

SCOCIO-ECONOMIC HOUSEHOLD SURVEY OF NONGSPUNG VILLAGE, MEGHALAYA

A Report Submitted to

UNIVERSITY OF SCIENCE & TECHNOLOGY MEGHALAYA

nirf India Ranking-2024 (151-200)

Accredited 'A' Grade by NAAC



Unveiling Excellence

Submitted by

**DEPARTMENT OF RURAL DEVELOPMENT
SCHOOL OF SOCIAL SCIENCES AND HUMANITIES**

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DECLARATION

This is to declare that the report entitled “**Socio-Economic Household Survey of Nongspung-A Village, Ri-Bhoi District, Meghalaya**” is an original work undertaken and prepared by the Department of Rural Development, University of Science and Technology Meghalaya (USTM). The study was conducted as part of USTM’s initiative to transform Nongspung -A village into a Smart Village. The data presented in this report were collected through household surveys, Participatory Rural Appraisal (PRA) methods, and community interactions. The findings, analysis, and recommendations contained herein are based on the information obtained during the course of the fieldwork.

This report has not been submitted to any other institution or organization for any academic, administrative, or professional purpose.

Dr. PAPIYA DUTTA
Associate Professor and HoD

CERTIFICATE

This is to certify that the report entitled “**Socio-Economic Survey of Nongspung-A Village, Ri-Bhoi District, Meghalaya**” has been prepared and submitted by the Department of Rural Development, University of Science and Technology Meghalaya (USTM). The study was carried out under the initiative of USTM towards the holistic development of Nongspung-A village as a Smart Village. The report is a result of primary and secondary data collection, systematic analysis, and collaborative fieldwork undertaken by faculty members and students of the Department.

This report is hereby certified as a bona fide work and may serve as a reference for academic, developmental, and policy purposes.

Dr. PAPIYA DUTTA
Associate Professor and HoD

ACKNOWLEDGEMENT

The Department of Rural Development, University of Science and Technology Meghalaya (USTM), expresses its sincere gratitude to the residents of Nongspung-A village, Ri-Bhoi District, for their active participation and cooperation in the socio-economic household survey. Their willingness to share information and engage in participatory exercises was fundamental to the successful completion of this study.

We extend our appreciation to the University authorities for providing the opportunity to undertake this survey as part of USTM's initiative to transform Nongspung-A into a smart village. Their vision, guidance, and encouragement have been instrumental throughout this endeavour.

The Department acknowledges the valuable guidance and support provided by the faculty members of the Department of Rural Development throughout the study. We also recognize the significant contributions of the students of BA/BSc and MA/MSc Rural Development, whose active involvement in data collection, field interactions, and Participatory Rural Appraisal (PRA) exercises greatly enhanced the quality and comprehensiveness of the research.

We also extend our sincere thanks to all individuals, institutions, and officials whose direct or indirect support contributed to the enrichment of this report.

Dr. PAPIYA DUTTA
Associate Professor and HoD
Department of Rural Development
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LIST OF ABBREVIATIONS

- **AAY** – Antyodaya Anna Yojana
- **ANM** – Auxiliary Nurse Midwife
- **BMI** – Body Mass Index
- **CSO** – Chief Statistical Officer
- **GDP** – Gross Domestic Product
- **MGNREGA** – Mahatma Gandhi National Rural Employment Guarantee Act
- **MSRLS** – Meghalaya State Rural Livelihoods Society
- **NRHM** – National Rural Health Mission
- **NSAP** – National Social Assistance Programme
- **PHH** – Priority Household (Ration Card)
- **PMAY-G** – Pradhan Mantri Awas Yojana – Gramin
- **PMJAY** – Pradhan Mantri Jan Arogya Yojana
- **PRA** – Participatory Rural Appraisal
- **PWD** – Public Works Department
- **SHG** – Self-Help Group
- **USTM** – University of Science and Technology, Meghalaya

EXECUTIVE SUMMARY

This report presents the findings of a socio-economic household survey of Nongspung-A village in Meghalaya, conducted by the Department of Rural Development, University of Science and Technology Meghalaya (USTM). The study was carried out as part of USTM's broader initiative to transform Nongspung-A into a Smart Village through evidence-based planning, sustainable interventions, and community participation.

The survey adopted a concurrent triangulation mixed-method design, integrating quantitative household surveys with qualitative Participatory Rural Appraisal (PRA) techniques. A total of 56 households were surveyed, and 50 villagers participated in PRA exercises. This dual approach ensured a comprehensive understanding of the village's socio-economic realities.

Key areas of investigation included demographics, education, health, income and livelihoods, landholding and agriculture, housing, sanitation, infrastructure, social institutions, and access to government schemes. The data revealed a predominance of agricultural dependence, limited access to formal credit, and infrastructural gaps, alongside encouraging trends such as high participation in Self-Help Groups (SHGs) and community institutions. Health indicators, including Body Mass Index (BMI), highlighted challenges of both undernutrition (especially among children) and emerging risks of overnutrition among adults.

The findings provide a baseline profile of the village, offering valuable insights into both challenges and opportunities for development. They highlight the need for targeted interventions in livelihood diversification, nutrition, health awareness, skill development, women's empowerment, and improved access to welfare schemes.

By situating this study within USTM's Smart Village initiative, the report aims not only to document existing conditions but also to serve as a planning tool for stakeholders, policymakers, and the local community in co-creating pathways toward sustainable rural transformation.

CHAPTER – I

INTRODUCTION

1.1 Background of the Study

Rural communities in India play a significant role in shaping the country's socio-economic landscape. They are home to the majority of the population and form the backbone of India's agrarian economy, social traditions, and cultural identity. The overall development of the nation is closely linked to the well-being and progress of its rural areas. However, rural communities often face multiple challenges, including limited access to healthcare, education, infrastructure, livelihood opportunities, and basic services. Addressing these issues requires systematic planning, evidence-based interventions, and active community participation.

To achieve inclusive growth, the Government of India, along with state governments and academic institutions, has introduced several rural development initiatives aimed at improving the quality of life in villages. Within this framework, socio-economic surveys play a crucial role in generating baseline information on the demographic profile, household economy, education, health, infrastructure, and community participation of rural populations. Such assessments provide essential data for identifying developmental gaps and designing targeted interventions.

In this context, Nongspung-A village in Meghalaya was adopted as an initiative of the University of Science & Technology Meghalaya (USTM) to be transformed into a Smart Village. The Smart Village initiative aims to integrate modern amenities, sustainable livelihoods, and community-driven governance into traditional village settings. As part of this initiative, the Department of Rural Development, USTM, conducted a comprehensive socio-economic household survey in Nongspung-A village. The purpose of the survey was to assess the existing socio-economic conditions, understand community needs, and propose strategies for sustainable transformation.

This report presents the findings of the socio-economic household survey of Nongspung-A village. It highlights key aspects such as demographic characteristics, livelihood patterns, education, health, access to government schemes, community participation, and local challenges. By documenting these realities, the study seeks to provide a foundation for evidence-based planning and to support the vision of Nongspung-A as a model Smart Village in Meghalaya.

1.1 Study Area

Nongspung-A is a rural village located in Meghalaya, known for its agrarian economy, traditional practices, and cohesive community life. The name “Nongspung” originates from the Khasi dialect, meaning “salted water,” while in the Garo dialect, the village is referred to as “Asim.” The village was formally recognized and registered as Nongspung by the Government of Meghalaya in 1982.

The village was initially established in 1962 by Singreng Sangma, who was the first settler, and comprised only ten households. Since its founding, Nongspung-A has gradually developed its social and physical infrastructure. The majority of households rely on agriculture and wage labor as their primary sources of livelihood, supplemented by forest resources and seasonal employment opportunities. While public services, including education, healthcare, and welfare schemes, are available, gaps persist in critical areas such as drinking water supply, healthcare access, and livelihood diversification.

Administratively, Nongspung-A falls under the Umling Community and Rural Development Block of Ri-Bhoi district in Meghalaya. The village is situated approximately 50 km from the district headquarters at Nongpoh. It is part of the Jirang constituency. The population is predominantly from the Garo community, with a smaller number of residents belonging to the Khasi and Naga community.

Table 1
Demographic Profile of Nongspung-A Village

Number of Household	56
Total Population	273
Gender Male	
Female	135
	138

The recent household survey highlighted that, Nongspung-A comprised of 56 households with a total population of 273, including 135 males and 138 females. The village has benefited from the extension of public services, including education, healthcare, and various welfare schemes; however, significant gaps remain, particularly in access to safe drinking water, comprehensive healthcare services, and diversified livelihood options.

• Economic Profile of Nongspung-A Village

The economic status of the village was assessed using per capita income (PCI), which provides an estimate of the average income per person. The PCI was calculated using the following formula:

$$\text{Per Capita Income (PCI)} = \frac{\text{Total Income of the Area}}{\text{Total Population of the Area}}$$

- Total Income of Nongspung Village = ₹1,299,640
- Total population of Nongspung Village = 273

Calculation:

$$\text{Monthly PCI: } \frac{1299640}{273} = ₹4,760.59$$

$$\text{Annual PCI: } 4,760.59 \times 12 = ₹57,127$$

An assessment of the village's economic profile indicates that the total monthly household income amounts to ₹1,299,640. Based on this, the monthly per capita income for the village is approximately ₹4,761, which translates to an annual per capita income of ₹57,127 per person. This measure provides a quantitative baseline to understand the standard of living and economic capacity of the residents, highlighting the need for targeted interventions to improve household income and resource access.

1.2 Rationale of the Study

Conducting a socio-economic survey in Nongspung-A Village is essential to understand the realities of households in terms of demographic characteristics, sources of income, landholding patterns, access to healthcare and education, housing conditions, participation in community institutions, and awareness and utilization of government schemes. The findings not only provide a comprehensive overview of current living conditions but also assist in evaluating the effectiveness of government programs, local governance, and community-based initiatives. Additionally, the study is expected to identify development challenges and highlight opportunities for sustainable and targeted interventions.

1.3 Research Questions

1. What is the socio-economic profile of households in Nongspung village, Meghalaya?
2. What are the primary livelihood patterns, income sources, and employment strategies of households?
3. How do households access public services, government schemes, and participate in local governance and community institutions?

1.4 Objectives of the Study

1. To assess the demographic characteristics, education, housing, and basic amenities of households in Nonspung village.
2. To examine the livelihood strategies, occupational patterns, landholding, livestock, migration, and income levels of households.
3. To analyze household access to health, financial services, government schemes, SHGs, and participation in local governance and community activities.

1.5 Structure of the Report

This report is organized into the following chapters:

- Chapter 1: Introduction – Presents the background of the study, rationale, research questions, objectives of the study, and an overview of the report structure.
- Chapter 2: Research Methods – Describes the methodology employed, sampling, including the household survey design, and Participatory Rural Appraisal (PRA) techniques.
- Chapter 3: Data Analysis
 - Section 1: Socio-Economic Profile of Nongspung Village – Provides detailed findings on demographics, education, basic amenities of households, occupation, income, health, housing, awareness of and access to government schemes.
 - Section 2: Participatory Rural Appraisal (PRA) Findings – Summarizes community perspectives on local resources, seasonal variations, health concerns, and development challenges.
- Chapter 4: Discussion – Integrates quantitative survey data and qualitative PRA insights to identify key socio-economic trends, disparities, and challenges in the village.
- Chapter 5: Major Findings and Recommendations– Highlights the main findings and proposes policy measures and community-level interventions for improving livelihoods and well-being.

CHAPTER – II

METHODOLOGY

2.1 Introduction

This chapter delineates the methodology employed to examine the socio-economic conditions of households in Nongspung Village, Meghalaya. It provides a detailed account of the research design, study population and sampling strategy, data collection methods, tools used, and procedures for data analysis. A mixed-methods approach was adopted to portray both quantitative and qualitative dimensions of the study, enabling a comprehensive understanding of household socio-economic realities.

2.2 Research Design

The study adopted a convergent parallel mixed-method design, also referred to as a concurrent mixed-methods approach. In this design, quantitative and qualitative data were collected simultaneously, analyzed independently, and subsequently integrated to provide a holistic interpretation of findings.

The convergent parallel design was selected to enable simultaneous validation of quantitative trends through qualitative insights, ensuring a more nuanced understanding of socio-economic conditions and community priorities.

Key Features of the Design

1. **Concurrent Data Collection:** Quantitative data were collected using a structured household survey administered to all 56 households. Whereas, Qualitative data were gathered through Participatory Rural Appraisal (PRA) techniques like timeline, social and resource mapping, seasonal calendars, health matrix and problem ranking inventory.
2. **Independent Analysis:** Quantitative data were analyzed using descriptive statistical techniques, including frequencies and percentages. Whereas, PRA data were analyzed thematically, with visual representations such as maps, charts, and diagrams supplementing narrative interpretations.
3. **Integration and Triangulation:** Findings from quantitative and qualitative data were triangulated to identify areas of convergence and divergence.

2.3 Study Population and Sampling

The study was conducted in Nongspung-A Village, Meghalaya, a rural community chosen to examine the socio-economic conditions of households. The village comprises a total of 56 households, all of which were included in the study to ensure comprehensive coverage of the entire population.

Given the manageable size of the population, a complete enumeration approach was employed, whereby every household was surveyed rather than selecting a sample. This approach ensured that the study covered the full spectrum of socio-economic variations within the village.

The respondents for the study were primarily the head of each household or, in their absence, an adult member well-informed about the household's resources, livelihood activities, and socio-economic status. This strategy ensured that the data collected were accurate, reliable, and representative of each household's circumstances.

2.4 Data Collection Methods

To obtain a comprehensive understanding of the socio-economic status in Nongspung Village, data collection was conducted through home visits to each household. The study adopted a mixed-methods approach, integrating quantitative and qualitative techniques to portray both measurable indicators and community perspectives.

Quantitative data were obtained through structured, face-to-face interviews with the head of each household or an adult member well-informed about household resources, livelihood, and socio-economic status.

Qualitative insights were gathered through Participatory Rural Appraisal (PRA) exercises conducted at the village community hall, where approximately 50 villagers, including men, women, and children, participated actively. PRA tools, such as timeline, social and resource mapping, seasonal calendars, health matrix, and problem inventory, were used for systematic documentation of community knowledge, perceptions, and priorities alongside household-level survey data."

2.5 Tools for Data Collection

1. Quantitative Tools: Interview schedule, which was used to collect quantitative data at the household level, elicited the demographic profile, housing and amenities, livelihood and occupation, access to banking services and savings, healthcare services, credit and loans,

community participation, awareness and beneficiaries of government schemes. This ensured uniformity in data collection, facilitating systematic comparison and statistical analysis across all 56 households.

2. Qualitative Tools: Participatory Rural Appraisal tools like Timeline Mapping, Social Mapping, Resource Mapping, Seasonal Calendar, Problem Inventory and Health Matrix were used to portray the community perspectives, local knowledge, and socio-cultural dimensions that could not be covered through structured surveys. The Participatory Rural Appraisal (PRA) was conducted at the village community hall, where villagers were invited to actively participate in mapping and discussion exercises. Participants created maps, timelines, and calendars on the ground and on paper, using symbols and interactive dialogue to reach shared understanding and agreement on key issues.

The PRA employed several tools:

1. **Timeline:** Captured chronological events and significant developments in the village.
2. **Resource Mapping:** Visualized natural, physical, and social assets available to the community.
3. **Social Mapping:** Illustrated habitation patterns, housing, and infrastructure.
4. **Health Matrix:** Identified, categorized, and prioritized health issues according to gender and age.
5. **Seasonal Calendar:** Tracked annual patterns in crops, livelihoods, food security, workload, expenditure, health, migration, and social events.
6. **Problem Inventory/Analysis:** Listed, categorized (by timeframe), and prioritized challenges based on frequency and perceived importance.

Data from all PRA exercises were carefully documented through notes, diagrams, maps, and charts. These qualitative findings were subsequently analyzed alongside quantitative survey data, enabling triangulation of results and providing a comprehensive understanding of the socio-economic conditions in Nongspung Village.

2.6 Data Analysis

1. **Quantitative Analysis:** Descriptive statistics like frequencies and percentages were computed to summarize demographic profile and socio-economic indicators. The findings were presented using tables and charts, followed by narrative interpretations highlighting patterns, variations, and key observations.
2. **Qualitative Analysis:** PRA data were analyzed thematically. Visual representations such as maps, seasonal calendars, and ranking diagrams were included to illustrate

community perceptions. Narrative interpretation emphasized the contextual understanding of household and community priorities.

3. **Triangulation:** Quantitative and qualitative findings were compared to validate results and enrich interpretations. Convergence of data strengthened the reliability of findings, while divergence highlighted areas requiring further inquiry. Triangulation facilitated a comprehensive understanding of socio-economic conditions and community priorities.

2.7 Ethical Considerations

Prior to data collection, informed consent was obtained from all participants to ensure that they were fully aware of the purpose and nature of the study. Household-level information was anonymized to maintain confidentiality and protect the privacy of respondents. Participation in both the PRA exercises and the household surveys was entirely voluntary, allowing for inclusive representation while minimizing any potential coercion or undue influence. These measures were implemented to uphold ethical standards throughout the research process.

CHAPTER – III

DATA ANALYSIS

This chapter presents the analysis of primary data collected through the socio-economic household survey and Participatory Rural Appraisal (PRA) conducted in Nongspung-A Village. The objective of the chapter is to systematically examine the demographic, economic, social, and infrastructural characteristics of village households, as well as the community's perceptions of resources, seasonal variations, health issues, and development challenges. Both quantitative survey data and qualitative PRA findings are analyzed to provide a comprehensive understanding of living conditions, access to services, participation in community institutions, and engagement with government schemes. The chapter is organized into two sections: Section-I: Socio-Economic Profile of Households in Nongspung-A Village which presents detailed findings from the household survey, and Section-II: Community Perspectives and Participatory Insights, which summarizes community-generated maps, timelines, seasonal calendars, and problem analyses. The findings are presented thematically to highlight patterns, trends, and disparities, thereby offering insights into development challenges and potential areas for intervention.

SECTION – I

Socio-Economic Household Survey of Nongspung-A Village

The household socio-economic survey of Nongspung-A Village was conducted to achieve the study's key objectives: to profile the demographic and socio-economic characteristics of households, to examine livelihood patterns and income sources, and to assess access to services, government schemes, and participation in local governance. Data were collected from all households using a structured questionnaire covering family composition, education, occupation, income, landholding, livestock, housing, access to basic amenities, health, participation in Self-Help Groups (SHGs), and engagement with government programs. The following tables present the survey findings, organized thematically to highlight demographic patterns, economic activities, living conditions, and community participation, thereby providing insights into development challenges and potential areas for intervention.

Table 1
Demographic Profile of the Respondents

Demographic Profile	Frequency	Percent
Age of the Respondents (in years)		
Below 30	19	33.9
31 – 60	33	58.9
Above 61	4	7.1
Gender		
Male	29	51.8
Female	27	48.2
Tribal Community		
Khasi	5	8.9
Garos	43	76.8
Other	8	14.3
Religion		
Christianity	55	98.2
Hindu	1	1.8
Education		
Illiterate	9	16.1
Primary	21	37.5
Matriculation	18	32.1
Higher Secondary	5	8.9
Graduate	2	3.6
Higher Education	1	1.8
Number of School Dropouts (Last 5 years)		
One	3	5.4
Two	3	5.4
Three	3	5.4
No School Dropouts	47	83.8

Age of the Respondents

The age profile of respondents in Nongspung Village indicates that the majority fall within the productive age group of 31–60 years with 58.9 per cent. This suggests that more than half of the village population surveyed belongs to the working-age, which has important implications for livelihood activities and economic productivity. A considerable proportion of respondents with 33.9 per cent are below 30 years, reflecting a relatively young population base that could contribute to future labor availability if adequately supported through education, skills, and employment opportunities.

In contrast, only 7.1 per cent of respondents are aged above 61 years, highlighting a smaller elderly population within the community. The age range spans from 20 to 96 years, indicating diversity in household composition and the presence of intergenerational structures. The dominance of the 31–60 age group demonstrates that the village has a strong active

workforce, which may be advantageous for agricultural and non-agricultural livelihood activities, though it also underscores the need for adequate employment avenues to harness this demographic potential.

Gender

The gender distribution of respondents in Nongspung Village showed representation of males with 51.8 per cent and females with 48.2 per cent. This indicated that the study adequately captured perspectives from both genders, thereby enhancing the inclusiveness and reliability of the findings.

In Garo and Khasi tradition, lineage and inheritance are traced through women, and daughters often assume responsibility for household management and property succession. In such a system, women often hold a central position in household decision-making, land ownership, and succession. Consequently, the presence of nearly half of the respondents being women reflects not only demographic realities but also the cultural practices that empower women in socio-economic and familial roles. This cultural context provides an important lens for interpreting household structures, resource distribution, and gender dynamics in the village.

Tribal Community

The data portrayed that majority of households in Nongspung Village belonged to the Garo community with 76.8 per cent, followed by a smaller proportion from the Khasi community composing of 8.9 per cent, and other tribal groups with 14.3 per cent. This indicated that the village is predominantly Garo, with the presence of Khasi and other groups contributing to its multi-ethnic composition.

The dominance of the Garo population suggests that the socio-economic practices, livelihood patterns, and cultural traditions of the village are largely influenced by Garo customs and social organization. However, the presence of Khasi and other tribal groups also points to a degree of cultural diversity and inter-community interaction within the village. Such diversity may influence aspects of community participation, resource-sharing, and local decision-making processes, while also reflecting the broader ethnic mosaic characteristic of Meghalaya.

Religion

Table 4 indicated that Christianity is the predominant religion in Nongspung Village, with 98.2 per cent of households identifying as Christian, while only 1.8 per cent reported Hindu affiliation. This overwhelming majority reflects the broader religious composition of Meghalaya, where Christianity is the dominant faith among tribal communities such as the Garo and Khasi.

Education

The educational profile of respondents in Nongspung Village depicted a mixed pattern of literacy and schooling levels. Only 16.1 per cent of the respondents were reported to be illiterate, indicating that while access to education has improved, educational exclusion still persists for a segment of the population. A considerable proportion of respondents, comprising 37.5 per cent, had attained primary education, while 32.1 per cent had completed matriculation. In contrast, only 8.9 per cent had studied up to the higher secondary level, whereas 3.6 per cent were graduates and a mere 1.8 per cent had pursued education beyond graduation.

This distribution suggests that while basic education is widespread, higher levels of education remain limited. The strong representation at the primary and matriculation levels reflects the availability and accessibility of village-level schooling, whereas the sharp decline in higher secondary and tertiary education points to structural barriers such as distance to institutions, financial constraints, or the need for youth to enter the workforce early.

Number of School Dropouts (Last 5 years)

The data on school dropouts in Nongspung Village over the last five years indicated that the majority of households, composing of 83.8 per cent, did not report any school dropouts. A small proportion of households experienced one, two, or three dropouts, each category accounting for 5.4% of households. These figures suggest that school retention is generally high; however, certain structural challenges may contribute to the limited number of dropouts.

It is important to note that the government school in the village provides education only up to the primary level, and students wishing to pursue higher education must travel to neighboring villages. Public transportation options are scarce, unreliable, and expensive, often requiring students to walk long distances to access secondary or higher secondary schools. These logistical and financial barriers likely influence decisions around continuing education, particularly for higher levels, and may contribute to the observed dropouts despite overall high retention at the primary level.

**Table 2 Housing
and Amenities**

Housing and Amenities (N=56)	Frequency	Percent
Type of Housing		
Kutchha	13	23.2
Semi-Pucca	3	5.4
Pucca	40	71.4
Sources of Drinking		
Household Connection	38	67.8
Well	14	25
River	4	7.2
Electricity Connection		
Yes	54	96.4
No	2	3.6
Electricity Bill (in rs.)		
Below 500	28	50
501 - 1000	14	25
1001 Above	5	8.9
Do not Pay Electricity Bills	9	16.1
Cooking Fuel Used		
Firewood	34	60.7
LPG	22	39.3
Communication and Connectivity		
Television	13	23.2
Mobile Phone	54	94.6
Internet Access	50	89.3
Utility Appliances		
Refrigerator	13	23.2
Washing Machine	8	14.3
Concrete Portable Water Filter	18	32.1
Vehicle Ownership		
Two-Wheeler	28	50
Four-Wheeler	9	16.1

Type of Housing

The housing conditions in Nongspung Village showed a predominance of permanent structures, indicative of gradual improvements in residential infrastructure. The majority of households with 71.4 per cent resided in pucca houses, while 23.2 per cent lived in kutchha houses and 5.4 per cent in semi-pucca dwellings, suggesting that while most families had access to durable housing, a notable minority continued to occupy less permanent structures. This distribution reflects both socio-economic variations within the village and the gradual transition from traditional to more permanent housing typologies.

Sources of Drinking

Water supply and drinking water sources highlighted that 67.8 per cent of households relied on household connections, ensuring relatively safe access, whereas 25 per cent depended on wells and 7.2 per cent used river water. The reliance of a small segment of households on untreated natural water sources highlights ongoing vulnerabilities to water quality issues and indicates the need for improved water infrastructure.

Electricity Connection and Electricity Bill

Access to electricity in Nongspung Village was almost universal, with 96.4 per cent of households connected to the grid and only 3.6 per cent lacked formal connections. Among connected households, 50 per cent paid below Rs. 500 per month, 25 per cent paid between Rs. 501 and 1,000, 8.9 per cent paid above Rs. 1,000, and 16.1 per cent did not pay electricity bills, likely due to government subsidies or metering arrangements.

Importantly, it was observed that some households without formal connections resorted to illegally hooking wires from nearby electric poles to meet their energy needs. While this practice provided immediate access, it posed significant safety risks, potential electrical hazards, and reflected inequities in energy accessibility, highlighting gaps in rural electrification programs.

Cooking Fuel Used

Household cooking fuel practices portrayed a continued reliance on traditional energy sources, with 60.7 per cent of households using firewood and 39.3 per cent relying on LPG. This indicated that, although cleaner fuels were gradually adopted, traditional practices persisted due to cultural preferences, economic considerations, and limited accessibility.

Communication and Connectivity

Communication and connectivity had improved significantly. A vast majority of households composing of 94.6 per cent owning mobile phones, 89.3 per cent having internet access, and 23.2 per cent owning television sets, reflected substantial penetration of modern communication technologies in the village.

Utility Appliances

Ownership of household appliances remained moderate, with 32.1 per cent of households having concrete portable water filters, 23.2 per cent owning refrigerators, and 14.3 per cent owning washing machines. This suggested that, although basic communication and energy access had improved considerably, the adoption of other modern amenities was still limited,

reflecting gradual transitions in living standards and continued socio-economic constraints within the village

Vehicle ownership

Vehicle ownership was relatively low in Nongspung village. 50 per cent of households owning two-wheelers and 16.1 per cent owning four-wheelers, portrayed a restricted personal mobility. This limitation may impact access to education, healthcare, and markets, further constraining socio-economic opportunities for certain households.

The housing and amenities profile of Nongspung Village stated a gradual improvement in infrastructure and basic services, with widespread electricity, mobile, and internet connectivity. Nonetheless, traditional practices such as firewood use persisted, and ownership of household appliances and vehicles remained moderate. The presence of informal electricity connections underscored systemic gaps in energy access and highlighted the complex interplay of socio-economic, infrastructural, and cultural factors influencing living conditions. These findings point to both progress in household amenities and continuing challenges that may affect quality of life, health, and economic opportunities in the village.

Table 3
Livelihood and Occupation

Livelihood and Occupation (N=56)	Frequency	Percent
Occupation		
Farmer	21	37.5
Daily Wager	16	28.7
Business	5	8.9
Government Employee	6	10.7
Private Employee	4	7.1
Unemployed	4	7.1
Number of Working Members in the Family		
One	18	32.1
Two	28	50
Three	6	10.7
More than three	4	7.1
Family Monthly Income (in rs.)		
Below 10000	27	48.2
10001 - 20000	14	25.0
20001 Above	15	26.8
Ownership of Agricultural Land		
Yes	21	37.5
No	35	62.5
Size of Agricultural Land Holdings (in bighas)		
1 – 2	12	21.5
3 – 4	5	8.9
More than 4	4	7.1

No Agricultural Land	35	62.5
Type of Cultivations (major)		
Agriculture Farming	6	10.7
Areca Nut Plantation	15	26.8
Not Applicable	35	62.5
Types of Livestock		
Chicken	16	28.7
Pig	8	14.2
Goat	1	1.8
No Livestock	31	55.3
Family Members Migrated for Work		
Within Meghalaya	3	5.4
Outside Meghalaya	5	8.9
None	48	85.7

Occupation

The occupational structure of Nongspung Village reflected a predominantly agrarian and informal labor-based economy, with limited diversification. Farming emerged as the primary livelihood activity, engaging 37.5 per cent of respondents, while 28.7 per cent depend on daily wage labor. These figures highlight the village's reliance on subsistence agriculture and casual labor, both of which are vulnerable to seasonal fluctuations, climatic variability, and market uncertainties. A smaller segment of households comprising of 10.7 per cent were government employees, 8.9 per cent were engaged in business activities, and 7.1 per cent in private sectors, suggesting that formal employment opportunities remain limited. Whereas, 7.1 per cent of respondents reported being unemployed, indicating the presence of underemployment within the community.

Number of Working Members in the Family

The number of working members per household further illustrated the economic dependence on multiple earners. 50 per cent of the households had two working members, 32.1 per cent had one, 10.7 per cent had three, and 7.1 per cent had more than three working members. This pattern reflects both the necessity of shared labor contribution within households and the reliance on family-based labor rather than external employment, particularly in farming and informal work.

Family Monthly Income

Analysis of family income revealed a predominance of low-income households: 48.2 per cent earned below Rs. 10,000 per month, 25 per cent earned between Rs. 10,001 and 20,000, and 26.8 per cent earned above Rs. 20,000. The concentration of households in the lower-income brackets limited economic resources and a potential vulnerability to financial shocks, while the

small proportion of higher-income households reflected emerging diversification or engagement in higher-paid employment.

Ownership and Size of Agricultural Land Holdings

The extent of agricultural land ownership in the village was low, with only 37.5 per cent of households holding land and the remaining 62.5 per cent being landless. Among landholders, 21.5 per cent owned 1–2 bighas, 8.9 per cent owned 3–4 bighas, and 7.1 per cent owned more than 4 bighas.

Type of Cultivations

Areca nut plantation was the predominant type of cultivation, practiced by 26.8 per cent of households, while the majority with 62.5 per cent did not engage in cultivation due to the absence of land. Limited landholding affected not only food security and income generation but also shaped household decisions regarding labor allocation and livelihood strategies.

Livestock

Livestock rearing was minimal, with 28.7 per cent of households keeping chickens, 14.2 per cent rearing pigs, and 1.8 per cent rearing goats, while 55.3 per cent did not engage in any livestock rearing. The limited participation in animal husbandry further constrained livelihood diversification and reduced opportunities for supplementary income generation.

Family Members Migrated for Work

Migration for work was relatively uncommon, with 85.7 per cent of households not sending any members outside the village, 5.4 per cent migrating within Meghalaya, and 8.9 per cent migrating outside the state. The limited migration suggested that households primarily relied on local resources for sustenance, though those who migrated did so in response to income constraints, seasonal labor requirements, or educational opportunities.

The livelihood profile of Nongspung depicted a community dependent on small-scale agriculture, plantation crops, and informal labor, constrained by limited landholding, low income, and minimal engagement in alternative livelihood strategies such as livestock rearing or external employment. These structural and economic limitations highlighted the vulnerability of households to seasonal, market, and climatic shocks and emphasized the importance of community support systems, local resource management, and potential interventions aimed at enhancing income diversification, livelihood resilience, and sustainable development in the village.

Table 4
Banking Services and Savings

Banking Services and savings (N=56)	Frequency	Percent
Bank Account		
Apex Bank	16	28.6
Rural Bank	14	25.0
State Bank of India	13	23.2
Canara Bank	5	8.9
Punjab Sindh Bank	4	7.1
HDFC	1	1.8
No Bank Account	3	5.4
Access to Banking Facilities		
ATM/ Debit Card	46	82.1
Mobile Banking/ UPI	28	50.0
SHG based savings linked to bank	12	21.4
Mode of savings		
Bank Account	44	78.6
Savings in Cash at Home	10	17.8
No Savings	2	3.6

Bank Account

The analysis of banking services and savings patterns in Nongspung Village revealed moderate financial inclusion and engagement with formal financial institutions. Majority of the households had bank accounts, across various banks. 28.6 per cent of the respondent had bank account with Apex Bank, 25 per cent with Rural Bank, 23.2 per cent with State Bank of India, 8.9 per cent with Canara Bank, 7.1 per cent with Punjab Sindh Bank, and 1.8 per cent with HDFC Bank. Only 5.4 per cent of households did not have any bank account, indicating that nearly all households were at least minimally linked to formal banking services.

Access to Banking Facilities

Access to banking facilities extended beyond account ownership. A significant proportion of households with 82.1 per cent had access to ATM or debit card services, while 50 per cent utilized mobile banking or UPI platforms, reflecting the adoption of digital financial services. Additionally, 21.4 per cent of households participated in self-help group (SHG)-based savings schemes linked to banks, suggesting community-level engagement in collective financial management.

Mode of savings

In terms of savings practices, most households with 78.6 per cent maintained their savings through bank accounts, while 17.8 per cent kept cash at home, and a small proportion composing of 3.6 per cent reported having no savings. This pattern highlighted the reliance on

formal banking for secure savings among most households, though a segment of the population continued to prefer cash holdings, possibly due to ease of access or limited trust in banking institutions.

The findings indicated that financial inclusion had expanded in the village, with most households linked to banks and a growing engagement with digital and SHG-based financial mechanisms. Nonetheless, the persistence of cash-based savings and minority without bank accounts reflected ongoing challenges in achieving universal access to secure and formal financial services, particularly for households with lower socio-economic status or limited financial literacy.

Table 5
Credit and Loan Access

Livelihood and Occupation (N=56)	Frequency	Percent
Loan Uptake over the Last Five Years		
Yes	12	21.4
No	44	78.6
Purpose of Taking Loan		
Construction of House	4	7.1
Business	4	7.1
Others	4	7.1
Not Applicable	44	78.6
Sources of Loan		
Bank	10	17.9
Self-Help Groups (SHGs)	1	1.8
Cooperative Society	1	1.8
Not Applicable	44	78.6
Repayment of Loan		
Fully Repaid	2	3.6
Partially Repaid	1	1.8
Still Repaying	9	16.1
Not Applicable	44	78.6
Difficulties Experienced in Accessing Loans		
Lacked of Required Documents	2	3.6
No Collateral or Guarantor	4	7.1
Complex Bank Procedures	2	3.6
High Interest Rates	2	3.6
Delay in Processing	2	3.6
Not Applicable	44	78.6

Loan Uptake over the Last Five Years

The analysis of loan uptake in Nongspung Village stated that a minority of households with 21.4 per cent had availed loans during the past five years, whereas the majority, comprising of 78.6 per cent had not accessed either formal or informal credit facilities during this period.

Among those households that did take loans, the primary purposes were evenly distributed, with 7.1 per cent utilizing loans for house construction, 7.1 per cent for business activities, and 7.1 per cent for other purposes, indicating that engagement with credit was relatively limited and focused mainly on household or livelihood-related investments.

Sources of Loan

The loan sources indicated that most households depended on formal banking institutions, with 17.9 per cent obtaining loans from banks. Households accessed credit through Self-Help Groups and cooperative societies accounted of only 1.8 per cent respectively, reflecting the limited reach and utilization of alternative community-based financial mechanisms. These findings suggest that while formal banks served as the primary source of credit, community-based or cooperative financial arrangements played only a marginal role in supporting household borrowing needs in the village.

Repayment of Loan

The loan repayment patterns showed that only 3.6 per cent of households had fully repaid their loans, 1.8 per cent had partially repaid, and 16.1 per cent were still in the process of repayment. These highlighting the ongoing financial obligations and potential stress associated with borrowing.

Difficulties Experienced in Accessing Loans

Households that experienced difficulties in accessing loans reported several challenges. 7.1 per cent cited the absence of collateral or guarantors, 3.6 per cent faced complex banking procedures, 3.6 per cent were constrained by high interest rates, 3.6 per cent experienced delays in processing, and 3.6 per cent lacked the required documentation. These findings indicated that bureaucratic, procedural, and financial barriers limited the accessibility of credit for a segment of the population in Nongspung village.

The credit profile of Nongspung Village suggested low levels of loan utilization, with most households either not requiring or not accessing credit over the past five years. For those who did take loans, formal banking institutions were the primary source, and challenges related to documentation, collateral, and procedural complexity underscored the structural barriers to financial inclusion. These dynamics reveal that while some households leveraged credit for productive purposes, a significant proportion of the population remained excluded from formal financial mechanisms, potentially constraining their ability to invest in housing, business, or other livelihood-enhancing activities.

Table 6
Membership in Self-Help Groups (SHGs)

Membership in SHGs (N=56)	Frequency	Percent
Membership in SHGs		
Yes	39	69.6
No	17	30.4
Formation of SHGs		
Government (MSRLM)	22	39.3
NGOs	1	1.9
Self-Initiated by Community	10	17.9
Don't Know	6	10.7
Not Applicable	17	30.4
SHGs Activities		
Monthly Savings and Internal Lending	15	26.8
Income-Generating Activities (Weaving, Piggery etc.)	5	8.9
Training and Skill Development	18	32.1
Accessing Government Schemes	1	1.8
Not Applicable	17	30.4
Benefits Received through SHGs		
Loan or Credit Access	6	10.7
Training / Skill Support	13	23.2
Income Improvement	7	12.5
Social Support / Group Solidarity	8	14.3
None	5	8.9
Not Applicable	17	30.4
Frequency of SHGs Meetings Conducted		
Weekly	16	28.5
Monthly	23	41.1
Not Applicable	17	30.4
Ratings of SHGs Impact on Household		
Very Positive	11	19.6
Somewhat positive	24	42.9
No change	4	7.1
Not Applicable	17	30.4

Membership and Formation of SHGs

The study showed that majority of households constituting 69.6 per cent were members of Self-Help Groups (SHGs), while 30.4 per cent were not affiliated with any group.

Membership in SHGs was largely facilitated through government initiatives, particularly the Meghalaya State Rural Livelihood Mission (MSRLM), which accounted for 39.3 per cent of SHG formation. A smaller proportion of groups were self-initiated by the community (17.9 per cent) or supported by non-governmental organizations (1.9 per cent), while 10.7 per cent of respondents were unaware of the formation process.

SHGs Activities

SHG activities were varied and focused on both financial and skill development objectives. Monthly savings and internal lending constituted the primary activity for 26.8 per cent of SHGs, providing members with opportunities for small-scale financial support. Training and skill development programs were conducted in 32.1 per cent of SHGs, emphasizing capacity building in areas such as weaving, handicrafts, and other livelihood related skills. Income generating activities, including piggery and weaving, were reported in 8.9 per cent of SHGs, while access to government schemes was minimal (1.8 per cent).

Benefits Received through SHGs

The benefits received through SHG participation reflected both economic and social dimensions. 10.7 per cent of households reported access to loans or credit, 23.2 per cent received training or skill support, 12.5 per cent experienced improvements in income, and 14.3 per cent benefited from social support and group solidarity. However, 8.9 per cent of members reported no tangible benefits, highlighting variability in the effectiveness of SHG programs.

Meetings and Impact of SHGs

SHG meetings were conducted with varying frequency, 41.1 per cent held monthly meetings, while 28.5 per cent convened weekly, suggesting regular engagement among active members. Evaluation of the impact of SHG participation indicated that 19.6 per cent of respondents perceived a very positive impact on their households, 42.9 per cent reported somewhat positive outcomes, and 7.1 per cent observed no change, reflecting the differential influence of SHGs on members' socio-economic well-being.

The findings suggested that SHGs in Nongspung Village played a significant role in promoting financial inclusion, skill development, and social cohesion, particularly for households affiliated with government-supported programs. Nonetheless, the limited engagement in income-generating activities and uneven benefits indicated scope for strengthening SHG interventions, enhancing capacity building, and ensuring more equitable access to credit, training, and livelihood opportunities across the community.

Table 7
Access to Healthcare Services

Access to Healthcare Services (N=56)	Frequency	Percent
Preference of Health Institution for Treatment		
Primary Health Centre	32	57.1
Private Clinic	17	30.4
Private Hospital	7	12.5
Health Insurance		
Yes	16	28.6
No	40	71.4

Preference of Health Institution for Treatment

The analysis of healthcare access in Nongspung-A Village indicated that majority of the households with 57.1 per cent preferred the Primary Health Centre (PHC) for treatment, suggesting reliance on public healthcare facilities as the main source of medical care. Whereas, 30.4 per cent of the households sought treatment at Private Clinics and 12.5 per cent at Private Hospitals, reflecting a limited but notable preference for private healthcare providers, likely due to perceived quality, responsiveness, or convenience.

The village did have a pharmacy, providing residents with access to over-the-counter medications and basic pharmaceutical services. However, the nearest Primary Health Centre (PHC) was located approximately 6.1 kilometres away, which may have posed accessibility challenges for some residents, particularly in adverse weather conditions or for those without reliable transportation.

Health Insurance

In terms of health insurance coverage, only 28.6 per cent of households reported having health insurance, whereas a substantial majority of 71.4 per cent lacked any form of coverage. Among those insured, all households were covered under the Ayushman Bharat scheme, indicating reliance on this government-provided health protection program. The low overall penetration of health insurance highlighted the financial vulnerability of households in meeting medical expenses and indicated a continued dependence on out-of-pocket expenditure for healthcare. The findings suggested that while primary public healthcare facilities were accessible, households exhibited a mixed preference between public and private providers, influenced by service quality and accessibility. The limited adoption of health insurance further emphasized the need for enhanced awareness, accessibility, and enrollment in insurance schemes to improve financial protection and health security for rural households.

**Table 8 Community
Participation**

Community Participation (N=6)	Frequency	Percent
Membership in Community Organization		
Yes	6	10.7
No	50	89.3
Conduct of Community Meetings		
Yes	36	64.3
No	11	19.6
Don't Know	9	16.1
Participation in Community Meetings		
Attending Meetings	50	89.3
Sharing Opinions	34	60.7
Voting on Village Decisions	33	58.9

Membership in Community Organization

The findings indicated that membership in community organizations was very limited. Only 10.7 per cent of respondents reported being members of such groups, while the overwhelming majority with 89.3 per cent stated that they did not hold membership in any community-based organizations. The memberships reported were primarily associated with Garo women's groups and the Village Council, which represented the key platforms for organized collective participation in the village.

Conduct of Community Meetings

The findings on the conduct of community meetings in Nongspung-A Village highlighted that a majority of households with 64.3 per cent reported that such meetings were held, primarily convened by village council members for community welfare and decision-making purposes. However, 19.6 per cent of households stated that no such meetings were conducted, while 16.1 per cent were uncertain about their occurrence. This variation indicated that although collective forums existed within the village, their reach and regularity were not universal, which might have limited the inclusiveness of participatory governance and the consistency of community-level engagement.

Participation in Community Meetings

The study showed that participation in community meetings in Nongspung-A Village was relatively high, with 89.3 per cent of households reporting attendance when such meetings were conducted. Beyond mere presence, 60.7 per cent of households indicated that they actively shared their opinions during discussions, reflecting a level of engagement in collective deliberations. Additionally, 58.9 per cent of households reported participating in voting on

village-level decisions, suggesting that decision-making processes were, to a certain extent, democratic and inclusive. This pattern suggested that even in the absence of formal membership or perfectly regular meetings, villagers demonstrated engagement and a willingness to participate in governance and decision-making processes whenever forums were available.

The findings reflected a village where formal institutional engagement was limited, but informal or ad-hoc participation remained strong, highlighting the importance of both structured and flexible mechanisms for community involvement in local governance and development.

Table 9
Awareness of Government Schemes

Government Schemes (N=56)	Frequency	Percent
Antyodaya Anna Yojana (AAY) Ration Card	40	71.4
Priority Household (PHH) Ration Card	19	33.9
Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	47	83.9
Pradhan Mantri Awas Yojana- Gramin (PMAY-G)	36	64.3
National Social Assistance Programme (NSAP)	16	28.6
Pradhan Mantri Jan Arogya Yojana (PMJAY)	37	66.1
Meghalaya State Rural Livelihoods Society (MSRLS)	40	71.4
National Rural Health Mission (NRHM)	50	89.3

In Nongspung-A Village, awareness of government schemes was found to be relatively widespread among households, yet uneven across particular programs. The highest awareness was reported for the National Rural Health Mission (NRHM), with 89.3 per cent of households familiar with its provisions, indicating the central role of health-related initiatives in rural areas. Similarly, a large majority of households with 83.9 per cent were aware of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), reflecting its prominence as a livelihood security measure.

Awareness to welfare schemes addressing food security and housing was also significant. About 71.4 per cent of households were aware of the Antyodaya Anna Yojana (AAY) ration card, while 33.9 per cent reported awareness of the Priority Household (PHH) ration card, suggesting differentiated knowledge of food entitlement categories. Furthermore,

64.3 per cent of respondents expressed awareness of the Pradhan Mantri Awas Yojana-Gramin (PMAY-G), highlighting its visibility as a housing support scheme.

Health and livelihood-related schemes also featured prominently in community awareness. For instance, 66.1 per cent of households reported being aware of the Pradhan Mantri Jan Arogya Yojana (PMJAY), which provides financial assistance for healthcare, while an equal 71.4 per cent were aware of the Meghalaya State Rural Livelihoods Society (MSRLS), which promotes self-help groups and livelihood initiatives. In contrast, awareness of the National Social Assistance Programme (NSAP), designed to support the elderly, widows, and persons with disabilities, was limited to 28.6 per cent of households, highlighting a significant gap in the knowledge of social security schemes.

The findings suggested that awareness was comparatively higher for schemes directly linked to livelihood, healthcare, and food security, while social assistance programs remained less visible, pointing to the need for more effective dissemination and outreach efforts to ensure inclusivity.

Table 10
Beneficiaries of Government Schemes

Government Schemes (N=56)	Frequency	Percent
Antyodaya Anna Yojana (AAY) Ration Card	30	53.6
Priority Household (PHH) Ration Card	8	14.3
Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)	36	64.3
Pradhan Mantri Awas Yojana- Gramin (PMAY-G)	28	50.0
National Social Assistance Programme (NSAP)	7	12.5
Pradhan Mantri Jan Arogya Yojana (PMJAY)	26	46.4
Meghalaya State Rural Livelihoods Society (MSRLS)	30	53.6
National Rural Health Mission (NRHM)	45	80.4

The analysis of government scheme beneficiaries in Nongspung-A Village portrayed varied levels of access and utilization across programs. More than half of the households, comprising of 53.6 per cent benefitted from the Antyodaya Anna Yojana (AAY), through which they received 5 kilograms of food grains per person per month, ensuring a degree of household food security. A smaller proportion of 14.3 per cent held Priority Household (PHH) ration cards.

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) reached 64.3 per cent of households, providing average daily wages in exchange for manual labour, thus supplementing household incomes and enhancing livelihood security. Similarly, 50 per cent of the households reported benefits under the Pradhan Mantri Awas Yojana–Gramin (PMAY-G), with recipients obtaining ₹1,30,000 for the construction of houses, significantly contributing to improved housing conditions.

Only 12.5 per cent of households benefitted from the National Social Assistance Programme (NSAP), under which beneficiaries received ₹500 per month, reflecting a limited but critical source of social protection for elderly and vulnerable groups. Meanwhile, 46.4 per cent of households accessed services under the Pradhan Mantri Jan Arogya Yojana (PMJAY), which provided them with a smart health card offering financial coverage for hospitalization and thereby reducing the burden of healthcare costs.

The National Rural Health Mission (NRHM) reached 80.4 per cent of households, delivering home visitation by ASHA workers, provision of nutritional support, medicines, and essential health services, thereby strengthening primary health outreach. Likewise, 53.6 per cent of households benefitted through the Meghalaya State Rural Livelihoods Mission (MSRLM), primarily through the formation of Self-Help Groups (SHGs), skill training programs such as mushroom cultivation, financial literacy, financial inclusion and livelihood promotion activities, which facilitated women’s empowerment and income diversification.

Collectively, these findings emphasized that while a broad spectrum of households benefitted from welfare schemes, the degree of coverage and nature of benefits varied, reflecting both the reach of social protection programs and the ongoing need for strengthening inclusivity and accessibility.

SECTION-II

Community Perspectives and Participatory Insights

To complement the household survey findings, a Participatory Rural Appraisal (PRA) was conducted in Nongspung-A village to capture community perspectives, perceptions, and priorities. While the quantitative analysis provided measurable insights into membership, participation, and access to government schemes, the PRA offered a deeper, contextual understanding of village realities by engaging the community directly in the research process. The PRA was held on August 2, 2025, and involved approximately 50 villagers, including men, women, and children, in a series of interactive sessions. Unlike structured surveys, PRA emphasized dialogue and visualization, enabling participants to collectively analyze their

environment, identify gaps, and prioritize solutions. This qualitative approach not only highlighted the lived experiences of the villagers but also helped contextualize the survey findings.

A range of participatory tools such as Timeline Mapping, Resource and Social Mapping, Health Matrix, Seasonal Calendar, and Problem Inventory/Analysis was used to explore historical developments, resource distribution, health issues, seasonal patterns, and key challenges faced by the community.

1. **Timeline Mapping:** To capture chronological events and developments.
2. **Resource Mapping:** To visualize natural, physical, and social assets.
3. **Social Mapping:** To depict habitation patterns, housing, and infrastructure.
4. **Health Matrix:** To identify, categorize, and prioritize health issues by gender and age.
5. **Seasonal Calendar:** To map annual patterns in crops, livelihoods, food security, workload, expenditure, health, migration, and social events.
6. **Problem Inventory/Analysis:** To list, categorize (by timeframe), and prioritize challenges based on frequency.

Data was collected through facilitated discussions, ensuring inclusivity across demographics. BMI measurements were taken for health analysis, and visual aids (e.g., maps) were photographed for reference.

PRA Key Findings

1. **Timeline:** Timeline captured the chronology of events as recalled by local people. It is drawn as a sequential aggregate of past events. It thus provided the historical landmarks of a community individual or institutions. The important point to note here is that it is not history as such but events of the past as perceived and recalled by the people themselves.

Table 11

Timeline chart

Time frame	Event
1962	Village established
1963	Started Agriculture farming
1976	Govt. school established
1982	Village road was taken by PWD
1983	Anganwadi established
1988	Tea shop (hotel)
1990	Electricity connectivity

1994	PHE was implemented
1996	Ration card
2000	Started using mobile
2005	Started using private vehicle
2009	First Grocery shop
2010	PMAY implemented (Housing)
2014	National Social Assistance Program (Old age pension)
2016	Concrete road (black topping)
2017	Toilet Scheme
2019	Formation of Self Help Group
2021	Community hall was sanctioned in 2021 and constructed in 2025
2024	First Pharmacy

Key Observations

- i. **Natural Resource Base:** The village is endowed with significant natural resources, including a river, ponds, a forest area, and plantations (Pineapple, Betel Nut, Banana). These form the core ecological capital for agriculture, fishing, and potentially sustainable forestry, supporting the primary livelihoods of the community.
 - ii. **Physical Infrastructure:** Key infrastructures like the P.W.D. road, bridge, and private roads create a network that connects different parts of the village and links it to the outside world. This is crucial for transportation, market access, and overall mobility.
 - iii. **Renewable Energy:** The presence of solar panel units indicates a community initiative towards adopting sustainable energy solutions. This reduces dependence on the conventional grid and provides a model for future expansion of renewable energy.
 - iv. **Social Infrastructure:** Assets like the school, community hall, and church are mapped, showing established spaces for education, community gatherings, and worship. Their presence is a key indicator of social organization.
 - v. **Economic Activities:** The map also indicates the existence of a stone mine and shops, pointing to economic activities beyond agriculture. This suggests a degree of economic diversification and local entrepreneurship.
3. **Social Mapping:** Social mapping complemented resource mapping by focusing on habitation, housing patterns, and social infrastructure. Villagers drew a map identifying 56 houses, including 6 migrant houses and 1 disabled house.

Figure 2
Social Map of Nongspung-A



Key observations

- i. **Accessibility of Amenities:** Essential services like the church, school, Anganwadi centre, community hall, and playground **are centrally** located. This strategic placement ensures equitable access for all households and facilitates community cohesion and collective action.
 - ii. **Water Infrastructure:** The map details extensive water infrastructure, including a Jal Jeevan Mission water tank, NRM water tank, community ring wells, and individual water taps connected to all 56 houses. This suggests significant government investment and coverage.
 - iii. **Migration:** The identification of 6 migrant houses indicates that seasonal or long-term migration is a recognized and integrated livelihood strategy for several families, providing an alternative source of income.
 - iv. **Vulnerable Groups:** The specific mapping of 1 disabled house demonstrates community awareness of social equity and the need to include vulnerable members in planning processes.
 - v. **Public and Private Services:** The coexistence of public facilities (government school, Anganwadi) with private enterprises (4 shops, 1 pharmacy, 1 resort) shows a blend of community support and private initiative in meeting the village's needs.
4. **Health Matrix:** The Health Matrix is often used in Participatory Rural Appraisal (PRA) to help communities identify, analyze, and prioritize health problems in their area. It is particularly useful in rural or resource-limited settings where local input is critical to designing appropriate health interventions.

Table 12

Frequency analysis of common health issues

Sl.no	Health issues	Male	Female	Children	Total	Rank
1	Headache	2	8	4	14	1
2	Stomach pain	2	3	6	11	2
3	Back pain	3	7	-	10	3
4	Knee	3	4	-	7	4
5	Waist pain	3	2	-	5	5
6	Calf	2	3	-	5	5
8	Back muscle	3	1	-	4	6
7	Chest pain	-	4	-	4	6
9	Eye	-	2	1	3	7
10	Nose	-	-	3	3	7

11	Elbow	1	1	-	2	8
13	Tigh	1	1	-	2	8
12	Neck	-	2	-	2	8
15	Buttocks	1	-	-	1	9
19	Wrist	1	-	-	1	9
14	Skin	-	1	-	1	9
16	Ankle	-	1	-	1	9
17	Ears	-	1	-	1	9
18	Shoulder	-	1	-	1	9

The table lists 18 different health issues, each with its corresponding total number of cases, as well as the breakdown by gender and age group. The health issues are ranked according to their total number of cases.

Key Observations:

- i. **Prevalent Issues:** Headache, stomach pain, and back pain are the top three, accounting for 35 cases (over half the total reported), suggesting widespread environmental, dietary, or stress-related factors in the community.
- ii. **Gender Disparities:** Females report higher incidences in headache (8), back pain (7), chest pain (4), and neck pain (2), possibly linked to occupational roles like farming or household labor. Males predominate in knee (3), waist (3), and back muscle pain (3), indicating potential ties to physical exertion.
- iii. **Child-Specific Concerns:** Children are most affected by stomach pain (6) and nose issues (3), highlighting possible nutritional deficiencies, hygiene problems, or seasonal illnesses, with no reports of pain-related adult issues.

Table 13

Body Mass Index (BMI) Analysis

Category (N=48)	BMI measurement	Percent
Male (N=16)	Underweight: < 18.5	13
	Normal: 18.5–24.9	69
	Overweight: 25–29.9	5
	Obese: ≥ 30	13
Female (N=15)	Underweight: < 18.5	7
	Normal: 18.5–24.9	60
	Overweight: 25–29.9	20
	Obese: ≥ 30	13

Children (N=17)	Underweight: < 18.5	53
	Normal: 18.5–24.9	35
	Overweight: 25–29.9	6
	Obese: ≥ 30	6

The BMI data showed the nutritional status of the sampled villagers in Nongspung-A. BMI was a measure of body fat based on height and weight, with standard ranges: underweight (<18.5), normal (18.5–24.9), overweight (25–29.9), and obese (≥30). The percentages reflected the proportion in each category, highlighting potential health trends.

For males, the majority (69 per cent) fell in the normal range, indicating generally balanced nutrition. However, 13 per cent were underweight, which could have suggested inadequate calorie intake, poor diet, or underlying health issues such as chronic illness. Only 5 per cent were overweight, but 13 per cent were obese, pointing to a smaller subset at risk for conditions such as diabetes or heart disease, possibly due to sedentary lifestyles or high-calorie diets. Females showed a similar pattern, with 60 per cent in the normal range, reflecting decent overall health. Underweight affected 7 per cent, potentially linked to factors like workload, pregnancy, or food access. Overweight was more common at 20 per cent, and obesity stood at 13 per cent, which may have indicated gender-specific risks, such as hormonal influences or dietary habits, increasing vulnerability to metabolic disorders. Children presented the most concerning profile, with 53 per cent underweight, signalling widespread malnutrition, growth stunting, or insufficient access to nutritious foods—common in rural areas with seasonal food scarcity. Only 35 per cent were normal, while overweight and obese each accounted for 6 per cent, suggesting emerging overnutrition in a small group, possibly from inconsistent diets or urban influences.

The table indicated nutritional imbalances in the community: undernutrition was prevalent (especially among children, affecting over half), while overnutrition appeared in adults (around 18–33 per cent combined overweight/obese). This could have stemmed from agricultural dependencies, limited healthcare, or economic factors. Interventions such as nutrition education, food security programs, and regular screenings would have been beneficial to address these disparities and promote healthier BMI distributions.

1. **Seasonal Calendar:** This seasonal calendar illustrates the interconnected cycles of agriculture, economy, health, migration, and social life over the year, highlighting vulnerabilities and peaks that inform rural planning.

Table 14

Seasonal Calendar Chart

Variables	January	February	March	April	May	June	July	August	September	October	November	December
Crop	Mustard Leaf, Banana	Banana	Banana	Banana	Banana, Chilli, Mango	Banana Chilli Mango	Pumkin, Mango, Corn, Chilies, Banana, Lichi, Bettel, Leaves	Banana, Pine-Apple	Banana, Pineapple	Banana, Carrot, Cabbage, Cucumber,	Rice, Cabbage, Cucumber	Maize, Rice
Livelihoods / Income		Banana, Corn, Flower	Corn, Rice, Pumkin, Taro, Cassava, Millet, Black Seme	Pumkin		Rice, Bettel-Nut, Jack-Fruit, Lichi, Pineapple, Lemon, Silkworm	Rice, Bettel Nut, Jackfruit, Lemon, Silkworm					
Food availability security		5	9	8	3	4	10		6	7	1	2
Work Load			Job card, Plantation crop			Self Help Group	Self Help Group					
Expenditure	2	7	4	12	6	3	5	10	8	11	9	1

Health issue	Coughing, Sneezing,		Fever	Fever	Smallpox	Malari, Dysentery,	Malaria, Dysentery, Headache		Fever	Fever	Cold	Coughing Sneezing
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	Livestock, Health Issue					Headache, Smallpox						
Migration	Assam-for work	Assam-house keeping	Out of NE for work				Assam-company				Return home	Return home
Social Events	New Year	General meeting, School function				School Vacation	School Vacation		School function	Children Camping, Dance competition	<i>Wangala</i> dance	Wedding Christmas

Key observations:

- i. **Crop Patterns:** Banana serves as a staple, perennial crop available year-round, providing consistent food and income stability. Crop diversity peaks in July with a wide array (pumpkin, mango, corn, chilies, banana, litchi, betel leaves), reflecting the monsoon harvest bounty, while variety dips significantly from February to April (limited to banana) and shifts to vegetables and staples like rice and maize in October-December, indicating post-monsoon and winter focuses.
- ii. **Livelihoods and Income Sources:** Income opportunities are concentrated in specific periods, with February-March featuring diverse sales (banana, corn, flower, rice, pumpkin, taro, cassava, millet, black sesame), marking an early-year peak. June-July emphasizes high-value items like rice, betel nut, jackfruit, litchi, pineapple, lemon, and silkworm products, suggesting summer as a key earning phase. Sparse data in other months implies reliance on subsistence or unrecorded non-farm activities, potentially creating income gaps.
- iii. **Food Availability and Security:** Rated on a 1-10 scale (higher better), security fluctuates dramatically, peaking at 10 in July amid abundant harvests and dipping to lows of 1-2 in November-December, signaling end-of-year scarcity risks. Moderate levels in March (9) and April (8) contrast with lows in May (3) and June (4), aligning with pre- monsoon transitions and underscoring the need for storage or supplementation during lean periods.
- iv. **Workload Dynamics:** Labor intensifies selectively, with March focused on job card schemes and plantation crops (government-supported employment), and June-July on Self-Help Groups (SHGs) for cooperative activities like processing or marketing. Blank entries in most months suggest routine farming dominates, but these peaks may overlap with high physical demands, contributing to health strains.
- v. **Expenditure Trends:** Rated 1-12 (higher more), spending surges in April (12), possibly for agricultural inputs during planting, and October-November (11-9) amid festivals and low food security, necessitating purchases. Lows in December (1), January (2), and June (3) correlate with harvest self-sufficiency, while moderate highs in August-September (10-8) and February (7) may tie to school or migration costs.
- vi. **Health Issues:** Seasonal patterns are evident, with cold-related ailments (coughing, sneezing, cold) dominating November-January, including livestock health concerns in January. Fevers recur in March-April and September-October, likely from weather

transitions, while monsoon months (May-July) bring severe issues like smallpox, malaria, dysentery, and headaches, peaking in June-July due to waterborne and vector risks exacerbated by rainfall.

- vii. **Migration Flows:** Labor migration to Assam is outbound-focused in January-March (for work, housekeeping) and July (company jobs), reflecting off-season job-seeking outside Meghalaya. Returns occur in November-December, aligning with harvest needs and festivals, potentially straining family structures but providing remittances during low local income periods.
 - viii. **Social Events:** Community life revolves around cultural and educational milestones, starting with New Year in January and general meetings/school functions in February. School vacations span June-July, allowing family time amid high workloads, while September-October features school functions, children's camping, and dance competitions. November-December culminates in Wangala dance (harvest festival) and weddings/Christmas, fostering social cohesion during low-food but post-harvest periods.
6. **Problem Inventory/ Analysis:** Problem inventory or analysis is a Participatory Rural Appraisal (PRA) exercise that helps villagers systematically identify, analyze and prioritize the challenge they face in their daily lives and livelihoods. assess their significance.

**Table 15 Now-
Soon-Later**

Now (Within 1 year)	Rank	Soon (1-5 year)	Rank	Later (5 years & beyond)	Rank
Drinking water	1	Hospital	1	Playground	1
Educated teacher	2	School	2	college	2
Ambulance	2	Road	3	school bus	3
Weekly market	2	Public toilet	4		
Public dustbin	3				

The table presented the Problem Inventory/Analysis conducted as part of the Participatory Rural Appraisal (PRA) in Nongspung-A Village. This “Now–Soon–Later” (NSL) chart was used to help villagers systematically identify, prioritize, and categorize challenges based on the urgency and timeframe for addressing them.

- **“Now”** represents issues that need immediate attention, typically within one year.
- **“Soon”** includes problems that should be addressed in the medium term, within 1–5 years.

- **“Later”** highlights issues that can be addressed in the long term, beyond five years.

The table lists various community needs along with their relative **rank**, reflecting the villagers’ assessment of their importance:

- Immediate concerns (**Now**) include drinking water, educated teachers, ambulance services, weekly markets, and public dustbins.
- Medium-term priorities (**Soon**) focus on hospitals, schools, roads, and public toilets.
- Long-term priorities (**Later**) highlight playgrounds, colleges, and school bus services.

This chart provides a visual representation of community-perceived priorities, helping planners and policymakers understand which issues require urgent interventions and which can be addressed over time.

Key findings of PRA

The integrated analysis of all PRA tools reveals a village at a crossroads, with a strong foundation of community assets and gradual development but facing significant systemic challenges.

- Gradual Development with Persistent Gaps:** The timeline shows consistent progress in infrastructure and social security. However, the problem inventory confirms that essential services like potable water supply and healthcare remain inadequate, indicating a gap between infrastructure installation and sustainable, reliable service delivery.
- Water: The Central Challenge:** The acute scarcity of drinking water (Problem Inventory) is the community's paramount concern. This is paradoxical given the presence of rivers, ponds, the Jal Jeevan Mission tank, and a history of PHE implementation (Timeline). This suggests issues with water quality, distribution, seasonal availability, or maintenance of the water supply system.
- Significant Health and Nutritional Concerns:** The Health Matrix reveals a high prevalence of preventable and manageable conditions:
 - Pain-related ailments** (headache, stomach, back) likely linked to strenuous agricultural livelihoods, dehydration, and poor posture.
 - Seasonal outbreaks** of vector-borne (malaria) and waterborne (dysentery) diseases during the monsoon, exacerbating the health burden.
 - The **BMI analysis** reveals a **critical child malnutrition crisis** (53% underweight), alongside a double burden of undernutrition and rising overnutrition among adults, pointing to issues of dietary diversity, food security, and health awareness.

- iv. **Pronounced Seasonal Vulnerability:** The Seasonal Calendar depicts a community whose life is dictated by agricultural and climatic cycles.
 - a. **Food insecurity** is severe from May-June (pre-monsoon) and November-December (post-harvest), directly impacting nutritional status.
 - b. **Income is irregular**, peaking around harvests (July), leading to high expenditure periods and necessitating seasonal migration to Assam for work.
- v. **Strong Social Capital and Natural Resource Base:** The resource and social maps highlight a well-connected village with a cohesive community structure, a place of worship, a school, and community halls. Abundant natural resources like rivers, forests, and fertile land for diverse plantations (pineapple, betel nut, banana) form a strong base for sustainable livelihood interventions.

The PRA exercise in Nongspung-A successfully empowered the community to articulate their development narrative a story of resilience underpinned by rich natural and social capital, yet challenged by critical gaps in basic services. The village's priorities are clear: water, health, and food security. The path forward must be community driven and partnership based. The solutions must leverage local knowledge and participation while integrating technical support and advocacy from government agencies and civil society. By addressing the immediate water crisis and concurrently working on longer-term health and livelihood security, Nongspung A can truly transition towards a sustainable and prosperous "Smart Model Village." The strong sense of community and history of collective action, as evidenced in this PRA, are the greatest assets for achieving this transformation.

CHAPTER - IV

DISCUSSION

The present study adopted a concurrent triangulation mixed-method design, combining quantitative household surveys with qualitative Participatory Rural Appraisal (PRA) exercises, to generate a comprehensive understanding of the socio-economic conditions in Nongspung-A Village. This chapter synthesizes the findings from both approaches, highlighting patterns, divergences, and implications for rural development interventions.

4.1 Demographic and Socio-Economic Profile

The quantitative survey indicated that Nongspung-A consists of 56 households with a total population of 273 individuals, exhibiting a relatively balanced gender distribution (135 males, 138 females). The average per capita income was estimated at ₹4,761 per month, or ₹57,127 annually, reflecting modest household earnings primarily derived from agriculture, wage labor, and seasonal employment. Qualitative findings from PRA corroborated these results, showing that households rely heavily on forest resources, plantations, and small-scale trading as supplementary income sources.

The findings also revealed that education and healthcare access remain limited. PRA insights emphasized the community's prioritization of education, with residents highlighting the need for qualified teachers and better school infrastructure. These qualitative reflections align with the quantitative finding that households depend largely on local government schools for primary education, suggesting that both service quality and availability remain critical concerns.

4.2 Housing, Amenities, and Utility Services

The quantitative data showed that 71.4 per cent of households lived in pucca houses, with 96.4 per cent having electricity connections. However, some households resorted to illegal electricity hookups, indicating gaps in formal infrastructure accessibility. Cooking fuel usage revealed continued reliance on traditional energy sources with 60.7 percent using firewood, despite growing LPG adoption (39.3 per cent).

PRA findings added contextual depth, illustrating that accessibility challenges are compounded by terrain and seasonal constraints. For example, households reported difficulty accessing water and fuel during monsoon months, which impacts daily labor and time allocation, especially for women and children.

4.3 Financial Inclusion and Livelihoods

The quantitative survey highlighted limited access to formal credit, with only 21.4 per cent of households having taken loans in the last five years, mostly from banks, and a minor reliance on SHGs and cooperatives. SHG membership was relatively high at 69.6 per cent, and PRA analysis indicated that these groups played a critical role in skill development, income-generating activities, and social support, suggesting that informal financial mechanisms complemented formal banking.

Participation in income-generating schemes, MGNREGA, and PMAY-G was significant, as corroborated by PRA exercises where villagers recounted the tangible benefits of these programs, including housing construction, wage support, and skill training. This triangulation underscores the interplay between government interventions, community mobilization, and household livelihoods.

4.4 Healthcare and Nutritional Status

Quantitative findings highlighted that most households preferred the Primary Health Centre with 57.1 per cent, followed by private clinics with 30.4 per cent, while health insurance coverage remained low with 28.6 per cent, primarily through Ayushman Bharat cards. PRA observations highlighted seasonal health vulnerabilities, including vector-borne and waterborne diseases during monsoon months, alongside widespread malnutrition, particularly among children (53 per cent underweight).

These results collectively indicated the dual burden of limited access to healthcare services and poor nutritional outcomes. The qualitative narratives emphasized the role of ASHA visits, Anganwadi programs, and self-care practices, offering critical insights into community coping mechanisms and health-seeking behaviors.

4.5 Community Participation and Governance

The survey data showed limited membership in formal community organizations with 10.7 per cent but high attendance in community meetings comprising of 89.3 per cent, suggesting that villagers actively engage in decision-making even without formal organizational affiliations. PRA findings corroborated this, indicating that village council-led meetings are central to participatory governance, yet inconsistencies in meeting frequency and inclusivity pose challenges to equitable decision-making.

This triangulation reveals a nuanced pattern: while institutional membership is low, social capital and participatory norms remain strong, forming a foundation for community-driven development interventions.

4.6 Access to Government Schemes

The quantitative data revealed moderate-to-high awareness and utilization of government programs such as MGNREGA with 83.9 per cent, NRHM with 89.3 per cent, PMAY-G with 64.3 per cent, and MSRLS with 71.4 per cent. PRA findings enriched this perspective by documenting specific benefits of MGNREGA wages, PMAY-G housing funds, NRHM home visits and medicines, MSRLM skill training, and SHG formation.

The integration of both data sources portrayed that while scheme awareness is widespread, effective utilization depends on accessibility, information dissemination, and community engagement.

4.7 Seasonal and Contextual Vulnerabilities

The PRA seasonal calendar revealed fluctuations in food security, income, and health outcomes, with lean periods during pre-monsoon and post-harvest months. Migration to Assam for labor during low-income months was prevalent. These seasonal trends explain the quantitative survey observations of income variability, expenditure peaks, and reliance on temporary employment schemes.

4.8 Synthesis and Implications

By triangulating quantitative and qualitative findings, the study highlighted the following key insights:

1. **Infrastructure and Services:** While physical infrastructure has improved (roads, electricity, schools), gaps remain in drinking water, healthcare, and educational quality.
2. **Livelihood Diversification:** Agriculture remains primary, supplemented by wage labor, SHGs, and seasonal migration. Financial inclusion through SHGs and bank loans is critical for economic resilience.
3. **Health and Nutrition:** Seasonal health vulnerabilities and child malnutrition highlight the need for targeted nutrition programs and strengthened healthcare delivery.
4. **Community Engagement:** High participation in meetings but low formal membership indicates a need to strengthen institutional mechanisms to support equitable decision-making.

5. **Government Schemes:** Awareness is high, but effective uptake is mediated by access, information, and community mobilization.

The concurrent triangulation approach validated survey findings through PRA insights, providing a holistic understanding of the village's socio-economic conditions, seasonal vulnerabilities, and developmental priorities. These integrated findings can inform targeted, community driven, and sustainable interventions.

CHAPTER - IV

MAJOR FINDINGS AND RECOMMENDATIONS

5.1 Major Findings

Based on the concurrent triangulation mixed-method study, combining quantitative household survey data and qualitative PRA insights, the following key findings emerged:

5.1.1 Demographics and Livelihoods

- Nongspung-A Village has 56 households with a total population of 273, showing balanced gender distribution (135 males, 138 females).
- Agriculture, wage labor, and forest-based resources remain the primary sources of livelihood. Seasonal migration to Assam provides supplementary income for some households.
- The average per capita income was estimated at ₹4,761 per month and ₹57,127 per year, indicating a modest economic base with vulnerability to seasonal fluctuations.

5.1.2 Access to Basic Amenities

- Electricity: 96.4 per cent of households had formal electricity connections; however, a small proportion of 3.6 per cent relied on informal access.
- Cooking fuel: 60.7 per cent used firewood, while 39.3 per cent relied on LPG, reflecting continued dependence on traditional energy sources.
- Water: Drinking water scarcity was identified as the most critical problem in both the survey and PRA, despite the presence of rivers, ponds, and Jal Jeevan Mission infrastructure.

5.1.3 Communication and Technology

- Mobile phone ownership was widespread with 94.6 per cent, and with 89.3 per cent having internet access, indicated significant penetration of modern communication technologies.
- Ownership of other household appliances such as refrigerators (23.2 per cent) and washing machines (14.3 per cent) was moderate, highlighting partial adoption of modern amenities.

5.1.4 Financial Inclusion and SHGs

- Only 21.4 per cent of households had taken loans in the last five years, mostly from banks, with minor reliance on SHGs and cooperatives.

- Membership in SHGs was relatively high (69.6 per cent), and PRA findings highlighted their role in skill development, income-generating activities, and social support.
- Savings were predominantly maintained through bank accounts (78.6 per cent), with a smaller proportion retaining cash at home (17.8 per cent).

5.1.5 Health and Education

- Healthcare access relied primarily on the nearest Primary Health Centre (57.1 per cent), with some households opting for private clinics (30.4 per cent) and hospitals (12.5 per cent).
- Health insurance coverage was low (28.6 per cent), mainly through Ayushman Bharat cards.
- Health issues included headache, back pain, stomach pain, and seasonal diseases such as malaria and dysentery, with children showing high rates of undernutrition (53 per cent underweight).

5.1.6 Community Participation and Governance

- Membership in community organizations was limited to 10.7 per cent, but attendance at meetings was high (89.3 per cent), reflecting active engagement when forums were convened.
- The conduct of community meetings by village council members was irregular, which may reduce the effectiveness of participatory governance.

5.1.7 Government Schemes and Social Protection

- Awareness of government schemes was high (MGNREGA 83.9 per cent, NRHM 89.3 per cent), and utilization varied.
- Beneficiaries reported receiving support such as PMAY-G housing (₹1.3 lakh), MGNREGA wages, NSAP pensions (₹500/month), home visits and medicines via NRHM, and SHG-based skill training (e.g., mushroom cultivation).

5.1.8 Seasonal Vulnerabilities and PRA Insights

- PRA revealed strong seasonal variations in agriculture, income, food security, and health.
- Food insecurity peaked in pre-monsoon (May-June) and post-harvest months (November-December).
- The village possesses substantial natural and social capital (rivers, forests, school, community hall, pharmacy), yet challenges in water supply, health infrastructure, and diversified livelihoods persist.

5.2 Recommendations

Based on the integrated analysis, the following interventions are proposed at community and policy levels:

5.2.1 Immediate Interventions (0–1 Year)

- **Water Management:** Conduct technical audits of water systems, implement rooftop rainwater harvesting, and organize community awareness campaigns on water conservation.
- **Health Camps:** Organize monthly health check-ups through local health authorities, with focus on children and women.

5.2.2 Short-Term Interventions (1–3 Years)

- **Livelihood Support:** Strengthen SHGs through skill development, value addition of local produce, and microenterprise support.
- **Nutrition Programs:** Implement community-based nutrition education and supplementary feeding for children and mothers via Anganwadi centres.
- **Road Maintenance:** Ensure roads are maintained to facilitate market access, healthcare, and emergency services.

5.2.3 Medium to Long-Term Interventions (3–5+ Years)

- **Healthcare Infrastructure:** Advocate for the establishment of a sub-centre or PHC within accessible distance.
- **Education Enhancement:** Upgrade schools, improve teacher availability, and consider transport solutions like school buses.
- **Economic Diversification:** Promote eco-tourism, sustainable NTFP harvesting, and agro-entrepreneurship for youth.
- **Community Facilities:** Establish playgrounds, weekly markets, and public sanitation facilities to enhance quality of life.

5.3 Conclusion

The socio-economic and PRA analysis of Nongspung-A Village highlighted a community with rich natural and social resources, a history of gradual development, and strong participatory potential. Despite these strengths, critical gaps remain in water availability, healthcare, nutrition, and livelihood diversification. The findings depicted the need for a community driven, multi-sectoral approach that combines immediate interventions in water and health with long-term strategies for livelihood diversification, education, and social infrastructure

development. Strengthening SHGs, leveraging government schemes, and empowering local governance structures can transform Nongspung-A into a sustainable and resilient model village. By integrating quantitative data with qualitative community perspectives, this study provided actionable insights for policymakers, development practitioners, and the local community to enhance livelihoods, well-being, and equitable access to resources.

ANNEXURE – I

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ANNEXURE - II

DEPARTMENT OF RURAL DEVELOPMENT UNIVERSITY OF SCIENCE AND TECHNOLOGY MEGHALAYA

Interview schedule

SOCIO-ECONOMIC HOUSEHOLD SURVEY OF NONSPUNG VILLAGE, MEGHALAYA

Village: Nonspung A

Date of Survey:

Block: Umling

Sl. No.: _____

District: Ri-Bhoi

State: Meghalaya

Demographic Profile

1. Name of Respondent: _____
2. Gender of Head of Household: 1) Male 2) Female 3) Other
3. Age of Head of Household: _____
4. Caste/Tribe: 1) Khasi 2) Garo 3) Other
5. Community: 1) ST 2) SC 3) OBC 4) General
6. Religion: 1) Christianity 2) Hinduism 3) Islam 4) Other: _____
7. Number of family members: _____
8. Highest educational qualification of household head:
1) Illiterate 2) Primary 3) Secondary 4) Higher Secondary 5) Graduate 6) Higher Education
9. No. of children attending school: 1) Boys: _____ 2) Girls: _____
10. Distance to nearest school (km): _____
11. Any dropout in household in last 5 years? 1) Yes 2) No
12. If yes, reason: 1) Financial 2) Distance 3) Lack of interest 4) Other: _____
13. Number of Dropout students _____

Housing and Amenities

14. Type of house: 1) Kutcha 2) Semi-Pucca 3) Pucca
15. Ownership of house: 1) Owned 2) Rented
16. Source of drinking water: 1) Public tap 2) Well 3) River 4) Household connection
17. Sanitation facility: 1) Own toilet 2) Shared 3) Open defecation
18. Electricity connection: 1) Yes 2) No
19. If yes, monthly electricity bill _____
20. Cooking fuel used: 1) Firewood 2) LPG 3) Kerosene 4) Other: _____
21. Mobile phone in the household? 1) Yes 2) No
22. TV/Radio ownership? 1) TV 2) Radio 3) None
23. Internet access? 1) Yes 2) No
24. Refrigerator: 1) Yes 2) No
25. Washing Machine: 1) Yes 2) No
26. Water Filter (Concrete Portable water tank with sand/coal/stone) : 1) Yes 2) No
27. Two Wheeler: 1) Yes 2) No
28. Four Wheeler: 1) Yes 2) No

Livelihood and Occupation

29. Occupation of household head:
1) Agriculture 2) Daily wage labour 3) Government 4) Private 5) Business
6) Unemployed 7) Other: _____
30. Secondary occupation (if any): _____
31. Number of Working Members _____

32. Occupation of working members:

Sl No.	Name	Age	Gender	Type of Occupation	Monthly Income

33. Do you own agricultural land? 1) Yes 2) No If

yes, how much? _____ bighas

34. What do you cultivate? _____ -

35. Do you have any livestock? 1) Yes 2) No

If yes, what type? 1) Cow 2) Goat 3) Poultry 4) Pig 5) Others: _____

36. Do you sell the livestock? 1) Yes 2) No If

yes, where? _____ **Migration**

37. Has any member migrated for work? 1) Yes 2) No

38. If yes, then destination of migration: 1) Within Meghalaya 2) Outside Meghalaya

Household Income and Saving

39. Monthly income of the household head _____

40. Monthly family income (approx.): ₹ _____

41. Do you have Bank Account? 1) Yes 2) No

If yes, Can you name the Bank _____

42. Mode of Savings: 1) Bank Account

2) Savings in Cash at Home

3) No Savings

43. Do you have access to banking facilities? 1) Yes 2) No

44. If yes, specify the type(s) of access: *(Tick all that apply)*

1) ATM/debit card

2) Mobile banking or UPI (e.g., Google Pay, PhonePe)

3) Bank is located within 5 km

4) Access to Business Correspondent (Bank Mitra)

5) Post Office savings services

6) SHG-based savings linked to bank

7) Others: _____

Credit and Loan Access

45. Have you or any member of your household taken any loan in the past 5 years? 1) Yes 2) No

46. If yes, what was the purpose of the loan? *(Tick all that apply)*

1) Agriculture or livestock

2) House construction/repair

3) Education

4) Health/medical expenses

5) Small business/self-employment

6) Social functions (e.g., marriage)

7) Repayment of other loans

8) Consumption needs

9) Others (please specify): _____

47. Where was the loan taken from? *(Tick all that apply)*

1) Bank

2) Self-Help Group (SHG)

3) Microfinance Institution

4) Cooperative Society

5) Moneylender

- 6) Friends/Relatives
 7) Others (please specify): _____
48. Was the loan repaid?
 1) Fully repaid
 2) Partially repaid
 3) Not repaid
 4) Still repaying
49. Did you face any difficulties in accessing loans or credit? 1) Yes 2) No
50. If yes, what were the main difficulties? (*Tick all that apply*)
 1) Lack of required documents (ID, income proof, etc.)
 2) No collateral or guarantor
 3) Complex bank procedures
 4) High interest rates
 5) Delay in processing
 6) Limited awareness of schemes
 7) Distance to financial institution
 8) Not eligible (income, etc.) specify reason _____
 9) Poor credit history
 10) Others (please specify): _____

Participation in Self Help Group

51. Is any member of your household a part of a Self-Help Group (SHG)? 1) Yes 2) No If yes, how many household members are part of an SHG? _____
52. What is the gender of the SHG member(s)?
 1) Female 2) Male 3) Both
53. What is the name of the SHG (if known)? _____
54. Who facilitated the formation of the SHG?
 1) Government (e.g., NRLM / MSRLS)
 2) NGO / Community-Based Organization
 3) Self-initiated by community
 4) Don't know
55. What activities does the SHG engage in? (*Tick all that apply*)
 1) Monthly savings and internal lending
 2) Income-generating activities (weaving, piggery, food processing, etc.)
 3) Training and skill development
 4) Health or sanitation awareness
 5) Accessing government schemes
 6) Others: _____
56. Has your household received any benefit from SHG participation? (*Tick all that apply*)
 1) Loan or credit access
 2) Training / skill support
 3) Income improvement
 4) Social support / group solidarity
 5) None
 6) Others: _____
57. How frequently do SHG meetings take place?
 1) Weekly
 2) Monthly
 3) Irregular
58. How would you rate the SHG's impact on your household?
 1) Very positive
 2) Somewhat positive
 3) No change
 4) Negative
 5) Don't know

Health and Healthcare Access

59. Distance to nearest health centre (km): _____
60. Can you name the nearest health centre _____
61. Preferred health facility for treatment:
 1) Sub-Center 2) PHC 3) CHC 4) District Hospital 5) Private Clinic 6) Private Hospital
 7) Traditional Healer 4) Others: _____
62. Why did you prefer this health facility? _____
63. Did any household member suffer from chronic illness? 1) Yes 2) No If yes, then specify _____
64. Are you enrolled in any health insurance scheme? 1) Yes 2) No If yes, name: _____

Community Participation and Local Governance

65. Are you a member of any community-based organization? 1) Yes 2) No If yes, Specify _____
66. Are there regular community meetings held? 1) Yes 2) No
67. Do you participate in village meetings ?
 1) Attending meetings 1) Yes 2) No
 2) Sharing opinions 1) Yes 2) No
 3) Voting on village decisions 1) Yes 2) No
 If no, the why? _____

Access to Government Schemes

68. Are you aware of the following schemes? 1) Yes 2) No

Sl. No	Scheme	Response
1	Antyodaya Anna Yojana (AAY) Ration Card (poorest of the poor households – 35kgs of rice per month)	
2	Priority Household (PHH) Ration Card (economically weaker families not in the AAY category; Entitled to 5 kg of rice per person per month)	
3	Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) (job card – 100 days of guaranteed wage employment)	
4	Pradhan Mantri Awas Yojana- Gramin (PMAY-G) (financial assistance to poor rural families to build pucca houses; ₹1.2 lakh (plain areas) or ₹1.3 lakh (hilly/tribal areas))	
5	National Social Assistance Programme (NSAP) (old age pension; widow pension and disability pension)	
6	Pradhan Mantri Jan Arogya Yojana (PMJAY) (Ayushman Bharat- health insurance coverage up to ₹5 lakh per family per year for hospitalization)	
7	Meghalaya State Rural Livelihoods Society (MSRLS) (Self-Help Groups (SHGs) and women's empowerment through livelihood promotion, credit access, and training)	
8	National Rural Health Mission (NRHM) (ASHA workers, maternal and child health services, etc.)	

69. Have you received any benefits from these schemes? 1) Yes 2) No

Sl. No	Scheme	Response	If yes, Mention
1	Antyodaya Anna Yojana (AAY) Ration Card (poorest of the poor households – 35kgs of rice per month)		
2	Priority Household (PHH) Ration Card		

	<i>(economically weaker families not in the AAY category; Entitled to 5 kg of rice per person per month)</i>		
3	Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) <i>(job card – 100 days of guaranteed wage employment)</i>		
4	Pradhan Mantri Awas Yojana- Gramin (PMAY-G) <i>(financial assistance to poor rural families to build pucca houses; ₹1.2 lakh (plain areas) or ₹1.3 lakh (hilly/tribal areas))</i>		
5	National Social Assistance Programme (NSAP) <i>(old age pension; widow pension and disability pension)</i>		
6	Pradhan Mantri Jan Arogya Yojana (PMJAY) <i>(Ayushman Bharat- health insurance coverage up to ₹5 lakh per family per year for hospitalization)</i>		
7	Meghalaya State Rural Livelihoods Society (MSRLS) <i>(Self-Help Groups (SHGs) and women's empowerment through livelihood promotion, credit access, and training)</i>		
8	National Rural Health Mission (NRHM) <i>(ASHA workers, maternal and child health services, etc.)</i>		

70. In your opinion, what would help improve livelihood opportunities in your village?

ANNEXURE - III
GLIMPLSE OF NONGSPUNG-A VILLAGE



Housing & Settlement



Houses Constructed under PMAY Scheme



Nongspung Garo LP School



Church



Community Hall



Public Ground



Street Light



Village Roads & Footpaths



Shops Structures in the Village



Anganwadi Centre



Anganwadi Kitchen



Pharmacy



Sources of Drinking Water



Sanitation: Public and Private Toilets @ Bathrooms



Resort



Betelnut Plantation

ANNEXURE - IV

GLIMPSE OF PRA ACTIVITY

Year	EVENTS
1962	Union established
1963	Started education program
1976	Government school - established
1982	NGO work was established
1983	Organized in village till marginal land (1000) was bought
1988	For village and school started
1990	Electricity connectivity
1991	P.W. was established
1996	Water and soil established
2000	Started some small shops
2005	Started some small shops
2009	Started some small shops
2010	NGO established (new)
2014	NGO established (new)
2016	NGO established (new)
2017	NGO established (new)
2019	NGO established (new)
2021	NGO established (new)
2024	NGO established (new)

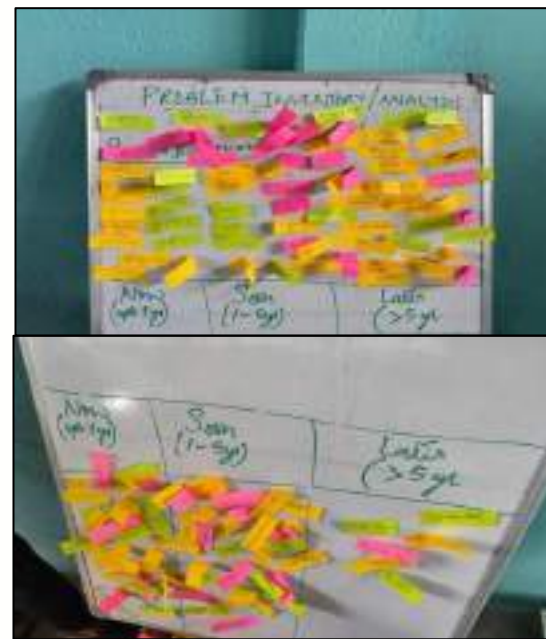
Timeline Mapping



Seasonal Calendar



Health Matrix Chart



Problem Inventory





Campus

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