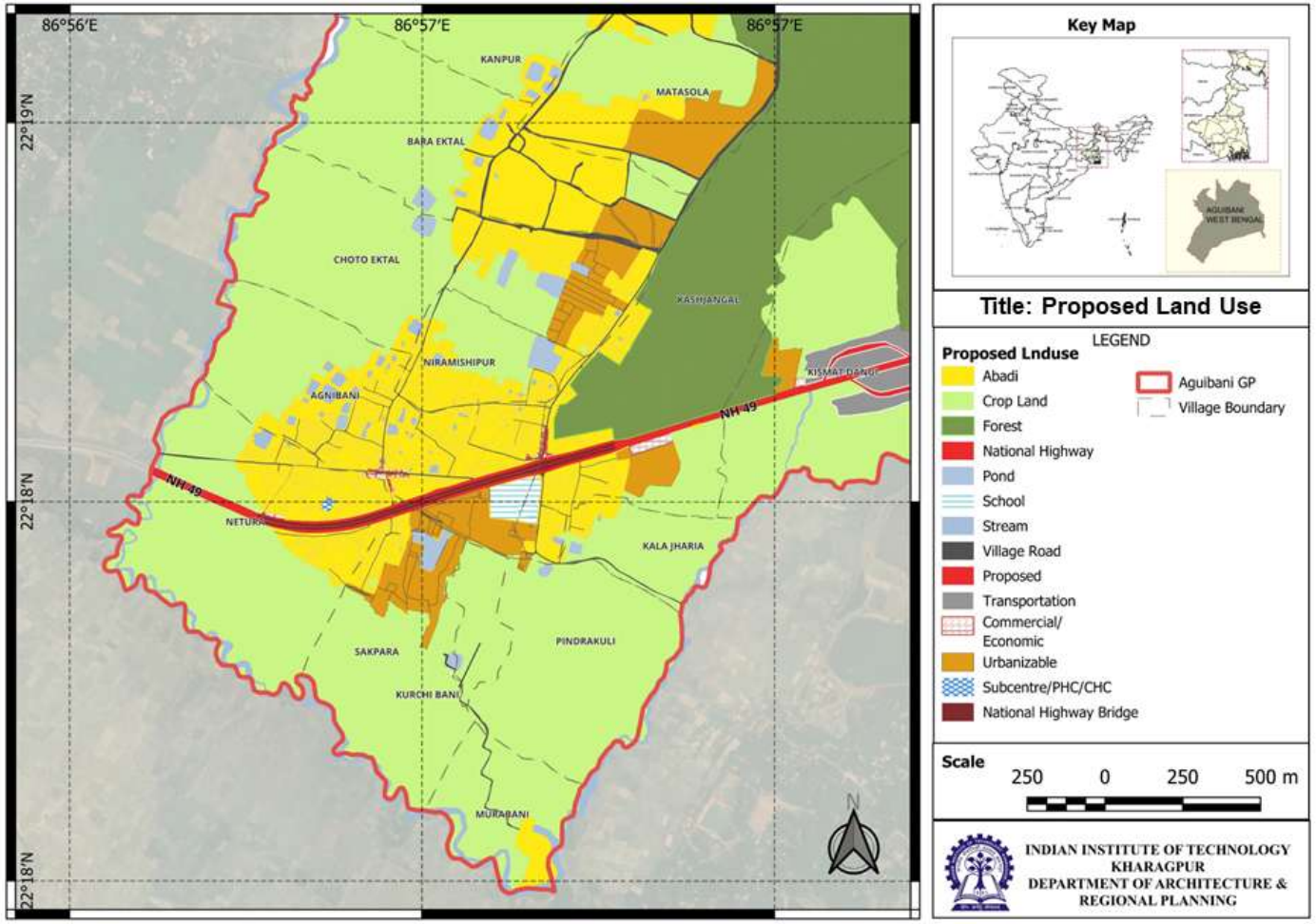

Figure 7.1 Proposed Land Use

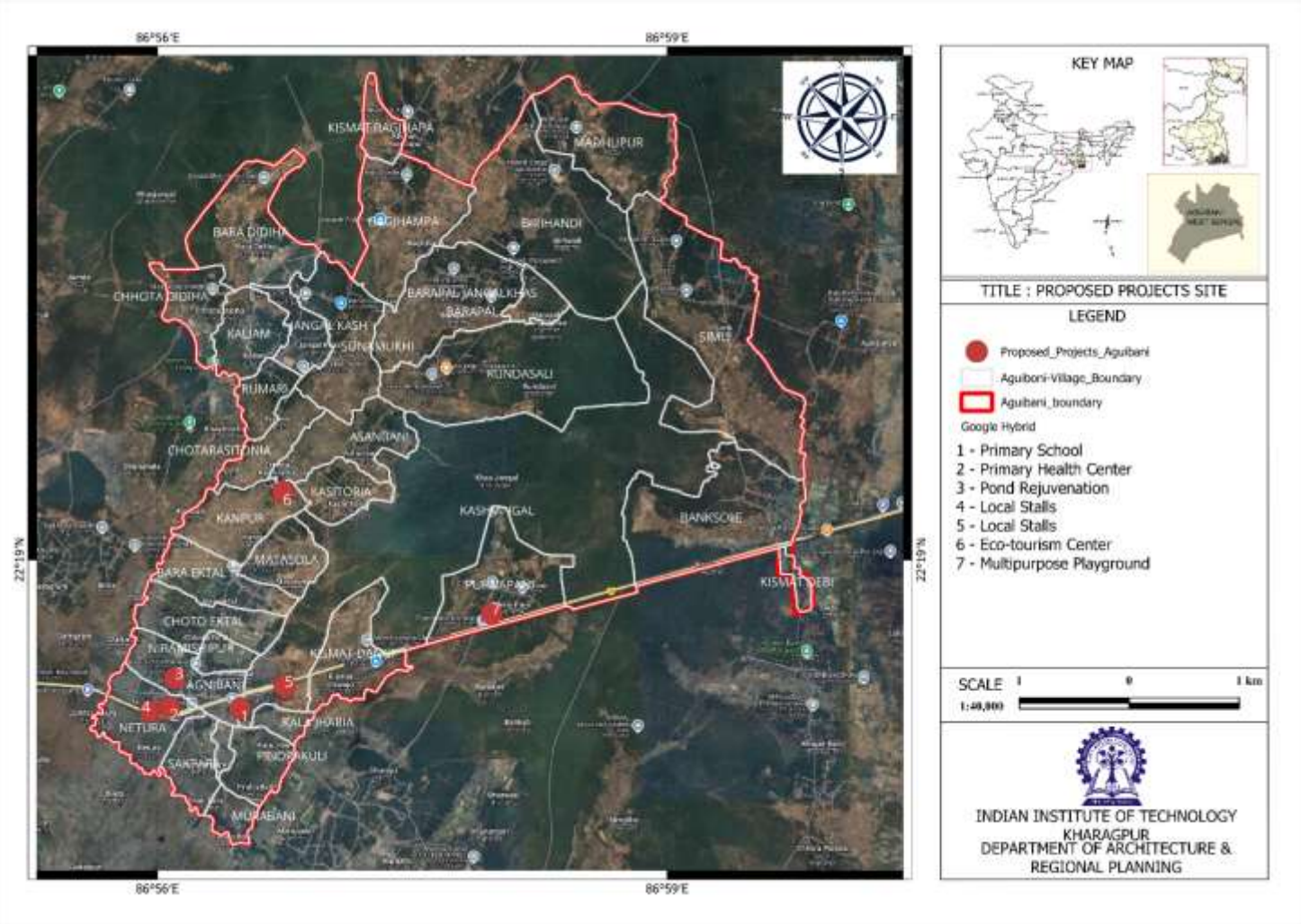

Figure 7.2 Proposed Project Location

Proposed suitable sites for the proposed projects are shown in the figure shown above. GP level projects are Ecotourism center, Multipurpose Playground and Solar streetlights.

Local level projects are Primary school, Primary Health Center, Pond Rejuvenation and Local Stalls.

8. Development Themes, Modules and Detailed Proposals Identification

Infrastructure Module

- Upgradation of internal village roads and construction of footpaths in Bhagjhapa, Kismat Bhagjhapa, and Murabani for better connectivity.
- Installation of piped water supply systems and provide household water tap connections, especially in low-access tribal hamlets.
- Development of decentralized wastewater treatment system (DEWATS) and stabilization ponds (~0.87 MLD) for safe greywater disposal.
- Construction of solid waste segregation and collection centers (~100-150 sq.m), equipped with bins and balers.
- Setting up household-level greywater reuse systems for irrigation, especially in Bara Didiha and Murabani.
- Establishment of NADEP composting units (to process 1.16 TPD biodegradable waste) using ~0.014 ha community land.
- Construction and repair of household toilets and kutcha to pucca house conversions under PMAY.
- Periodic desilting and maintenance of drains, ponds, and DEWATS to ensure effective stormwater and greywater management.

Beautification / Place Making

- Beautification of weekly haats with shaded stalls, drinking water facilities, and solid waste bins.
- Creation of community green open spaces with seating, plantations, and shaded areas near ICDS centers and schools.
- Village wall painting drives, showcasing tribal art, local culture, and awareness on government schemes and SDGs.
- Roadside tree plantations using native and flowering species in all villages, especially near temples and community halls.
- Beautification and bund development of community ponds, with benches, pathways, and signage.
- Development of herbal gardens and school kitchen gardens to enhance local nutrition and aesthetics.

Preserving Heritage and Culture / Tourism

- Conservation and improvement of religious structures like Maa Sitala Mandir, Kalidebi Mandir, Maharudra Mandir, and Hari Mandir across Aguibani, Chhota Didiha, Sonamui, Simli, Purna Pani, and other villages.
- Formal mapping of cultural assets like Adibasi Sidhu Kanhu Club, Adarsha Adibasi Club, and temple premises with basic upgrades (lighting, signage, public sanitation).
- Annual organization and promotion of tribal and religious festivals such as Durgapuja Mela at Birhandi and Sitala Puja as cultural tourism events.
- Development of an Eco-Tourism Center with nature trails, cultural exhibits, eco-friendly accommodations, and tribal food/craft stalls.
- Establishment of a Cultural Resource Center with exhibition space, tribal library, and performance area to promote Santali culture and folklore.
- Community Event Grounds for local fairs and festivals, including facilities for food stalls and cultural performances.
- Development of existing playgrounds in Chhota Didiha, Bara Didiha, and Kumari for sports tourism and recreation.
- Setup of handicraft workshops and sales outlets for artisans in the GP to preserve traditional crafts and generate income.

Integrating Disaster Preparedness and Resilience

- Installation of solar-powered public announcement and emergency alert systems in tribal and remote habitations.
- Construction of raised handpumps and deep borewells in flood-prone areas for resilient drinking water supply.
- Formation of SHG-based disaster response teams and training in first aid, flood safety, and early response.
- Regular mock drills and disaster awareness sessions using multilingual communication materials.
- Implementation of trench systems and protective fencing in forest-fringe areas to manage human-animal conflict.
- Distribution of disaster safety kits and placement of early warning signage in key hazard-prone locations.
- School-level climate change awareness and heatwave safety programs for students and teachers.

Clean Energy Adaptation

- Installation of solar-powered street lights in dark zones across all revenue villages.
- Expansion of solar irrigation pumps for farmers to reduce cost and dependency on grid power.
- Distribution of solar lanterns and clean cookstoves to improve indoor air quality in tribal households.
- Rooftop solar installations in government buildings (schools, health sub-centers, GP office) to ensure energy self-sufficiency.
- Development of solar-powered cold storage units for perishable goods and small-scale agricultural produce.
- Promotion of solar dryers for spices and local crops (e.g., turmeric, cashew) to add value and reduce spoilage.

ICT Initiatives

- Establishment of digital learning centers with Wi-Fi, tablets, and educational software for youth and women.
- Smart classrooms and e-learning modules in primary and secondary schools in Aguibani GP.
- Development of a Gram Panchayat mobile app to disseminate information on government schemes, services, and emergency alerts.
- Digitization of public records including birth/death registers, pension lists, and property tax rolls.
- Training for SHGs and youth on e-governance, digital payments, and social media awareness.
- Online dashboards for monitoring GP-level schemes, infrastructure projects, and SDG indicators.
- Promotion of interactive citizen engagement platforms like digital notice boards and grievance redress kiosks at the GP office.

Suggested List of Proposals are divided under 6 sectors from 2026 to 2036: (For detailed list of projects and finance refer to section 10.1 Financial Phasing Sectorwise.

Infrastructure Projects (IP)	Beautification & Public Spaces (B&PS)	Heritage, Cultural and Eco-tourism (HCET)	Disaster Preparedness & Climate Resilience (DR&CR)	Clean Energy Projects (CEP)	Employment Support (ES)
• Expansion of piped water supply network • Internal village road strengthening & widening • Footpath & culverts • Open and closed drainage systems • Deep borewells and water storage tanks • Community sanitation units and toilets • Repair & maintenance of **schools**, ICDS, and **GP** office • **PHC, Primary School** • Multi-village water distribution system	• **Village entry gates** and wall painting campaigns • **Pond rejuvenation** with benches, kiosks, and railing • Landscaping near temples and ponds • Development of eco-walls in public parks • Greening of community centers and tree plantations • **Multipurpose Playground**	• Renovation of Sitala Mandirs and tribal cultural clubs • Creation of cultural maps and tribal heritage documentation • Annual festival promotion (e.g., Birhandi Mela, Sitala Puja) • Planning and execution of the **Eco-Tourism Center** in Kanpur • Tribal Cultural Resource Centre and folk-art exhibitions • Heritage trail linking temples and tribal landmarks	• Solar-powered emergency alert systems • Fire safety training for SHGs and youth • Hazard risk signage and simulation drills • Stocking of emergency kits and mobile health vans • Rainwater harvesting structures in schools and ICDS • Solar fencing around forest-adjacent villages	• LED solar-powered street lighting across GP • Rooftop solar panels for GP buildings, community halls, and Anganwadi's • Solar microgrid setup for clusters • Biogas units (Phase 1 & 2) • Solar-powered irrigation pumps and dryers • Community solar kitchens and solar freezer units • Solar-powered bus shelters	• Local Products **Stalls, & fair area** • **Mobile Herbal Oil Extraction Units** • Forest Produce Aggregation & **Branding Hub** • **Display Boards at NH49**

ICT Initiatives (ICT)
• Digital literacy training • Smart classrooms • E-governance kiosks, grievance redressal & Citizen app for reporting & real-time tracking • GP website & E-library • GIS-based asset & hazard mapping

Suggested Projects which can be initiated in 2026 are:

Sr. N	Infrastructure Module	Beautification / Place Making	Preserving Heritage and Culture, Tourism	Integrating disaster preparedness and resilience	Clean Energy Adaptation	ICT Initiatives
1	Initiate piped water supply project (Phase 1)	Develop village entry gates (Sonamui, Simli)	Install basic signage at religious temples	Install solar-powered street lights (pilot)	Solar streetlights in key public areas	Digital literacy training (youth, SHGs)
2	Internal village road strengthening (Sonamui, Bara Didiha)	Create seating areas at pond edges	Begin documentation of tribal cultural assets	Awareness campaign on climate hazards	Solar panel setup for GP building (pilot)	Setup basic e-governance info kiosk

Suggested Projects which can be initiated in 2027 are:

Sr.N	Infrastructure Module	Beautification/ Place Making	Preserving Heritage and Culture, Tourism	Integrating disaster preparedness and resilience	Clean Energy Adaptation	ICT Initiatives
1	Continue piped water supply network (Phase 2)	Beautification of ponds (Simli, Kumari)	Inventory tribal practices, audio-visual content	Disaster info boards	Solar pumps for agricultural use (pilot)	Digital grievance redressal kiosk (GP office)
2	Renovation of primary school buildings	Wall murals depicting village culture	Awareness workshops on tribal heritage	Disaster info boards in public locations	Expand solar street lighting	Awareness drives GP portal usage

Suggested Projects which can be initiated in 2028 are:

Sr.N	Infrastructure Module	Beautification/ Place Making	Preserving Heritage and Culture, Tourism	Integrating disaster preparedness and resilience	Clean Energy Adaptation	ICT Initiatives
1	Construct open drains (Phase 1 - high-density hamlets)	Village wall painting around schools	Host a local cultural festival (Baraektal)	Train SHGs in first-aid	Expand solar lighting in low-access villages	ICT curriculum support in schools
2	School sanitation unit upgrades	Pathways near temples and waterbodies	Promotion of Durgapuja Mela as a rural fair	Train SHGs in rescue operations	Rooftop solar in community halls	Smart classroom setup (pilot)

Suggested Projects which can be initiated in 2029 are:

Sr.N	Infrastructure Module	Beautification/ Place Making	Preserving Heritage and Culture, Tourism	Integrating disaster preparedness and resilience	Clean Energy Adaptation	ICT Initiatives
1	Internal roads to tribal villages (e.g., Kumari)	Develop multipurpose playground in Purna Pani	Renovate Sitala Mandirs (Sonamui, Chhota Didiha)	Train youth taskforce in each ward	Solar irrigation system (Phase 1)	Panchayat capacity building on digital systems
2	Water storage tanks in hill-side areas	Entry signage with tribal motifs	Cultural map creation and distribution	Stock emergency supplies in schools/ICDS	Maintenance training for solar assets	Village info boards with QR code access

Suggested Projects which can be initiated in 2030 are:

Sr. N	Infrastructure Module	Beautification/ Place Making	Preserving Heritage and Culture, Tourism	Integrating disaster preparedness and resilience	Clean Energy Adaptation	ICT Initiatives
1	Expand household tap water connections (Phase 3)	Landscaping around key temples and ponds	Planning for Eco-Tourism Center (Kanpur)	Training on animal conflict management	Solar microgrid for GP office and school cluster	Public Wi-Fi zones in school and library
2	Culvert/bridge construction on seasonal streams	Painting of heritage murals	Community cultural calendar preparation	Install hazard risk signage	Expand solar panels in anganwadis	GP website and document archive system

Suggested Projects which can be initiated in 2031 are:

Sr.N	Infrastructure Module	Beautification/ Place Making	Preserving Heritage and Culture, Tourism	Integrating disaster preparedness and resilience	Clean Energy Adaptation	ICT Initiatives
1	Expansion of drain network (Phase 2)	Greening of community centers	Begin construction of Eco-Tourism Center (Phase 1)	Fire safety training for SHGs and youth	Solar lighting in all community toilets	Digital monitoring of services via GP dashboard
2	Repair & maintenance of school and ICDS buildings	Tree plantation in vacant public spaces	Construction of Tribal Cultural Resource Center	Awareness on heatwave and health safety	Pilot biogas plant in village cluster	Capacity building for PRI on digital systems

Suggested Projects which can be initiated in 2032 are:

Sr.N	Infrastructure Module	Beautification/ Place Making	Preserving Heritage and Culture, Tourism	Clean Energy Adaptation	ICT Initiatives
1	Strengthening village link roads to health centers	Beautification of cultural performance spaces	Completion of Eco-Tourism Center (Phase 2)	Household-level solar rooftop drive (Phase 1)	App-based citizen reporting system (pilot)
2	Construction of small market sheds in weekly haats	Solar-powered decorative lighting	Promotion of tribal cuisine and handicrafts	Solar fencing in forest-adjacent settlements	GIS-based asset inventory of GP infrastructure

Suggested Projects which can be initiated in 2033 are:

Sr.N	Infrastructure Module	Beautification/ Place Making	Preserving Heritage and Culture, Tourism	Integrating disaster preparedness and resilience	Clean Energy Adaptation	ICT Initiatives
1	Road widening and pedestrian-friendly walkways	Public seating and shaded resting places	Annual fair/festival promotion (Birhandi Mela)	Earthquake safety awareness workshops	Solar dryer units for agri produce (pilot)	Gram Panchayat mobile service delivery unit
2	Installation of deep borewells in water-stressed areas	Eco-wall structures in public parks	Capacity building of tribal artisans	GIS-based hazard mapping	Phase 2: Biogas units in secondary villages	Digital census and survey tool integration

Suggested Projects which can be initiated in 2034 are:

Sr.N	Infrastructure Module	Beautification/ Place Making	Preserving Heritage and Culture, Tourism	Integrating disaster preparedness and resilience	Clean Energy Adaptation	ICT Initiatives
1	Rainwater harvesting tanks in schools and ICDS	Riverfront/pond-side aesthetic improvement	Organize tribal folk art exhibitions	Emergency simulation drills in key sites	Solar freezer units for perishable goods	Real-time grievance tracking via mobile app
2	Multi-village water storage cum distribution system	Beautify approach roads to religious centers	Host inter-GP tribal cultural exchange programs	Mobile health van with emergency kits	Solar powered bus shelters (pilot)	E-library extension for youth and schools

Suggested Projects which can be initiated in 2035 are:

Sr. N	Infrastructure Module	Beautification / Place Making	Preserving Heritage and Culture, Tourism	Integrating disaster preparedness and resilience	Clean Energy Adaptation	ICT Initiatives
1	Final phase of water network upgrades	Beautification of GP office complex	Maintenance and marketing of eco-tourism zone	Maintenance of emergency kits and shelters	Establish decentralized solar power units	Integration with district-level e-governance
2	Annual repair & audit of infrastructure systems	Create art installation zones using local crafts	Launch a heritage trail connecting temples and tribal clubs	Digital documentation of GP disaster action plan	Expand community solar kitchen pilot	Online dashboard for all GP schemes and works

9. Financing Strategies and Resource Planning

PRIMARY SCHOOL BUDGET					
ABSTRACT OF COST					
S.No.	**DESCRIPTION OF ITEMS**	**UNIT**	**Qty.**	**Rate**	**AMOUNT IN LACS**
1	Civil Work	sqm	790	16000	**126.4**
2	Electrical	Rs		12.50%	15.80
3	Plumbing	Rs		5%	**6.32**

4	Site Development & external lighting			5%	6.32
				TOTAL	**154.84**
				Contingency(1%)	1.55
				G. TOTAL	**156.39**

DEVELOPMENT OF PHC					
AT MOKRAMPUR, PASCHIM MEDINIPUR					
ABSTRACT OF COST					
S.No.	**DESCRIPTION OF ITEMS**	**UNIT**	**Qty.**	**Rate**	**AMOUNT IN LACS**
1	Civil Work	sqm	760	16000	**121.6**
2	Electrical	Rs		12.50%	15.20
3	Plumbing	Rs		5%	**6.08**
4	Site Development & external lighting			5%	6.08
5	Medical Equipments				10
				TOTAL	**158.96**
				Contingency(1%)	1.59
				G. TOTAL	**160.55**

POND REJUVENATION					
AT MOKRAMPUR, PASCHIM MEDINIPUR					
ABSTRACT OF COST					
S.No.	**DESCRIPTION OF ITEMS**	**UNIT**	**Qty.**	**Rate**	**AMOUNT IN LACS**
1	Ceaning of pond	sqm	3000	171	**5.13**
2	Benches	Rs	10	100000	10.00
3	MS Railing around pond	Kg	342	130	**0.4446**
4	Kiosks/stall	nos	4	2100000	84
5	Site development & external electrification	As per detail			1.2
				TOTAL	**25.17**
				Contingency(1%)	0.25
				G. TOTAL	**25.43**

PROJECTS	**COST**
PRIMARY SCHOOL BUDGET	156.39
DEVELOPMENT OF PHC	160.55
POND REJUVENATION	25.43
TOTAL COST	**342.36**

9.1. Phasewise Financial Plan

Total Finance: Phase 1 (in Lakhs):

Table 9-1 Financial Plan (Phase 1)

	Sr. No.	Projects	Unit cost	Unit	Requirement	Total Cost	Total Cost + Contigency	Total Cost in lakhs
1 (2026)	1	Initiate the piped water supply project and door-to-door connection	500,000	per km	5	2500000	2750000	**27.5**
			15,000	per HH	1000	15000000	16500000	**165**
	2	Develop village entry gates	1100000	per gate	2	2200000	2420000	**24.2**
	3	Install basic signage at religious sites	6000	Per signage	25	150000	165000	**1.65**
	4	Install solar-powered streetlights	12000	per light	90	1080000	1188000	**11.88**
	5	Digital literacy training (youth, SHGs).	665000	per center	1	665000	731500	**7.315**
2 (2026)	6	Internal village road strengthening (Sonamui, Bara Didiha).	1500000	per km	3	4500000	4950000	**49.5**
	7	Create seating areas at pond edges.	6000	per bench	70	420000	462000	**4.62**
	8	Begin documentation of tribal cultural assets	545000		1	545000	599500	**5.995**
	9	Awareness campaign on climate hazards.	75000	75000	1	75000	82500	**0.825**
	10	Solar panel setup for GP building (pilot)	50000	per kW	30	1500000	1650000	**16.5**
	11	Set up basic e-governance info kiosk	125000	per unit	3	375000	412500	**4.125**
Total Finance: Phase 1 (in Lakhs)								**319.1**

Total Finance: Phase 2 (in Lakhs):

Table 9-2 Financial Plan (Phase 2)

	Sr. No.	Projects	Unit cost	Unit	Requirement	Total Cost	Total Cost + Contigency	Total Cost in lakhs
3 (2027)	12	Piped water supply project (Phase 2) and door to door connection	500,000	per km	5	2500000	2750000	**27.5**
			15,000	per HH	1546	23190000	25509000	**255.09**
	13	Beautification of ponds (Simli, Kumari)	550000	per pond	4	2200000	2420000	**24.2**
	14	Inventory tribal practices, audiovisual content	100000		1	100000	110000	**1.1**
	15	Solar pumps for agricultural use (pilot)	461600	Per pump	5	2308000	2750000	**27.5**
	16	Digital grievance redressal kiosk (GP office)	321000	per unit	4	1284000	1412400	**14.124**
4 (2027)	17	Renovation of primary school buildings (Price may change as per renovation req.)	600000	per unit	1	600000	660000	**6.6**
	18	Wall murals depicting village culture	60000	per mural	5	300000	330000	**3.3**
	19	Awareness workshops on tribal heritage	60000	per workshop	1	60000	66000	**0.66**
	20	Disaster info boards in public locations.	7000	Per signage	25	175000	2750000	**27.5**
	21	Expand solar street lighting	12000	per light	90	1080000	1188000	**11.88**
	22	Awareness drives GP portal usage	60000	60000	1	60000	66000	**0.66**
Total Finance: Phase 2 (in Lakhs)								**400.1**

Total Finance: Phase 3 (in Lakhs):

Table 9-3 Financial Plan (Phase 3)

	Sr. No.	Projects	Unit cost	Unit	Requirement	Total Cost	Total Cost + Contigency	Total Cost in lakhs
5(2028)	23	Construct open drains (Phase 1 - high-density hamlets)	416000	per 100 m	5	2080000	2288000	**22.88**
	24	Village wall painting around schools	60000	per painting	10	600000	660000	**6.6**
	25	Host local cultural festival (Baraektal)				200000	220000	**2.2**
	26	Train SHGs in first-aid & rescue operations	60000			60000	66000	**0.66**
	27	Expand solar lighting in low-access villages	12000	per light	30	360000	396000	**3.96**
	28	ICT curriculum support in schools	100000			100000	110000	**1.1**
6(2028)	29	School sanitation unit upgrades	1000000			1000000	1100000	**11**
	30	Pathways near temples and waterbodies	400	Per Sq. Mt.	3000	1200000	1320000	**13.2**
	31	Promotion of Durgapuja Mela as a rural fair	200000		1	200000	220000	**2.2**
	32	Rooftop solar in community halls	50000	per kW	30	1500000	1650000	**16.5**
	33	Smart classroom setup (pilot)	800000	per class room	2	1600000	1760000	**17.6**
Total Finance: Phase 3 (in Lakhs)								**97.9**

Total Finance: Phase 4 (in Lakhs):

Table 9-4 Financial Plan (Phase 4)

	Sr. No.	Projects	Unit cost	Unit	Requirement	Total Cost	Total Cost + Contigency	Total Cost in lakhs
7 (2029)	34	Internal roads to tribal villages (e.g., Kumari)	1500000	per km	0.5	750000	825000	**8.25**
	35	Develop multipurpose playground in Purna Pani	2750	Per Sq. Mt.	500	1375000	1512500	**15.125**
	36	Renovate Sitala Mandirs (Sonamui, Chhota Didiha) (Price may change as per design and renovation)	500000	per temple	2	1000000	1100000	**11**
	37	Train youth taskforce in each ward	20000	per ward	9	180000	198000	**1.98**
	38	Solar irrigation system (Phase 1)	700000	per unit	1	700000	770000	**7.7**
	39	Panchayat capacity building on digital systems	510000	per building	1	510000	561000	**5.61**
8 (2029)	40	Water storage tanks in hill side areas	20	per ltr.	10000	200000	220000	**2.2**
	41	Entry signage with tribal motifs	5000	per signages	10	50000	55000	**0.55**
	42	Cultural map creation and distribution	20000			20000	22000	**0.22**
	43	Stock emergency supplies in schools/ICDS.	15000	per unit	1	15000	16500	**0.165**
	44	Maintenance training for solar assets	20000	per ward	9	180000	198000	**1.98**
	45	Village info boards with QR code access	5000	per boards	10	50000	55000	**0.55**
Total Finance: Phase 4 (in Lakhs)								**55.33**

Total Finance: Phase 5 (in Lakhs):

Table 9-5 Financial Plan (Phase 5)

	Sr. No.	Projects	Unit cost	Unit	Requirement	Total Cost	Total Cost + Contigency	Total Cost in lakhs
9 (2030)	46	**Expand household tap water connections (Phase 3)**	500,000	per km	5	2500000	2750000	**27.5**
			15,000	per HH	1000	15000000	16500000	**165**
	47	**Landscaping around key temples and ponds** (Price may change as per design)	38000	per 1000 sq.ft.	5	190000	209000	**2.09**
	48	**Planning for Eco Tourism Center (Kanpur)** (Price may change as per design)					2500000	**25**
	49	**Training on animal conflict management**	20000	per training	1	20000	22000	**0.22**
	50	**Solar microgrid for GP office and school cluster**	600000	per 4KW	1	600000	660000	**6.6**
	51	**Public Wi-Fi zones in school and library**	16000	per access point	5	80000	88000	**0.88**
10 (2030)	52	**Culvert/bridge construction on seasonal streams**	600000	per bridge	2	1200000	1320000	**13.2**
	53	**Painting of heritage murals**	5000	per painting	10	50000	55000	**0.55**
	54	**Community cultural calendar preparation**	5000		1	5000	5500	**0.055**
	55	**Install hazard risk signage.**	5000	per painting	10	50000	55000	**0.55**
	56	**Expand solar panels in anganwadis**	50000	per kW	5	250000	275000	**2.75**
	57	**GP website and document archive system**	60000		1	60000	66000	**0.66**
Total Finance: Phase 5 (in Lakhs)								**245.1**

Total Finance: Phase 6 (in Lakhs):

Table 9-6 Financial Plan (Phase 6)

	Sr. No.	Projects	Unit cost	Unit	Requirement	Total Cost	Total Cost + Contigency	Total Cost in lakhs
11 (2031)	58	**Expansion of drain network (Phase 2)**	416000	per 100 m	5	2080000	2288000	**22.88**
	59	**Greening of community centres**	38000	per 1000 sq.ft.	2	76000	83600	**0.836**
	60	**Begin construction of Eco Tourism Center (Phase 1)** (Price may change as per design)						**75**
	61	**Fire safety training for SHGs and youth**	50000	per session	4	200000	220000	**2.2**
	62	**Solar lighting in all community toilets**	8000	per light	20	160000	176000	**1.76**
	63	**Digital monitoring of services via GP dashboard**	500000		1	500000	550000	**5.5**
12 (2031)	64	**Repair & maintenance of school and ICDS buildings**	500000	per building	2	1000000	1100000	**11**
	65	**Tree plantation in vacant public spaces**	35000	per 1000 sq.ft.	2	70000	77000	**0.77**
	66	**Construction of Tribal Cultural Resource Center** (Price may change as per design)	5000000		1	5000000	5500000	**55**
	67	**Awareness on heatwave and health safety.**	60000	60000	1	60000	66000	**0.66**
	68	**Pilot biogas plant in village cluster**	922000	per plant ($30m^3$/day)	1	922000	1014200	**10.142**
	69	**Capacity building for PRI on digital systems**	510000	per building	1	510000	561000	**5.61**
Total Finance: Phase 6 (in Lakhs)								**191.4**

Total Finance: Phase 7 (in Lakhs):

Table 9-7 Financial Plan (Phase 7)

	Sr. No.	Projects	Unit cost	Unit	Requirement	Total Cost	Total Cost + Contingency	Total Cost in lakhs
13 (2032)	70	**Strengthening village link roads to health centers**	1500000	per km	1	1500000	1650000	**16.5**
	71	**Beautification of cultural performance spaces**	60000		1	60000	66000	**0.66**
	72	**Completion of Eco Tourism Center (Phase 2)** (Price may change as per design)					0	**75**
	73	**Household level solar rooftop drive (Phase 1)**	85000	per 1 kW panel	50	4250000	4675000	**46.75**
	74	**App-based citizen reporting system (pilot)**	1000000		1	1000000	1100000	**11**
14 (2032)	75	**Construction of small market sheds in weekly haats**	60000	per shed	10	600000	660000	**6.6**
	76	**Solar powered decorative lighting**	8000	per light	20	160000	176000	**1.76**
	77	**Promotion of tribal cuisine and handicrafts**	200000		1	200000	220000	**2.2**
	78	**Solar fencing in forest adjacent settlements**	240000	per 1 km	6	1440000	1584000	**15.84**
	79	**GIS-based asset inventory of GP infrastructure**	100000		1	100000	110000	**1.1**
Total Finance: Phase 7 (in Lakhs)								**177.4**

Total Finance: Phase 8 (in Lakhs):

Table 9-8 Financial Plan (Phase 8)

	Sr. No.	Projects	Unit cost	Unit	Requirement	Total Cost	Total Cost + Contigency	Total Cost in lakhs
15 (2033)	80	Road widening and pedestrian friendly walkways	400	per sqm	8000	3200000	3520000	**35.2**
	81	Public seating and shaded resting places	120000	per gaxebo	10	1200000	1320000	**13.2**
	82	Annual fair/festival promotion (Birhandi Mela)	200000		1	200000	220000	**2.2**
	83	Earthquake safety awareness workshops	60000	per workshop	1	60000	66000	**0.66**
	84	Solar dryer units for agri produce (pilot)	426000	per ton	2	852000	937200	**9.372**
	85	Gram Panchayat mobile service delivery unit	700000	per mobile van	2	1400000	1540000	**15.4**
16 (2033)	86	Installation of deep borewells in water stressed areas	1100000	per 250m deep	5	5500000	6050000	**60.5**
	87	Eco-wall structures in public parks	1650	per sq.ft.	800	1320000	1452000	**14.52**
	88	Capacity building of tribal artisans	875000			875000	962500	**9.625**
	89	GIS-based hazard mapping.	100000		1	100000	110000	**1.1**
	90	Phase 2: Biogas units in secondary villages	922000	per plant ($30m^3$/day)	1	922000	1014200	**10.142**
	91	Digital census and survey tool integration	1080000			1080000	1188000	**11.88**
Total Finance: Phase 8 (in Lakhs)								**183.8**

Total Finance: Phase 9 (in Lakhs):

Table 9-9 Financial Plan (Phase 9)

	Sr. No.	Projects	Unit cost	Unit	Requirement	Total Cost	Total Cost + Contigency	Total Cost in lakhs
17 (2034)	92	Rainwater harvesting tanks in schools and ICDS	70000	per building	3	210000	231000	2.31
	93	Riverfront/pond side aesthetic improvement (Price may change as per design)	100000		1	100000	110000	1.1
	94	Organize tribal folk art exhibitions	586000	per exhibition	1	586000	644600	6.446
	95	Emergency simulation drills in key sites	600000			600000	660000	6.6
	96	Solar freezer units for perishable goods	500000	per 500L freezer	1	500000	550000	5.5
	97	Real-time grievance tracking via mobile app	600000		1	600000	660000	6.6
18 (2034)	98	Multi-village water storage cum distribution system	900000		1	900000	990000	9.9
	99	Beautify approach roads to religious centers (Price may change as per design)	1000000		2	2000000	2200000	22
	100	Host inter GP tribal cultural exchange programs	586000	per program	1	586000	644600	6.446
	101	Mobile health van with emergency kits.	700000	per van	1	700000	770000	7.7
	102	Solar powered bus shelters (pilot)	500000	per shelter	2	1000000	1100000	11
	103	E-library extension for youth and schools	1000000	per unit	1	1000000	1100000	11
Total Finance: Phase 9 (in Lakhs)								**96.6**

Total Finance: Phase 10 (in Lakhs):

Table 9-10 Financial Plan (Phase 10)

	Sr. No.	Projects	Unit cost	Unit	Requirement	Total Cost	Total Cost + Contigency	Total Cost in lakhs
19 (2035)	104	**Final phase of water network upgrades** (price varies as per requirement)	500,000	per km	5	2500000	2750000	**27.5**
			15,000	per HH	1000	15000000	16500000	**165**
	105	**Beautification of GP office complex** (Price may change as per design)	1000000	per unit	1	1000000	1100000	**11**
	106	**Maintenance and marketing of eco-tourism zone**	500000			500000	550000	**5.5**
	107	**Maintenance of emergency kits and shelters**	350000			350000	385000	**3.85**
	108	**Establish decentralized solar power units**	500000	per unit	2	1000000	1100000	**11**
	109	**Integration with district level e-governance**	200000		1	200000	220000	**2.2**
20 (2035)	**110**	**Annual repair & audit of infrastructure systems**	500000		1	500000	550000	**5.5**
	111	**Create art installation zones using local crafts**	100000	per installation	5	500000	550000	**5.5**
	112	**Launch heritage trail connecting temples and tribal clubs** (Price may change as per design)	600000		1	600000	660000	**6.6**
	113	**Digital documentation of GP disaster action plan.**	300000		1	300000	330000	**3.3**
	114	**Expand community solar kitchen pilot**	150000	per unit	3	450000	495000	**4.95**
	115	**Online dashboard for all GP schemes and works**	300000		1	300000	330000	**3.3**
Total Finance: Phase 10 (in Lakhs)								**255.2**

9.2. Funding Schemes

Proposal-to-Scheme Mapping for 2026

Sr. No.	Proposal	Likely Funding Schemes
1	Initiate piped water supply project (Phase 1)	National Rural Drinking Water Programme - NRDWP, XV Finance Commission, NRDWP, 5th State Finance Commission
2	Internal village road strengthening	XV Finance Commission, 4th State Finance Commission, MGNREGA
3	Develop village entry gates	Own Funds, 5th State Finance Commission
4	Create seating areas at the pond edges	Own Funds, SBM, 5th State Finance Commission
5	Install basic signage at religious temples	ISGPP(Institutional Strengthening of Gram Panchayats Program), Own Funds
6	Begin documentation of tribal cultural assets	SAGY(Saansad Adarsh Gram Yojana), ISGPP, Own Funds
7	Install solar-powered street lights	XV Finance Commission, Own Funds
8	Solar streetlights in public areas	XV Finance Commission, Own Funds
9	Solar panel setup for the GP building	XV Finance Commission
10	Awareness campaign on climate hazards	Calamity Relief Fund, NRHM
11	Digital literacy training (SHGs, youth)	Rashtriya Gram Swaraj Abhiyan, XV Finance Commission
12	Set up basic e-governance info kiosk	XV Finance Commission, Own Funds

Proposal-to-Scheme Mapping for 2027

Sr.no.	Proposal	Likely Funding Schemes
1	Continue piped water supply network (Phase 2)	NRDWP, XV Finance Commission, Grant for Five Year Plan (WB)
2	Renovation of primary school buildings	Grant in Aid Establishment (WB), XV Finance Commission, Mid-Day Meal Scheme
3	Beautification of ponds (Simli, Kumari)	Swachh Bharat Mission, Own Funds, ISGPP
4	Wall murals depicting village culture	SAGY, Own Funds,
5	Inventory tribal practices, audio-visual content	SAGY, Rashtriya Gram Swaraj Abhiyan
10	Awareness workshops on tribal heritage	Rashtriya Gram Swaraj Abhiyan
6	Disaster info boards	Calamity Relief Fund, Rashtriya Gram Swaraj Abhiyan
7	Solar pumps for agricultural use (pilot)	RKVY, PM Krishi Sinchayi Yojana, Misc. GIA
8	Expand solar street lighting	XV Finance Commission, Clean Energy (Misc. GIA)
9	Digital grievance redressal kiosk	ISGPP, Rashtriya Gram Swaraj Abhiyan
11	Awareness drives GP portal usage	ISGPP, Rashtriya Gram Swaraj Abhiyan

Proposal-to-Scheme Mapping for 2028

Sr.no.	Proposal	Likely Funding Schemes
1	Construct open drains (Phase 1)	XV Finance Commission, Swachh Bharat Mission, MGNREGA
2	School sanitation unit upgrades	Swachh Bharat Mission, Mid-Day Meal Scheme, ICDS
3	Village wall painting around schools	SAGY, Own Funds
4	Pathways near temples and waterbodies	MGNREGA, Own Funds
5	Host a local cultural festival (Baraektal)	SAGY
6	Promotion of Durgapuja Mela as a rural fair	SAGY
7	Train SHGs in first aid	NRHM
8	Train SHGs in rescue operations	CALAMITY RELIEF FUND, NRHM
9	Expand solar lighting in low-access villages	XV Finance Commission, Clean Energy (Misc. GIA)
10	Rooftop solar in community halls	Clean Energy (Misc. GIA)
11	ICT curriculum support in schools	ISGPP
12	Smart classroom setup (pilot)	ISGPP

Proposal-to-Scheme Mapping for 2029

Sr.no.	Proposal	Likely Funding Schemes
1	Internal roads to tribal villages (e.g., Kumari)	MGNREGA, XV Finance Commission, 5th SFC
2	Water storage tanks in hill-side areas	CALAMITY RELIEF FUND, Grant for Five Year Plan (WB), NRDWP
3	Develop multipurpose playground in Purna Pani	Khelo India, 5th SFC
4	Entry signage with tribal motifs	ISGPP, SAGY, Own Funds
5	Renovate Sitala Mandirs (Sonamui, Chhota Didiha)	SAGY, Rashtriya Gram Swaraj Abhiyan
6	Cultural map creation and distribution	SAGY
7	Train youth taskforce in each ward	Rashtriya Gram Swaraj Abhiyan
8	Stock emergency supplies in schools/ICDS	ICDS, CALAMITY RELIEF FUND, NRHM
9	Solar irrigation system (Phase 1)	RKVY, PMKSY, XV Finance Commission
10	Maintenance training for solar assets	RKVY, Rashtriya Gram Swaraj Abhiyan
11	Panchayat capacity building on digital systems	ISGPP, Rashtriya Gram Swaraj Abhiyan
12	Village info boards with QR code access	Own Funds, ISGPP

Proposal-to-Scheme Mapping for 2030

Sr.no.	Proposal	Likely Funding Schemes
1	Expand household tap water connections (Phase 3)	NRDWP, XV Finance Commission, Grant for Five Year Plan (WB)
2	Culvert/bridge construction on seasonal streams	MGNREGA, 5th SFC, Prime Minister Gramin Awaas Yojana
3	Landscaping around key temples and ponds	ISGPP, Own Funds
4	Painting of heritage murals	SAGY, Own Funds
5	Planning for Eco-Tourism Center (Kanpur)	SAGY, National Rurban Mission, Grant for Five Year Plan (WB)
6	Community cultural calendar preparation	ISGPP
7	Training on animal conflict management	CALAMITY RELIEF FUND, NRHM
8	Install hazard risk signage	CALAMITY RELIEF FUND, ISGPP
9	Solar microgrid for GP office and school cluster	MNRE, XV Finance Commission, Clean Energy (Misc. GIA)
10	Expand solar panels in anganwadis	ICDS, Clean Energy (Misc. GIA), XV Finance Commission
11	Public Wi-Fi zones in school and library	Rashtriya Gram Swaraj Abhiyan, Digital India Programme

Proposal-to-Scheme Mapping for 2031

Sr.no.	Proposal	Likely Funding Schemes
1	Expansion of drain network (Phase 2)	MGNREGA, XV Finance Commission, Swachh Bharat Mission
2	Repair & maintenance of school and ICDS buildings	Grant In Aid Establishment (WB), ICDS, XV Finance Commission
3	Greening of community centers	Own Funds
4	Tree plantation in vacant public spaces	MGNREGA, CAMPA Fund, Swachh Bharat Mission
5	Begin construction of Eco-Tourism Center (Phase 1)	National Rurban Mission, SAGY, Grant for Five-Year Plan (WB)
6	Construction of Tribal Cultural Resource Center	SAGY, Grant In Aid (WB)
7	Fire safety training for SHGs and youth	CALAMITY RELIEF FUND, Rashtriya Gram Swaraj Abhiyan
8	Awareness on heatwave and health safety	NRHM, CALAMITY RELIEF FUND
9	Solar lighting in all community toilets	Swachh Bharat Mission, XV Finance Commission
10	Pilot biogas plant in village cluster	Clean Energy (Misc. GIA), XV Finance Commission
11	Digital monitoring of services via GP dashboard	ISGPP, Rashtriya Gram Swaraj Abhiyan
12	Capacity building for PRI on digital systems	ISGPP, Rashtriya Gram Swaraj Abhiyan

Proposal-to-Scheme Mapping for 2032

Sr.no.	Proposal	Likely Funding Schemes
1	Strengthening village link roads to health centers	XV Finance Commission, 5th SFC, MGNREGA
2	Construction of small market sheds in weekly haats	National Rurban Mission, XV Finance Commission, Own Funds
3	Beautification of cultural performance spaces	ISGPP
4	Solar-powered decorative lighting	Clean Energy (Misc. GIA), Own Funds, XV Finance Commission
5	Completion of Eco-Tourism Center (Phase 2)	National Rurban Mission, SAGY
6	Promotion of tribal cuisine and handicrafts	National Rural Livelihood Mission
7	Household-level solar rooftop drive (Phase 1)	MNRE, Clean Energy (Misc. GIA), XV Finance Commission
8	Solar fencing in forest-adjacent settlements	RKVY, Clean Energy (Misc. GIA), CALAMITY RELIEF FUND
9	App-based citizen reporting system (pilot)	Digital India Programme, Rashtriya Gram Swaraj Abhiyan
10	GIS-based asset inventory of GP infrastructure	ISGPP, Rashtriya Gram Swaraj Abhiyan

Proposal-to-Scheme Mapping for 2033

Sr.no.	Proposal	Likely Funding Schemes
1	Road widening and pedestrian-friendly walkways	XV Finance Commission, MGNREGA, 5th SFC
2	Installation of deep borewells in water-stressed areas	NRDWP, CALAMITY RELIEF FUND, XV Finance Commission
3	Public seating and shaded resting places	Own Funds, ISGPP
4	Eco-wall structures in public parks	Swachh Bharat Mission, ISGPP, Own Funds
5	Annual fair/festival promotion (Birhandi Mela)	SAGY
6	Capacity building of tribal artisans	National Rural Livelihood Mission
7	Earthquake safety awareness workshops	CALAMITY RELIEF FUND, Rashtriya Gram Swaraj Abhiyan
8	GIS-based hazard mapping	ISGPP, Rashtriya Gram Swaraj Abhiyan
9	Solar dryer units for agri produce (pilot)	RKVY, Clean Energy (Misc. GIA)
10	Phase 2: Biogas units in secondary villages	Clean Energy (Misc. GIA), XV Finance Commission
11	Gram Panchayat mobile service delivery unit	ISGPP, Rashtriya Gram Swaraj Abhiyan
12	Digital census and survey tool integration	ISGPP, Digital India Programme

Proposal-to-Scheme Mapping for 2034

Sr.no.	Proposal	Likely Funding Schemes
1	Rainwater harvesting tanks in schools and ICDS	Swachh Bharat Mission, NRDWP, ICDS
2	Multi-village water storage cum distribution system	NRDWP, Grant for Five Year Plan (WB), XV Finance Commission
3	Riverfront/pond-side aesthetic improvement	ISGPP, Own Funds, Swachh Bharat Mission
4	Beautify approach roads to religious centers	5th SFC, Own Funds, ISGPP
5	Organize tribal folk art exhibitions	SAGY, National Rurban Mission
6	Host inter-GP tribal cultural exchange programs	SAGY, Rashtriya Gram Swaraj Abhiyan
7	Emergency simulation drills in key sites	CALAMITY RELIEF FUND, NRHM
8	Mobile health van with emergency kits	NRHM, ICDS, CALAMITY RELIEF FUND
9	Solar freezer units for perishable goods	Clean Energy (Misc. GIA), MNRE
10	Solar powered bus shelters (pilot)	MNRE, XV Finance Commission
11	Real-time grievance tracking via mobile app	Digital India Programme, Rashtriya Gram Swaraj Abhiyan
12	E-library extension for youth and schools	Digital India Programme

Proposal-to-Scheme Mapping for 2035

Sr.no.	Proposal	Likely Funding Schemes
1	Final phase of water network upgrades	NRDWP, XV Finance Commission, 5th SFC
2	Annual repair & audit of infrastructure systems	Grant in Aid Establishment (WB), 5th/6th SFC
3	Beautification of GP office complex	ISGPP, Own Funds
4	Create art installation zones using local crafts	Own Funds
5	Maintenance and marketing of eco-tourism zone	SAGY, National Rurban Mission
6	Launch heritage trail connecting temples and tribal clubs	SAGY, ISGPP
7	Maintenance of emergency kits and shelters	CALAMITY RELIEF FUND, NRHM
8	Digital documentation of GP disaster action plan	Rashtriya Gram Swaraj Abhiyan, ISGPP
9	Establish decentralized solar power units	MNRE, Clean Energy (Misc. GIA)
10	Expand the community solar kitchen pilot	Clean Energy (Misc. GIA), XV Finance Commission
11	Integration with district-level e-governance	Rashtriya Gram Swaraj Abhiyan, Digital India Programme
12	An online dashboard for all GP schemes and work	ISGPP, Rash

10. Phasing, Action Plan and Implementation Strategies

10.1. Financial Phasing Sectorwise

Financial Phasing for Module-1: Infra Module (10 years)

Sector		Projects	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Approx. Finance Required (in lacs)		Funding Scheme
			1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr			
Infrastructure	Physical Infrastructure	Piped water supply project	(Initiate - High Density Hamlets) 25%	(High Density Hamlets) 50%	75%	100%					Expansion of HH connection (25%)	Expansion of HH connection (75%)									90%	Final Phase (100%)	676.59	994.99	National Rural Drinking Water Programme – NRDWP, XV Finance Commission, NRDWP, 9th State Finance Commission
			192.5		299.09						192.5										192.5				
		Construct open drains				(Initiate - High Density Hamlets) 25%	50%	75%					90%	Final Phase (100%)									45.8		XV Finance Commission, Swachh Bharat Mission, MGNREGA
						22.9							22.9												
		Water storage tanks in hill-side areas						(Initiate) 25%	50%	100%													2.2		Calamity Relief Fund, Grant for Five Year Plan (WB), NRDWP
		Installation of deep borewells in water-stressed areas														(Initiate) 25%	50%	100%					68.5		NRDWP, Calamity Relief Fund, XV Finance Commission
		Multi-village water storage cum distribution system																(Initiate) 25%	50%	100%			9.9		NRDWP, Grant for Five Year Plan (WB), XV Finance Commission
	Transport Infrastructure	Internal village road strengthening (Sonamui, Bara Didhe)	(Initiate) 50%	100%																			49.5	122.65	XV Finance Commission, 4th State Finance Commission, MGNREGA
		Internal roads to tribal villages (e.g., Kumari)						(Initiate) 25%	50%	100%													8.25		XV Finance Commission, 4th State Finance Commission, MGNREGA
		Culvert/bridge construction on seasonal streams								(Initiate) 25%	50%	100%											13.2		XV Finance Commission, 5th State Finance Commission, MGNREGA
		Strengthening village link roads to health centers												(Initiate) 25%	50%	100%							16.5		XV Finance Commission, 4th State Finance Commission, MGNREGA
		Road widening and pedestrian-friendly walkways														(Initiate) 25%	50%	100%					35.2		XV Finance Commission, 5th State Finance Commission, MGNREGA

Sector		Projects	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Approx. Finance Required (in lacs)		Funding Scheme
			1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr			
Infrastructure	Social Infrastructure	Renovation of primary school buildings		(Initiate) 25%	50%	100%																	6.6	354.51	Grant in Aid Establishment (WB), XV Finance Commission, Mid-Day Meal Scheme
		Primary School				(Initiate) 25%	50%	100%															156.4		Grant in Aid Establishment (WB), XV Finance Commission, Mid-Day Meal Scheme
		Primary Health Center						(Initiate) 25%	50%	100%													160.6		Grant in Aid Establishment (WB), XV Finance Commission, 5th State Finance Commission, MGNREGA
		School sanitation unit upgrades				(Initiate) 25%	50%	100%															11		Grant in Aid Establishment (WB), XV Finance Commission, 5th State Finance Commission, MGNREGA
		Repair & maintenance of school and ICDS buildings										(Initiate) 25%	50%	100%									11		Grant in Aid Establishment (WB), XV Finance Commission, 5th State Finance Commission, MGNREGA
		Construction of small market sheds in weekly haats												(Initiate) 25%	50%	100%							6.6		Grant in Aid Establishment (WB), XV Finance Commission, 5th State Finance Commission, MGNREGA
		Rainwater harvesting tanks in schools and ICDS																(Initiate) 25%	50%	100%			2.31		Grant in Aid Establishment (WB), XV Finance Commission, 5th State Finance Commission, MGNREGA

Financial Phasing for Module-2: Beautifecation and Public Spaces Module (10 years)

Sector	Projects	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Approx. Finance Required (in lacs)		Funding Scheme
		1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr			
Beautification & Public Spaces	Develop village entry gates	(Initiate) 50%	100%																			24.2	166.756	XV Finance Commission, 4th State Finance Commission, MGNREGA
	Pond Rejuvenation (Create seating areas at pond edges)	(Initiate) 50%	100%																			4.62		Own Funds, SBM, 5th State Finance Commission
	Pond Rejuvenation (Beautification of ponds)		(Initiate) 25%	50%	100%																	24.2		Swachh Bharat Mission, Own Funds, ISGPP
	Wall murals depicting village culture		(Initiate) 25%	50%	100%																	3.3		SAGY(Saansad Adarsh Gram Yojana), Own Funds,
	Village wall painting around schools				(Initiate) 25%	50%	100%															6.6		SAGY, Own Funds
	Pathways near temples and waterbodies				(Initiate) 25%	50%	100%															13.2		MGNREGA, Own Funds
	Develop multipurpose playground in Purna Pani						(Initiate) 25%	50%	100%													15.2		Khelo India, 5th SFC
	Entry signage with tribal motifs						(Initiate) 25%	50%	100%													0.55		ISGPP, SAGY, Own Funds
	Landscaping around key temples and ponds								(Initiate) 25%	50%	100%											2.09		ISGPP, SAGY, Own Funds
	Painting of heritage murals								(Initiate) 25%	50%	100%											0.55		SAGY, SAHAY (WB), Own Funds
	Greening of community centres										(Initiate) 25%	50%	100%									0.836		MGNREGA, XV Finance Commission, Swachh Bharat Mission
	Tree plantation in vacant public spaces										(Initiate) 25%	50%	100%									0.77		MGNREGA, CAMPA Fund, Swachh Bharat Mission
	Beautification of cultural performance spaces												(Initiate) 25%	50%	100%							0.66		ISGPP, XV Finance Commission, Own Funds
	Solar powered decorative lighting												(Initiate) 25%	50%	100%							0.75		Clean Energy (Misc. GIA), Own Funds, XV Finance Commission
	Public seating and shaded resting places														(Initiate) 25%	50%	100%					13.2		Own Funds, ISGPP, XV Finance Commission
	Eco-wall structures in public parks														(Initiate) 25%	50%	100%					14.52		Swachh Bharat Mission, ISGPP, Own Funds
	Riverfront/pond side aesthetic improvement																(Initiate) 25%	50%	100%			3		ISGPP, Own Funds, Swachh Bharat Mission
	Beautify approach roads to religious centers																(Initiate) 25%	50%	100%			22		5th SFC, Own Funds, ISGPP
	Beautification of GP office complex																		(Initiate) 25%	50%	100%	11		ISGPP, Own Funds, XV Finance Commission
	Create art installation zones using local crafts																		(Initiate) 25%	50%	100%	5.5		Own Funds

Financial Phasing for Module-3: Heritage, Cultural and Tourism Module (10 years)

Sector	Projects	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Approx. Finance Required (in lacs)		Funding Scheme
		1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr			
Heritage and Culture, Tourism	Install basic signage at religious sites	(Initiate) 50%	100%																			1.65	294.185	ISGPP(Institutional Streegthening of Gram Panchayats Program), Own Funds, Grant in Aid Establishment (West Bengal)
	Begin documentation of tribal cultural assets	(Initiate) 50%	100%																			6		SAGY(Saansad Adarsh Gram Yojana), ISGPP, Own Funds
	Inventory tribal practices, audio visual content		(Initiate) 25%	50%	100%																	1.1		SAGY, Rashtriya Gram Swaraj Abhiyan
	Awareness workshops on tribal heritage		(Initiate) 25%	50%	100%																	0.66		SAGY, Rashtriya Gram Swaraj Abhiyan
	Host local cultural festival (Baraekta)				(Initiate) 25%	50%	100%															2.2		SAGY, Own Funds
	Promotion of Durgapuja Mela as a rural fair				(Initiate) 25%	50%	100%															2.2		SAGY, Own Funds
	Renovate Sitala Mandirs (Sonamui, Chhota Didiha)						(Initiate) 25%	50%	100%													11		SAGY, Rashtriya Gram Swaraj Abhiyan
	Cultural map creation and distribution						(Initiate) 25%	50%	100%													0.22		SAGY, Own Funds
	Eco Tourism Center (Kanpur)									(Initiate)	10%	25%	50%	75%	100%							175		SAGY, National Rurban Mission, Grant for Five Year Plan (WB), XV Finance Commission, Own Funds
										25		75		75										
	Maintenance and marketing of eco-tourism zone																		(Initiate) 25%	50%	100%	5.5		SAGY, National Rurban Mission
	Community cultural calendar preparation								(Initiate) 25%	50%	100%											0.055		ISGPP, Own Funds
	Construction of Tribal Cultural Resource Center										(Initiate) 25%	50%	100%									55		SAGY, Grant in Aid (WB), XV Finance Commission, Own Funds
	Promotion of tribal cuisine and handicrafts												(Initiate) 25%	50%	100%							2.2		National Rural Livelihood Mission
	Annual fair/festival promotion (Birbandi Mela)														(Initiate) 25%	50%	100%					2.2		SAGY, Own Funds, SAHAY
	Capacity building of tribal artisans														(Initiate) 25%	50%	100%					9.6		National Rural Livelihood Mission, SAHAY (WB)
	Organize tribal folk art exhibitions																(Initiate) 25%	50%	100%			6.5		SAGY, National Rurban Mission
	Host inter GP tribal cultural exchange programs																(Initiate) 25%	50%	100%			6.5		SAGY, Rashtriya Gram Swaraj Abhiyan
	Launch heritage trail connecting temples and tribal clubs																		(Initiate) 25%	50%	100%	6.6		SAGY, ISGPP

Financial Phasing for Module-4: Disaster Preparedness and Climate Resilence Module (10 years)

Sector	Projects	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Approx. Finance Required (in lacs)		Funding Scheme
		1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr			
Disaster Preparedness & Climate Resilience	Awareness campaign on climate hazards	(Initiate) 50%	100%																			0.825	57.87	Calamity Relief Fund, NRHM
	Disaster info boards in public locations		(Initiate) 25%	50%	100%																	27.5		Calamity Relief Fund, Rashtriya Gram Swaraj Abhiyan
	Train SHGs in first-aid & rescue Operation				(Initiate) 25%	50%	100%															0.66		NRHM
	Train youth taskforce in each ward						(Initiate) 25%	50%	100%													1.98		Rashtriya Gram Swaraj Abhiyan
	Stock emergency supplies in schools/ICDS						(Initiate) 25%	50%	100%													0.165		ICDS, Calamity Relief Fund, NRHM
	Training on animal conflict management								(Initiate) 25%	50%	100%											0.22		Calamity Relief Fund, NRHM
	Install hazard risk signage								(Initiate) 25%	50%	100%											0.55		Calamity Relief Fund, ISGPP
	Fire safety training for SHGs and youth										(Initiate) 25%	50%	100%									2.2		Rashtriya Gram Swaraj Abhiyan, Calamity Relief Fund
	Awareness on heatwave and health safety										(Initiate) 25%	50%	100%									0.66		Calamity Relief Fund, NRHM
	Earthquake safety awareness workshops														(Initiate) 25%	50%	100%					0.66		Rashtriya Gram Swaraj Abhiyan, Calamity Relief Fund
	GIS-based hazard mapping														(Initiate) 25%	50%	100%					1.1		ISGPP, Rashtriya Gram Swaraj Abhiyan
	Emergency simulation drills in key sites																(Initiate) 25%	50%	100%			6.6		Calamity Relief Fund, NRHM
	Mobile health van with emergency kits																(Initiate) 25%	50%	100%			7.7		Calamity Relief Fund, NRHM, ICDS
	Maintenance of emergency kits and shelters																		(Initiate) 25%	50%	100%	3.85		Calamity Relief Fund, NRHM
	Digital documentation of GP disaster action plan																		(Initiate) 25%	50%	100%	3.3		Rashtriya Gram Swaraj Abhiyan, ISGPP

Financial Phasing for Module-5: Clean Energy Adaptation Module (10 years)

Sector	Projects	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Approx. Finance Required (in lacs)		Funding Scheme
		1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr			
Clean Energy Adaptation	Install solar-powered streetlights (Pilot)	(Initiate - Main Roads) 25%	50%	60%	75%	80% (Low access Villages)	100% (Low access Villages)															27.72	233.706	XV Finance Commission, Own Funds
		11.88		11.88		3.96																		
	Solar panel setup for GP building (pilot)	(Initiate) 50%	100%																			16.5		XV Finance Commission
	Solar pumps for agricultural use (pilot)		(Initiate) 25%	50%	100%																	27.5		RKVY, PM Krishi Sinchayi Yojana, Misc. GIA
	Rooftop solar in community halls				(Initiate) 25%	50%	100%															16.5		RKVY, PM Krishi Sinchayi Yojana, Misc. GIA
	Solar irrigation system						(Initiate) 25%	50%	100%													7.7		RKVY, PMKSY, XV Finance Commission
	Maintenance training for solar assets						(Initiate) 25%	50%	100%													1.98		RKVY, Rashtriya Gram Swaraj Abhiyan
	Solar microgrid for GP office and school cluster								(Initiate) 25%	50%	100%											6.6		MNRE, XV Finance Commission, Clean Energy (Misc. GIA)
	Expand solar panels in anganwadis								(Initiate) 25%	50%	100%											2.75		ICDS, Clean Energy (Misc. GIA), XV Finance Commission
	Solar lighting in all community toilets										(Initiate) 25%	50%	100%									1.76		Swachh Bharat Mission, XV Finance Commission
	Pilot biogas plant in village cluster										Initiate	(Initiate - Primary Villages) 25%	50%	60%	75%	80% (Secondary Villages)	100% (Secondary Villages)					20.284		Clean Energy (Misc. GIA), XV Finance Commission
												10.142		10.142										
	Household level solar rooftop drive												(Initiate) 25%	50%	100%							46.75		MNRE, Clean Energy (Misc. GIA), XV Finance Commission
	Solar fencing in forest adjacent settlements												(Initiate) 25%	50%	100%							15.84		RKVY, Clean Energy (Misc. GIA), CALAMITY RELIEF FUND
	Solar dryer units for agri produce (pilot)														(Initiate) 25%	50%	100%					9.372		RKVY, Clean Energy (Misc. GIA)
	Solar freezer units for perishable goods																(Initiate) 25%	50%	100%			5.5		Clean Energy (Misc. GIA), MNRE
	Solar powered bus shelters (pilot)																(Initiate) 25%	50%	100%			11		MNRE, XV Finance Commission
	Establish decentralized solar power units																		(Initiate) 25%	50%	100%	11		MNRE, Clean Energy (Misc. GIA)
	Expand community solar kitchen pilot																		(Initiate) 25%	50%	100%	4.95		Clean Energy (Misc. GIA), XV Finance Commission

Financial Phasing for Module-6: ICT Initiatives Module (10 years)

Sector	Projects	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Approx. Finance Required (in lacs)		Funding Scheme
		1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr			
ICT Initiatives	Digital literacy training (youth, SHGs).	(Initiate) 50%	100%																			7.315	126.214	Rashtriya Gram Swaraj Abhiyan, XV Finance Commission
	Setup basic e- governance info kiosk	(Initiate) 50%	100%																			4.125		Rashtriya Gram Swaraj Abhiyan, XV Finance Commission, Own Funds
	Digital grievance redressal kiosk (GP office)		(Initiate) 25%	50%	100%																	14.124		ISGPP, Rashtriya Gram Swaraj Abhiyan
	Awareness drives GP portal usage		(Initiate) 25%	50%	100%																	0.66		ISGPP, Rashtriya Gram Swaraj Abhiyan
	ICT curriculum support in schools				(Initiate) 25%	50%	100%															1.1		ISGPP, Rashtriya Gram Swaraj Abhiyan, XV Finance Commission, 5th State Finance Commission (WB)
	Smart classroom setup (pilot)				(Initiate) 25%	50%	100%															17.6		ISGPP, Own Fund
	Panchayat capacity building on digital systems						(Initiate) 25%	50%	100%													5.51		ISGPP, Rashtriya Gram Swaraj Abhiyan
	Village info boards with QR code access						(Initiate) 25%	50%	100%													0.55		Own Funds, ISGPP
	Public Wi-Fi zones in school and library								(Initiate) 25%	50%	100%											0.88		Rashtriya Gram Swaraj Abhiyan, Digital India Programme
	GP website and document archive system								(Initiate) 25%	50%	100%											0.66		Rashtriya Gram Swaraj Abhiyan (RGSA), XV Finance Commission, Own Funds, ISGPP
	Digital monitoring of services via GP dashboard										(Initiate) 25%	50%	100%									5.5		ISGPP, Rashtriya Gram Swaraj Abhiyan
	Capacity building for PRI on digital systems										(Initiate) 25%	50%	100%									5.61		ISGPP, Rashtriya Gram Swaraj Abhiyan
	App-based citizen reporting system (pilot)												(Initiate) 25%	50%	100%							11		Digital India Programme, Rashtriya Gram Swaraj Abhiyan
	GIS-based asset inventory of GP infrastructure												(Initiate) 25%	50%	100%							1.1		ISGPP, Rashtriya Gram Swaraj Abhiyan
	Gram Panchayat mobile service delivery unit														(Initiate) 25%	50%	100%					15.4		ISGPP, Rashtriya Gram Swaraj Abhiyan
	Digital census and survey tool integration														(Initiate) 25%	50%	100%					11.88		ISGPP, Digital India Programme
	Real-time grievance tracking via mobile app																(Initiate) 25%	50%	100%			6.6		Digital India Programme, Rashtriya Gram Swaraj Abhiyan
	E-library extension for youth and schools																(Initiate) 25%	50%	100%			11		Digital India Programme
	Integration with district level e-governance																		(Initiate) 25%	50%	100%	2.2		Rashtriya Gram Swaraj Abhiyan, Digital India Programme
	Online dashboard for all GP schemes and works																		(Initiate) 25%	50%	100%	3.3		ISGPP, Rash

Financial Phasing for Module-7: Employment Support Module (10 years)

Sector	Projects	2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		Approx. Finance Required (in lacs)		Funding Scheme
		1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr	1st Qtr	2nd Qtr			
Employment Support	Local Products Stalls, & fair area		(Initiate) 25%	50%	60%	75%	80%	100%														100	258.98	XV Finance Commission Own Fund, NABARD
	Mobile Herbal Oil Extraction Units	(Initiate) 50%	100%																			30		MGNREGA XV Finance Commission National Rural Livelihood Mission, CSIR Aroma Mission
	Forest Produce Aggregation & Branding Hub			(Initiate - Main Roads) 25%	50%	60%	75%	80%	100%													98.98		MGNREGA XV Finance Commission National Rural Livelihood Mission
	Display Boards at NH49 with QR Code				(Initiate) 25%	50%	100%															30		XV Finance Commission Own Fund, TRIFED (Tribal Cooperative Marketing Development Federation)

10.2. Annual Action Plan

Projects Taken Up Yearwise and required Financial Plan:

IP	B&PS	HCET	DP&CR	CEP	ES	ICT	2025-26 (in lacs)
Water Supply	Develop village entry gates	Install basic signage at religious sites	Awareness campaign on climate hazards	Install solar-powered streetlights (Pilot)	Mobile Herbal Oil Extraction Units	Digital literacy training (youth, SHGs).	
Internal village road strengthening	Create seating areas at pond edges	Begin documentation of tribal cultural assets		Solar panel setup for GP building (pilot)		Setup basic e-governance info kiosk	349.1
242	28.82	7.65	0.825	28.38	30	11.44	
IP	B&PS	HCET	DP&CR	CEP	ES	ICT	2026-27 (in lacs)
Water Supply	Beautification of Pond	Inventory tribal practices	Disaster info boards in public locations	Install solar-powered streetlights (Pilot)	Local Products Stalls, & fair area	Digital grievance redressal kiosk	
Renovation of primary school buildings	Wall murals depicting village culture	Awareness workshops on tribal heritage		Solar pumps for agricultural use (pilot)	Forest Produce Branding Hub	Awareness drives GP portal usage	499.6
305.69	27.50	1.76	27.50	39.38	82.99	14.78	
IP	B&PS	HCET	DP&CR	CEP	ES	ICT	2027-28 (in lacs)
Construct open drains	Village wall painting around schools	Host local cultural festival (Baraektal)	Train SHGs in first-aid & rescue Operation	Install solar-powered streetlights (Pilot)	Stalls and Branding Hub (Phase 2)	ICT curriculum support in schools	
Primary School & sanitation unit upgrade	Pathways near temples and waterbodies	Promotion of Durga mela		Rooftop solar in community halls	Display Boards at NH49 with QR Code	Smart classroom setup (pilot)	367.3
190.30	19.80	4.40	0.66	20.46	112.99	18.70	
IP	B&PS	HCET	DP&CR	CEP	ES	ICT	2028-29 (in lacs)
Water Storage Tanks & PHC	Multipurpose Ground	Renovate Sitala Mandir	Train youth taskforce in each ward	Solar irrigation system	Forest Produce Branding Hub	Panchayat Capacity Building on Digital S.	
Internal Road to tribal Villages	Entry signage with tribal motifs	Cultural map creation and distribution	Stock Emergency supplies	Maintenance training for solar assets		Village info boards with QR code access	249.0
171.05	15.75	11.22	2.15	9.68	32.99	6.16	
IP	B&PS	HCET	DP&CR	CEP	ES	ICT	2029-30 (in lacs)
Piped Water Supply	Landscaping around Ponds & Temples	Eco Tourism Center (Kanpur)	Training on animal conflict management	Solar microgrid for GP office and school cluster		Public Wi-Fi zones in school and library	
Culvert/bridge construction	Painting of heritage murals	Community cultural calendar preparation	Install hazard risk signage	Expand solar panels in anganwadis		GP website & document Archive	245.1
205.70	2.64	25.06	0.77	9.35		1.54	

IP	B&PS	HCET	DP&CR	CEP	ES	ICT	2030-31 (in lacs)
Construct open drains	Greening of community centres	Eco Tourism Center (Phase 2)	Fire safety training for SHGs and youth	Solar lighting in all community toilets	Employment Through Eco tourism Center	Digital Monitoring Services	
Repair & maintenance of school and ICDS	Tree plantation in vacant public spaces	Tribal Cultural resource Center	Awareness on heatwave and health safety	Pilot biogas plant in village cluster		Capacity building for PRI on digital systems	191.4
33.90	1.61	130.00	2.86	11.90		11.11	
IP	B&PS	HCET	DP&CR	CEP	ES	ICT	2031-32 (in lacs)
Strengthening village roads to health centers	Beautification of cultural performance spaces	Eco Tourism Center (Phase 3)		Biogad Plant (Phase 2)	Employment through Eco tourism Center	App-based citizen reporting system (pilot)	
Construction of small market sheds in haats	Solar powered decorative lighting	Promotion of tribal cuisine and handicrafts		HH solar rooftop & Solar Fencing near Forest		GIS-based asset inventory of GP infra.	181.5
23.10	1.42	77.20		67.66		12.10	
IP	B&PS	HCET	DP&CR	CEP	ES	ICT	2032-33 (in lacs)
Installation of deep borewell	Public seating and shaded resting places	Annual fair/festival promotion (Birhandi Mela)	Earthquake safety awareness workshops	Biogad Plant (Phase 3)	Employment through eco tourism center	Gram Panchayat mobile service delivery unit	
Road Widening and Walkways	Eco-wall structures in public parks	Capacity building of tribal artisans	GIS-based hazard mapping	Solar dryer units for agri produce (pilot)		Digital census and survey tool integration	178.7
95.70	27.72	11.80	1.76	14.44		27.28	
IP	B&PS	HCET	DP&CR	CEP	ES	ICT	2033-34 (in lacs)
Multi-village water storage & distribution	Riverfront/pond side aesthetic improvement	Organize tribal folk art exhibitions	Emergency simulation drills in key sites	Solar freezer units for perishable goods		Real-time grievance tracking via mobile app	
Rainwater harvesting tanks in schools & ICDS	Beautify approach roads to religious centers	Tribal Cultural Exchange Program	Mobile health van with emergency kits	Solar powered bus shelters (pilot)		E-library extension for youth and schools	98.6
12.21	25.00	13.00	14.30	16.50		17.60	
IP	B&PS	HCET	DP&CR	CEP	ES	ICT	2034-35 (in lacs)
Piped water supply project	Beautification of GP office complex	Maintenance and marketing of eco-tourism zone	Maintenance of emergency kits and shelters	Establish decentralized solar power units		Integration with district level e-governance	
	Create art installation zones using local crafts	Launch Heritage Trial	Digital documentation of GP disaster action plan	Expand community solar kitchen pilot		Online dashboard for all GP schemes and works	249.7
192.50	16.50	12.10	7.15	15.95		5.50	

10.4. Implementation Strategies:

- Projects that have low Capital and O&M Costs but can generate good revenue for the Panchayat are suggested to be prioritized for implementation.
- Options for PPP may be explored for projects to make them more feasible for the Panchayats and, at the same time, attractive for the Private Venture to invest in.
- Based on the Rural-Rural/Rural-Urban linkages, if some part of capital investment can be pooled in from neighboring Rural/Urban Areas to augment revenue-generating infrastructure services used commonly by the Rural and Urban Areas. E.g., some hygienic hostel/lodge facilities for people working in urban areas during the day but staying in rural areas at night. Or the development of better public transportation between the urban and rural areas. Any bicycle sharing scheme or development of safe bicycle infrastructure, etc.
- Monetization of Panchayat Assets for ensuring enhancement of Own Source of Revenue. (eg. Providing Plug and Play Infrastructure Solutions for Commercial/Non-Polluting activities to set up in Vacant Panchayat Land at a suitable location)
- Land with high real estate potential (especially near Highways) can be utilised for enhancing the direct/indirect revenue sources of the Panchayats.
- Regular mapping of resources along with the financial resources and the resource pooling (including human resources) for effective implementation of the GPSDP by the Panchayat.
- Possible integration of Panchayat-Private Participation for the creation and maintenance of Infrastructure and Services.
- Points towards Prevention, Mitigation, Preparedness, Response, and Recovery against possible Disasters.

11. 3D Representation/Visualisation of the Projects

Figure 11.1 Local Stalls and Aguibani Display Board

Figure 11.2 Primary School

Figure 11.3 PHC

Figure 11.4 Pond Rejuvenation

Figure 11.5 Essential & Medicinal Oils Mobile Extractor

ANNEXURES

Annexure-1

Research/Documentation 1: Topic 1

Annexure-2

Research/Documentation 2: Topic 2

Annexure-3

Research/Documentation 3: Topic 3