

Internet Society Foundation

## Multiple Vulnerabilities of Adivasis and Tea Plantation Workers in Assam and West Bengal

An Analysis of Socio-Economic and Digital Milieux

A Baseline Report of Project Internet Roshni Phase II, 2024



MULTIPLE VULNERABILITIES OF ADIVASIS AND TEA PLANTATION WORKERS IN ASSAM AND WEST BENGAL: AN ANALYSIS OF SOCIO-ECONOMIC AND DIGITAL MILIEUX

A Baseline Report of Project Internet Roshni, Phase II

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### Executive Summary & Major Findings

Based on in-depth research on the socio-economic and digital milieux of the Adivasis and the tea plantation workers in the state of Assam and West Bengal, India this study provides an overview of the poor living conditions, lack of basic amenities, low wages and precarious working conditions of the Adivasis and the tea plantation workers in Assam and West Bengal. The study also analyses the gaps in the provisions of the Plantation Labour Act of 1951 and the real conditions in the tea gardens. This study focuses on the idea that digital geographies cannot be studied in isolation without bringing in the physical, social, economic and cultural materials to the study. Therefore, this study takes a socioeconomic approach as an entry point to understand the digital geographies amongst the Adivasis and the tea plantation workers in Assam and West Bengal. This study has brought to the front the increasing issues of casualisation, contractualisation and precariousness of the workforce in the tea plantation sector in Assam and West Bengal. This study also reflects upon the digital poverty of the tea plantation workers and the Adivasis whereby it is impacting their rights to access the basic needs. This study has shown the issues of connectivity in the tea gardens which leads to economic distress as well as leads them to not avail important benefits from various government schemes and programmes.

This study also highlights the aspirations of the youth in the tea gardens who want to learn digital skills and other vocational skills. However, they cannot access educational and other important job opportunities because of lack of information in the tea gardens. This study also shows how the youth and students have connectivity problems to travel to their school, colleges and how a lack of poor digital infrastructure upon a poorer physical infrastructure is keeping them behind on the parameters of development. The most important workforce on whose labour the tea plantation industry runs are women workers; their situation is worrying because they earn around Rs 4000 to Rs 6000 (48 to 72 USD) in a month, thereby making it difficult for them to manage their finances. The tea plantation women workers were not having ownership of smartphones and were relying on their male counterparts and family members for digital needs. The independence and the agency of the women workers were overridden due to the casual nature of work, low wages and other patriarchal structures in society.

This study would provide background support to Digital Empowerment Foundation to carry out necessary activities to strengthen the Adivasis and the tea plantation workers to enhance their digital skills, improve digital connectivity to make qualitative change in their ways of living.

#### **Major Findings**

- The Baseline Survey has been conducted in the tea estates of two States, Assam and West Bengal. For the survey selected districts of Dibrugarh, Jorhat, Udalguri and Sonitpur in Assam and districts of Alipurduar, Cooch Behar, Jalpaiguri and Darjeeling. The focus group discussions (FGDs) were conducted in the selected tea estates of Dibrugarh, Jorhat, Udalguri, Alipurduar, Jalpaiguri.
- The number of respondents from Dibrugarh is 794, Jorhat 320, Udalguri 221 and Sonitpur 35. Jalpaiguri has 701 respondents, Alipurduar 106, Cooch Behar 105 and Darjeeling 105
- Casualisation of workforce in the tea plantation sector

- » The share of permanent workers for the category of male and female is highest in Jalpaiguri of West Bengal (15%, 11.6%) and in Assam for men in district of Dibrugarh (10%), for women in Jorhat (10%).
- » The percentage of casual workers is higher among the female population across the districts of the surveyed region.
- Lack of basic infrastructure and poor amenities at the tea gardens
  - » The two major drinking water sources are borewell and tap water with more respondents having access to tap water. However, on field visit it was found that one source of tap water was catering to the needs of more than 5 families making it difficult for them to access water on time.
  - » Most of the tea estate owners provide accommodation facilities to the workers, with the highest respondent share being in the district of Dibrugarh in Assam (144 respondents). However, the conditions of the houses are in poor state where the Tea Estates doesn't invest in improving the housing conditions. The temporary and the casual workers don't get housing facilities.
  - » The respondents answered in affirmative about whether their houses were equipped with latrines. The field visit and the FGD indicated that the community residing in the tea gardens had to struggle to get toilets/ latrines made. In the case of Dibrugarh's tea estate, Dimakushi, there were very few houses which had latrines in their homes. Open defection is still a common practice in the tea gardens.

- Lack of higher education opportunities at the tea gardens
  - » For Assam in the district of Dibrugarh, the number of high schools is 154 and in the state of West Bengal, presence of primary schools is more in the tea estates, with Jalpaiguri having 549 schools.
  - » There are issues of connectivity at the tea gardens, where the college going students have to struggle to travel to colleges. Natural calamities like heavy rainfall and flood exacerbates students' difficulties in travelling.
  - » There are no proper computers or IT classes in the schools. Students are interested in gaining digital education, but they cannot because of lack of digital infrastructure in the schools.
- In Assam the highest percentage of people using ATM is in the district of Dibrugarh and in West Bengal the highest ATM card users is in the district of Jalpaiguri.
- Lack of awareness about the Plantation Labour Act, 1951
  - » In West Bengal, 12.52% workers in Darjeeling have awareness about rules in the Plantation Labour Act and 0.32% being the lowest awareness in Alipurduar. In Assam, 60.51% workers are aware about the rules and only 1.77% in the district of Sonitpur.
  - » The maximum working hours are eight hours for workers in both Assam and West Bengal.
- Very low wages for the tea plantation workers

- » The tea estate labourers get paid less as found in our study area. About 26.89% received salary of about Rs 5000 per month. To compensate for the low salary, few labourers (26.25%) work somewhere else as well.
- The major health facilities used by the workers are the OPD services (73.11%) at the health centres. For severe illness, most of the community members have to travel as farther as 100 km for treatment.
- The younger Adivasis community and the tea plantation workers are aware about the SIRISH portal in Assam, but they are not able to make full use of the portal due to lack of timely information.
- Digital poverty of the Adivasis community in the tea plantation sector
  - » The percentage share of those owning smartphone is highest in the district of Jalpaiguri (38.66%) in West Bengal, and the district of Dibrugarh has the highest percentage owners of smartphones (20.89%) in Assam.
  - The average money spent on recharge by people in Dibrugarh (89.78%) is less than Rs. 100 i.e. and more than Rs. 250 by people in the district of Jalpaiguri (43.32%).
  - The highest percentage of WhatsApp audiovideo call usage is in the district of Jalpaiguri (36.91%) followed by Dibrugarh (26.04%)
  - » In district of Alipurduar, the issue of internet among the respondents is mainly of slow loading (3.36%), in Cooch Behar of streaming (8.93%), in Darjeeling slow loading

(16.4%) and in Jalpaiguri of slow loading and streaming slow loading. Respondents in Dibrugarh has the highest number of issues (61.29%) of slow loading streaming.

- » Dibrugarh in Assam has the highest percentage (56.62) of people with digital literacy training, which is followed by Cooch Behar in West Bengal of 18.26%.
- » The highest percentage of people doing online shopping is in the district of Dibrugarh (34.61%), followed by Jalpaiguri (28.83%). The lowest share is in the district of Sonitpur (2.09%).
- » In West Bengal online payment is being used by 34.31% users in the district of Jalpaiguri and cash on delivery is also high (28.21%). In Assam, district of Dibrugarh has the highest percentage share in both cash on delivery (30.31%) and online payment (41.18%).
- » People receiving skill development training with the highest percentage share was in Dibrugarh of Assam (72.2%).
- » Among the selected districts of West Bengal, 26.3% of respondents are aware of online financial frauds in the district of Jalpaiguri, and Dibrugarh has the highest percentage share of awareness (39.77%).
- In Darjeeling, 13.59% people have agreed to provide information to panchayat members visiting the labour quarters about MGNREGA, PDS and other government schemes. In Dibrugarh, 58.97% people have agreed.
- The correlation coefficient between age and smartphone use is -0.2227. This indicates a moderate negative correlation between age

and smartphone usage. In other words, smartphone usage tends to decrease as age increases, and vice versa.

- For understanding the relationship between gender and smartphone usage, the chi-square value is 1.6156 with 1 degree of freedom, and the associated p-value is 0.204 which indicates that there is no statistically significant relationship between gender and the type of phone being used.
- A moderate positive correlation (0.2487) between gender and participation in Self-Help Groups has been noticed. A weak negative correlation (-0.0774) between gender and the level of skill indicates no significant relation between the two variables, and a moderate positive correlation (0.2271) of participating in Self-Help Groups and skill development, and hence a tendency for individuals who participate more in Self-Help Groups to have higher skill levels.
- There is no significant linear relationship between educational qualification and internet use.
- A weak positive linear relationship between age and internet usage where with the increase in age, the use of the internet increases.
- The variables of gender and age do not have a significant relation to making digital payment in the local markets.
- Most of the respondents (more than 80%) have received education up to Higher Secondary. Around 40% of the Adivasi respondents could either attain only primary education or did not receive any formal education.

- Cross-tabulation of levels of education and various dimensions of CDL (Critical Digital Literacy) found that the lowest levels of awareness about online financial fraud can be seen among the respondents with no formal education. But a surprising observation, even though the levels of awareness are higher among the respondents with secondary education, the percentage of people being scammed is highest and reporting cybercrime is lowest.
- The findings suggest that education level, age category, and gender category might not be the primary factors influencing CDL in this dataset.

## List of Acronyms

BOLT	-	Building Opportunities/ Leveraging Technologies
CDL	-	Critical Digital Literacy
CIL	-	Community Internet Libraries
DEF	- Digital Empowerment Foundation	
FGD	-	Focus Group Discussion
ISOC	-	Internet Society Foundation
PDS	-	Public Distribution System
PLA	-	Plantation Labour Act
PM WANI	-	Prime Minister Wi-Fi Access Network Interface
RRR	-	Response, Resilience and Recovery
SC	-	Scheduled Castes
SHGs	-	Self-Help Groups
ST	-	Scheduled Tribes
WIFI	-	Wireless Fidelity

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Multiple Vulnerabilities of Adivasis and Tea Plantation Workers in Assam and West Bengal



#### Multiple Vulnerabilities of Adivasis and Tea Plantation Workers: An Introduction

Individuals must possess more than just the freedom to achieve an information-based goal, but must also have the means to achieve (Britz et al., 2012, p.106).

## 1.1 The Background

Information as social capital has been recognised as crucial for building resilience for the vulnerable communities in India's growing digitisation of service delivery and welfare policies. Information as social capital can be built by providing marginalised communities with the capacity to have a high quality of life. The framework of Capacity building<sup>1</sup> has multifold benefits in supporting those individuals and groups who are the deprived, the 'have-nots'. In contemporary times, the population's basic needs extend beyond food, clothing, and shelter and include access to information. The access to information in the current times is communicated through various digital modes and platforms. The divide in access to digital information and services has been recognised as one of the crucial concerns for nations and societies to address. The digital divide where the 'have-nots' do not have access to information and technology in their everyday lives leads to multiple vulnerabilities of those groups.

Individuals must possess more than just the freedom to achieve an information-based goal, but must also have the means to achieve (Britz et al., 2012, p.106).

The means to achieve the information-based goal goes through building human capabilities at the level of education, health, skills and other social and cultural practices. The human capabilities also need to be built around environmental and sustainable livelihoods.

One such socio-economic group are the Adivasis and the tea plantation workers residing and

<sup>&</sup>lt;sup>1</sup> (Britz et al., 2012) in their paper on analysing the application of Amartya Sen's capability approach to an information-based rights framework argue that their "relative capabilities influence individuals' ability to access and use information" (p. 106).



The Adivasis working as tea plantation workers in the tea gardens of Assam and West Bengal are suffering from various impoverishments as they have been marginalised based on the work, based on their 'migrant' origin and based on being Adivasi. working in the tea gardens<sup>2</sup> of Assam and West Bengal. The story of Adivasis working in the tea gardens of Assam and West Bengal is the story of social exclusion, stigma and backwardness. The socio-economic conditions of the Adivasis working in the tea gardens are poor on the parameters of education, health, nutrition, and digital access. Various studies and reports have highlighted the poor conditions of the Adivasis and the tea plantation workers in Assam and part of the northern part of West Bengal. The Oxfam study on tea plantation workers in Assam has found higher incidents of contractualisation, wage cuts, poorer housing and higher incidences of debt, mostly among the temporary workers.<sup>3</sup>

For this Baseline Study, the focus has been on the Adivasis and the tea plantation workers working in the fields and factories of various tea estates who have been historically marginalised as they were 'imported' coolie workers through a penal and indentured labour<sup>4</sup> regime from central India to bypass the local 'lazy native' (Sharma, 2009, p. 1288). The history of tea plantation workers in Assam and West Bengal is crucial as the past has a bearing on their present today. The Adivasis working as tea plantation workers in the tea gardens of Assam and West Bengal are suffering from various impoverishments as they have been marginalised based on the work, based on their 'migrant' origin and based on being Adivasi. The lives of the Adivasis working in the Tea Gardens could be felt from the following lines:

<sup>&</sup>lt;sup>2</sup>In this report, the terms Tea Estate and Tea Garden are used interchangeably. The workers prefer to use the term *Chai Bagaans* (tea gardens); however, on the papers and in business terms, these are registered as Estates, therefore, Tea Estates. Therefore, the distinction between tea gardens and tea estates is made on the basis of context; if the living, social, and cultural conditions of the tea plantation workers are being referred to, then the term 'Garden' is used, and if the business or legal perspective I s being used, then the term 'Estate'.

<sup>&</sup>lt;sup>3</sup>Oxfam India. (2021). *In defense of living wages for tea plantation workers: Evidences from Assam*. Retrieved April 7, 2024, from <u>https://oxfamuploads.s3.ap-south-1.amazonaws.com/oxfamdata/</u> <u>images/LivingWage.pdf</u>

<sup>&</sup>lt;sup>4</sup>Indentured labour has been defined as "economically induced migration combined with coercive contractual obligations" (Das, 2016, p. 5).

राशन मल्ला तनखा मल्ला, मल्ला तो बोनस (No ration, no wages, no bonus) ओन्ना मल्ला अत्तना मल्ला मंजा सरबनास (No food, no clothes, everything is destroyed)

ख़द्द चीं'ख़ी, मुक्का चीं'ख़ी, एरर कट्टू नीदी (Kids cry, women cry, seeing empty vessels) एन्दरा ईदमि तली बगनयिर ही असल आजादी? (Is this the freedom of those working in the tea gardens?)<sup>5</sup>

On a macro level, the tea plantation industry is undergoing massive transformations with increasing competition from different countries, global price competition, emerging issues of mechanisation and others. The pitfalls of the global market economies impact the everyday lives of the workers and its affect could be seen in the economic lives of the workers. Economic deprivation is also linked with the social status of the workers. In our study we find that the conditions of the tea plantation workers are conditioned by their social status, which is leading to multiple vulnerabilities.

Digital Empowerment Foundation (henceforth DEF) works with the community. It has conducted critical surveys and studies on the vulnerability of the community, with a focus on access and connectivity. The study in 2019-2020, on 'Factors Determining Access to Public Schemes Information and Entitlement Benefits for the Tea Tribe Community: A Qualitative Study in Assam,'<sup>6</sup> helped to understand the challenges to accessing public schemes information and entitlement services for the community, with lack of access to internet and platforms, being a major hurdle. The study on 'Digital Empowerment of Tea Tribe: Towards Vulnerability Reduction and Unlocking Opportunities'<sup>7</sup> in 2021, focused on the key

<sup>6</sup>https://www.defindia.org/wp-content/uploads/2021/09/Factors-determining-access-to-entitlement-of-the-tea-tribe-community-in-Assam.pdf

<sup>&</sup>lt;sup>5</sup>Toppo, Bimal, retrieved from <u>https://kurukhtimes.com/node/179</u>.

https://www.defindia.org/wp-content/uploads/2022/01/Digital-Empowerment-of-Tea-Tribe-2022\_online.pdf\_

challenges around digital access and opportunity of the community in Assam in India.

DEF has established a sound working relationship with the community during 2022-2023, with the 'Internet Roshni (Light) Project under BOLT' supported by the Internet Society Foundation (henceforth ISOC) which focused on last-mile connectivity, access and empowerment through services linkages and integration within the tea gardens through provisions like the 'Community Library,' Further, the 'Saksham: Internet Strengthening Access to Social Security for the Tea Garden Community,'8 project in West Bengal in India focused on improving social security access for the tea garden community in 4 districts of West Bengal, including working in closed/shut down tea gardens. In all these, DEF is building a relationship with the critical stakeholders of and from the community including elected representatives, local self-governments, the district administration, the Tea Tribe Welfare Directorate of the Assam Government and others, to understand what, how and why internet and digital empowerment can be a big way forward for the community.

The second phase of the Project Internet Roshni extends to the tea estates of West Bengal. In the study, the differences between the respective state government's policies have minimal differences on the lives of the tea plantation workers in Assam and West Bengal. The overall tea plantation industry is run by The Plantation Labour Act, 1951 with no major revisions and changes and bare minimum welfare support from the state and the central governments.

<sup>&</sup>lt;sup>8</sup>https://www.defindia.org/strengthening-tea-garden-workers-by-creating-awareness-inclusion-and-access-to-social-protection-programs-in-west-bengal



No ration, no wages, no bonus No food, no clothes, everything is destroyed Kids cry, women cry, seeing empty vessels Is this the freedom of those working in the Tea Gardens ?

## 1.2 Research Design and Methodology

this section, the research design In and methodology used for the Baseline Study is discussed. This report is based on analysing the socio-economic and digital landscape of the Adivasis and tea plantation workers in the tea gardens of Assam and northern parts of West Bengal. This study is based on the assumption that the 100 communities identified overall are not internet-based information communities at all. And 50% of the women population of these communities are by and large out of internet ecosystem. The scenario in the tea gardens is such that there is no real and meaningful access to internet for the communities. and their ecosystems cannot have mainstream network connectivity due to remote terrain and extreme marginal condition of the households. The research design to conduct the baseline was done keeping these assumptions in mind. The study has used mixed method approach using both qualitative and quantitative methods to gather data to analyse the socio-economic and digital milieux of the Adivasis and the tea plantation workers. The cross-triangulation of data was done through various secondary literature and other reports.

Purposive sampling for the baseline survey was done based on the population of targeted beneficiaries under the Project Internet Roshni, phase II in 4 districts each of Assam West Bengal. The Baseline Survey Schedule<sup>9</sup> was prepared and uploaded on the Kobo App<sup>10</sup>. The field enumerators were trained, and a survey of 2400 respondents was undertaken. The data was then extracted from the

<sup>9</sup>See Annexure 1 for Baseline Survey Schedule <sup>10</sup>https://kf.surveytime.defindia.org/#/forms

The study has used mixed method approach using both qualitative and quantitative methods to gather data to analyse the socioeconomic and digital milieux of the Adivasis and the tea plantation workers. The crosstriangulation of data was done through various secondary literature and other reports.

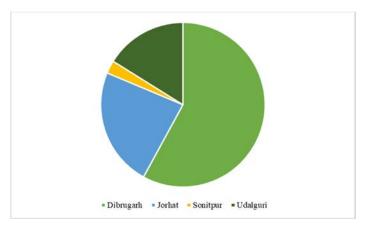
Kobo App and analysed in Excel and STATA. Apart from the survey, 10 Focus Group Discussions were conducted over 5 tea gardens in Assam and West Bengal. The interview questions for the Focus Group Discussions<sup>11</sup> were guiding questions, and the interviews were open-ended interviews.

#### 1.3 The Study Area

Across the sample, the Baseline Survey was done in the tea estates of Assam and West Bengal. The Baseline Survey was conducted in the districts of Dibrugarh, Jorhat, Udalguri and Sonitpur in Assam. The Survey was also conducted in the districts of Alipurduar, Cooch Behar, Jalpaiguri and Darjeeling. The FGDs were conducted in the selected tea estates of Dibrugarh, Jorhat, Udalguri, Alipurduar and Jalpaiguri.

In Assam, the district of Dibrugarh has the highest number of tea estate respondents (794), followed by Jorhat (320), Udalguri (221) and Sonitpur (35).

# Figure 1: Number of respondents in the tea estates in the districts of Assam

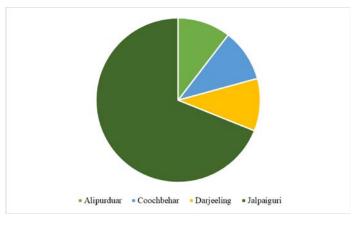


Source: Primary Data, DEF

<sup>&</sup>lt;sup>11</sup>See Annexure 3 for the Focus Group Discussion Interview Questions

In West Bengal, the district of Jalpaiguri has the highest number of respondents in the tea estates with 701 respondents, Alipurduar has 106, Cooch Behar has 105, and Darjeeling has 105.

## Figure 2: Number of respondents in the tea estates in the districts of West Bengal



Source: Primary Data, DEF

Table 1: List of tea estates where FGD was conducted in Assam

S. No	District	Tea Estates			
1.	Dibrugarh	rh Digholiya			
2.	Jorhat	rhat Sycotta, Kharikatia, Bahoni			
3.	Udalguri	Dimakushi, Budalpara			

Table 2: List of tea estates where FGD wasconducted in West Bengal

S. No	District	Tea Estates
1.	Jalpaiguri	Lankapara, Gopalpur, Binnaguri
2.	Alipurduar	Bundapani

Across the sample, the Baseline Survey was done in the tea estates of Assam and West Bengal. The Baseline Survey was conducted in the districts of Dibrugarh, Jorhat, Udalguri and Sonitpur in Assam. The Survey was also conducted in the districts of Alipurduar, Cooch Behar, Jalpaiguri and Darjeeling.



Multiple Vulnerabilities of Adivasis and Tea Plantation Workers in Assam and West Bengal

# 02

Amenities and Working Conditions of the Adivasis and the Tea Plantation Workers As per Tea Board (2019), India produces 22.4% of the world's total tea production making it the second largest producer. Assam, West Bengal followed by Tamil Nadu and Kerala, tops the list of tea-producers in India. In this section, the amenities and working conditions of the tea plantation workers and the Adivasis community are discussed based on the Survey and FGDs. We also discuss the gaps between the provisions in the Plantation Labour Act, 1951 and the welfare schemes of the Assam and West Bengal government. The tea industry has played an important role in India's national economy (Arya, 2013). As per Tea Board (2019), India produces 22.4% of the world's total tea production making it the second largest producer. Assam, West Bengal followed by Tamil Nadu and Kerala, tops the list of tea-producers in India. They form a part of the larger employment sector for people living in rural and remote parts of the country (Lines, 2006). For example, in Assam about one in five people are plantation labourers (Bose, 2017). In India, the Report of Plantation Labour Act reported that there are 1.278 tea estates in India and the area under tea cultivation is 3,37,690.4 hectares (Labour Bureau, 2019). Despite being an important source of employment, the wages received by the labourers are low compared to other organised sector workers (Mishra et al., 2011). Over the years there has been closure of few tea estates which has affected the livelihood of the labourers of tea plantations (Van Der Wal, 2008).

The labourers have suffered oppression since the colonial times as the Britishers brought the poor, low caste (mainly Dalits)<sup>1</sup>, tribals, landless and women to work in the tea estates. With the increasing demand of labourers, the agents began searching for workers from different states of the country. With time workers have become more politically aware of their rights and demands, voicing for their rights as adivasis.Tea estates are forbidden areas and often real scenarios are missed (Biggs, Gupta, Saikia, & Duncan, 2018).

<sup>&</sup>lt;sup>1</sup> In India, Dalit (broken people) is a term used for the communities on the lower end of the caste systemin Hinduism. The constitutional category is known as Scheduled Castes (SC).



"When the work is shut in the Tea Garden, then the men workers would find it easier to take cycle to the riverside where they would do go to do agriculture labour, but for women it's difficult to go as it is 6 to 7 km far away from here."

A 40-year-old Woman Tea Garden Worker at Digholiya Tea Estate

#### 2.1 Categories of Workers in Tea Estates

'Tea Tribes'<sup>2</sup> is the term often used in the colonial and post-colonial documents to refer to the labourers working in the tea garden of Assam, but the community strongly recognises itself as Adivasi, and the reason being the demand for indigenous rights in the states of Assam and West Bengal. Poet Kamal Kumar Tanti asks - "Is there any community in this world named after a commodity ?"3 The number of tea estates in Assam for 2019 was 788, in 2014 was 792 and in the year 1951 it was 785. There is a very slight increase only b/w 2019 and 1951. There is a very slight increase in the number of tea gardens in Assam. hus, over the years the tea estates in Assam have increased but the growth is less. The average daily workers employed are 1,77,149 male and 2,70,373 female (Labour Bureau, 2019).

The table below explains the percentage of permanent, temporary, or casual workers in the selected tea estates.<sup>4</sup>

<sup>3</sup> https://www.theindiaforum.in/politics/politics-vernacular-who-indigenous-assam

<sup>&</sup>lt;sup>2</sup> The term 'Tea-Tribes' has been rejected by certain Adivasis activists and groups in Assam who are also demanding the Scheduled Tribes (STs) status for the Adivasis community members.

<sup>&</sup>lt;sup>4</sup> Casualization of workforce is the major concern in the tea estates of Assam and West Bengal. Permanent workers receive housing, leaves, and other social security benefits, but the casual and the temporary workers don't avail any social and job security benefits.

	Male			Female			
	Permanent	Temporary	Casual	Permanent	Temporary	Casual	
Assam							
Dibrugarh	10	5	6	6	3	10	
Jorhat	5	4	0.6	10	11	0	
Sonitpur	2	0.3	0	1	0.3	0	
Udalguri	7	2	0	6	6	0.1	
West Bengal							
Alipurduar	0.9	0	0	2	0.3	0	
Cooch Behar	1	1	0.2	3	1	0.2	
Darjeeling	8	0	0	10	0	0	
Jalpaiguri	15	12	2	22	21	2	

#### Table 3: Category of workers in the study area (in percentage)

Source: Primary Data, DEF

The percentage share of men and women permanent workers is highest in the district of Jalpaiguri of West Bengal and for men in district of Dibrugarh in Assam.<sup>5</sup> The share of women permanent workers is high in the district of Jorhat, Assam.<sup>6</sup> The percentage of casual workers is lower across the districts amongst the category of workers, though for women, the percentage

<sup>&</sup>lt;sup>5</sup> This data needs to read in correlation with the total number of respondents surveyed in the districts. The districts of Dibrugarh and Jalpaiguri has the highest number of respondents surveyed. Therefore the percentage would be higher for these districts.

<sup>&</sup>lt;sup>6</sup> This data could be explained through the fact that the highest number of women were surveyed in Jorhat.

The precarity of women workers is more here like in the other employment sectors. There is feminisation of the tea plantation industry where the maximum work in the form of manual labour (plucking leaves, carrying leaves on their backs, cleaning the garden) is done by the women workers while doing domestic work at home requires gendered central policy interventions in the tea plantation industry.

is higher than for men. The precarity of women workers is more here like in the other employment sectors. There is feminisation of the tea plantation industry where the maximum work in the form of manual labour (plucking leaves, carrying leaves on their backs, cleaning the garden) is done by the women workers while doing domestic work at home requires gendered central policy interventions in the tea plantation industry. In one of the FGDs, a women member said:

"When the work is shut in the tea garden, the men find it easier to take a cycle to the riverside where they do agriculture labour, but for women, it is difficult to go as it is 6 to 7 kms away from here." A 40-year-old woman tea garden worker at Digholiya Tea Estate<sup>7</sup>

Few employment options other than low-paying wage work in the tea plantation sector lead to poverty among women workers, which then affects their food, health, finances, and other life conditions. The women workers in the tea estates of both Assam and West Bengal wish to learn skills like stitching, cooking, preparation of fertilisers and compost, etc. so that they can earn money and support themselves and their families.<sup>8</sup>

The plantation sector and tea estates are governed by rules and laws particular to the plantation sector from colonial times to the present time. The labour laws and the labour regulations are different in the tea estates. Most of the workers and their families are working and resided in the tea gardens for generations. Therefore, the workplace and the residential places are in the same compound for the tea plantation workers, mostly residing in the quarters provided by the tea estate management known as 'labour lines'. However, hiring temporary

<sup>&</sup>lt;sup>7</sup> In a FGD held at Digholiya Tea Estate, Dibrugarh, Assam, 15th February 2024.

<sup>&</sup>lt;sup>8</sup> In a FGD held at Binnaguri Tea Estate, Jalpaiguri, West Bengal, 21<sup>st</sup> February,2024.



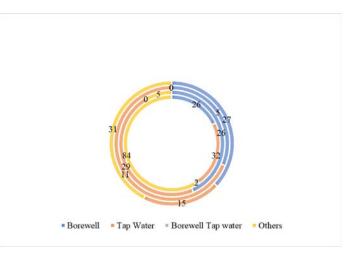
labour is also a popular practice, especially during the busiest time of year. Additionally, seasonal workers are recruited for temporary positions at times of high labour demand, such as during the plantation harvesting season.

#### 2.2 Basic Amenities in the Tea Estates

This section discusses basic amenities such as drinking water, accommodation, hospitals, schools, and other services like document photocopying. The demand for better living conditions from the Adivasis and tea plantation workers are not met and even the basic provisions in the Plantation Labour Act, 1951 are not implemented. Tea estates are not properly checked by the government agencies for violations.

In the case of Assam and particularly in the districts of Dibrugarh and Jorhat, where the DEF team visited for FGD, poor road infrastructure and connectivity was one of the important reasons for the backwardness of the Adivasis and tea plantation workers. The seclusion of the communities was geographical as well as social. The roads were cut off for days during the rainy seasons and in Assam the flood hazards would affect the connectivity of the communities residing in the tea gardens.

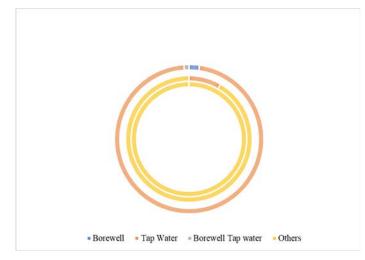
Access to safe and clean drinking water has been a major concern in the tea estates as both Assam and parts of West Bengal are prone to disasters. The access to clean drinking water both at the site of residence and workplace has to be ensured. In the Baseline Survey, it was found that there was a higher prevalence of diarrhoea and other water borne diseases among the community members of the tea gardens. Access to safe and clean drinking water has been a major concern in the tea estates as both Assam and parts of West Bengal are prone to disasters. The access to clean drinking water both at the site of residence and workplace has to be ensured.



#### Figure 3: Sources of drinking water in Assam

Source: Primary Data, DEF

Figure 4: Sources of drinking water in West Bengal



Source: Primary Data, DEF

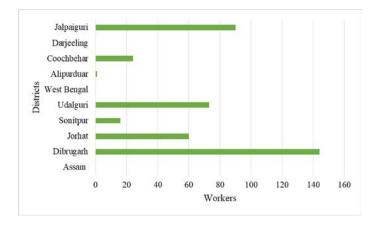
There are two main sources of drinking water, borewell and tap water. The chart above shows the drinking water source in selected districts of Assam. Tap water is major source of drinking water in all the districts of Assam and Borewell with the second highest share. In West Bengal tap water is the major source in the district of Jalpaiguri. Mainly tap water and other sources are used for fulling the drinking water requirements. But as compared to Assam the response to the question has been less in West Bengal.

# Table 4: Sources of drinking water in the tea gardens

District	Borewell	Tap Water	Borewell Tap water	Others
Assam				
Dibrugarh	26	32	2	84
Jorhat	26	29	0	5
Sonitpur	5	11	0	0
Udalguri	27	15		31
West Bengal				
Alipurduar	0	0	0	1
Cooch Behar	0	2	0	22
Darjeeling	0	0	0	0
Jalpaiguri	2	87	1	0

Source: Primary Data, DEF

The field observations however showed that the housing conditions were not good, and contractual and the casual workers would not get accommodation provisions from the tea estate owners and they would live with their families who were permanent workers, thereby making it a congested space.



#### Figure 5: Accommodation provided by tea estates

In the district of Dibrugarh of Assam, 144 responded that accommodation was provided by the tea estate owners, though in the district of Jorhat, a different picture was noticed where 109 workers responded that they were not provided with accommodation. Despite this, respondents across districts gave a positive view of the provision of accommodation by tea estate owners. The field observations however showed that the housing conditions were not good, and contractual and the casual workers would not get accommodation provisions from the tea estate owners and they would live with their families who were permanent workers, thereby making it a congested space.

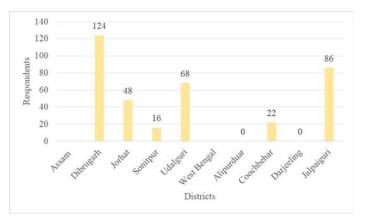
the allotment to workers and their families of housing accommodation and of suitable strips of vacant land adjoining such accommodation for the purpose of maintaining kitchen gardens, and for the eviction of workers and their families from such accommodation.<sup>9</sup>

Source: Primary Data, DEF

<sup>&</sup>lt;sup>9</sup>16 (e) of The Plantation Labour Act, 1951, <u>https://www.indiacode.nic.in/bit-stream/123456789/13226/1/the\_plantations\_labour\_act\_1951.pdf</u>

The above clause from the Plantation Labour Act ensures that the tea plantation workers get suitable accommodation and the previous clauses also mention that any worker who is working more than 6 months would be also eligible to housing facilities in the tea estates.

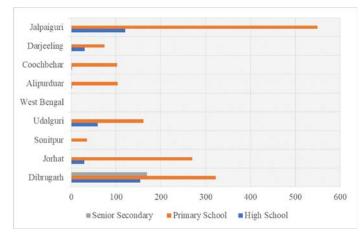
#### Figure 6: Latrines at home in the tea estates



The major challenge they face is that they have to lose their wage for a day when they have to travel to the town for their documents work (photocopy, printout, filling the forms) leads them to loss of pay of Rs 180.

Source: Primary Data, DEF

Majority of the houses have latrine across the districts of Assam and West Bengal. In Dibrugarh 124 workers responded that they do have latrine facility at home, so did 86 workers in the district of Jalpaiguri of West Bengal. Compared to Assam, West Bengal received less response to this variable which indicates a disparity in the facility.



### Figure 7: Number of schools in districts of tea estates in Assam and West Bengal

Source: Primary Data, DEF

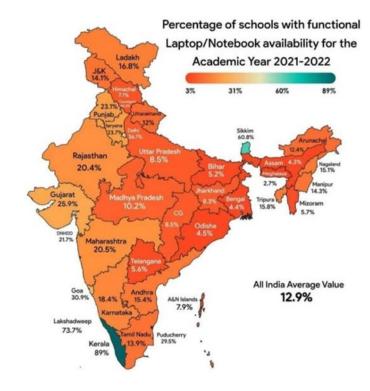
The workers and the tea estate employees have family and children, and the children need education facilities. Therefore, for Assam in the district of Dibrugarh the number of high schools is 154, 270 primary school in the district of Jorhat and 169 senior secondar school in Dibrugarh. On the other hand, in the state of West Bengal, the presence of primary schools is more in the tea estates, in which Jalpaiguri has 549 schools, Alipurduar has 104 schools, Cooch Behar has 103 schools and Darjeeling 74 schools. High schools are more in the district of Jalpaiguri i.e. 120.

Thus, the provisions as mentioned in the PLA 1951 are followed in the tea estates. However, the quality of education with updated technologies is absent. In the field survey it was found that there are hardly any schools in the tea gardens where there are computer and IT (Information Technology)courses. There are demands by the student community for digital learning in schools.

The below figure shows that Assam doesn't perform well on providing digital infrastructure for students

at the schools. This is a huge loss for the Adivasi students from the tea gardens because they cannot afford private coaching for digital education.

Figure 8: Percentage of schools with functional laptop/notebook availability for the Academic Year 2021-22



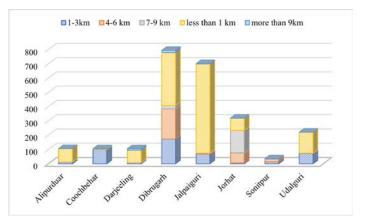
Source: UDISE+ Report 2021-2022 (Department of School Education & Literacy, Ministry of Education, Government of India)





A 53-year-old Male Tea Garden Worker at Digholiya Tea Estate For photocopy they have to travel long distance (5 to 6 km) and if there is no power then they would charge Rs 5 per page, otherwise they would charge Rs 3 per page. They said that there is no *guarantee that after* travelling for 5 to 6 km, the photocopy shops would be open. There is no public transportation, they have to spend Rs 50 per journey in auto which makes them pay Rs 100 for a page of photocopy which may cost them around Rs 3 or Rs 5

### Figure 9: Distance travelled to get photocopy of documents



Source: Primary Data, DEF

For getting photocopy of documents, people of Alipurduar have to travel less than a kilometre, in Cooch Behar within a range of 1-3 km, in Darjeeling and Jalpaiguri less than a kilometre. For the districts of Assam, Dibrugarh has better accessibility of facilities in every range of distance and the highest they have to travel less than kilometre. In Jorhat the maximum is the range of 7-9 km, in Sonitpur 4-6 km and in Udalguri less than a kilometre. The major challenges faced by the Adivasis and the tea plantation workers is the distance they have to travel to get their important documents photocopied and printouts. The need for community resource centres within the tea gardens needs to be addressed to tackle the issue of connectivity.

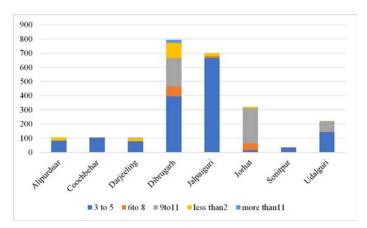
The major challenge they face is that they have to lose their wage for a day when they have to travel to the town for their documents work (photocopy, printout, filling the forms), leading to a loss of pay of Rs 180.<sup>10</sup>

<sup>&</sup>lt;sup>10</sup> In a FGD held at Digholiya Tea Estate, Dibrugarh, Assam, 15<sup>th</sup> February, 2024.

The lack of public transportation connecting the tea gardens to the nearest markets in the blocks and towns leads to tea plantation workersspending heavy money which imbalances their monthly finances. The absence of community resource centres in the tea gardens for accessing the internet, photocopy, printing, filling forms creates severe disadvantages for the community.

The lack of public transportation connecting the tea gardens to the nearest markets in the blocks and towns leads to tea plantation workers spending heavy money which imbalances their monthly finances. The absence of community resource centres in the tea gardens for accessing the internet, photocopy, printing, filling forms creates severe disadvantages for the community.

### Figure 10: Average money spent on page printout (in Rs)



Source: Primary Data, DEF

The average money spent on printing a page by the respondents is Rs 3–5. Across the districts in West Bengal and Assam the share money spent is high for Rs 3–5, followed by Rs 9–11. Dibrugarh also has photoshops charging less than Rs 2 for printing a page. Dibrugarh has a wide range of shops which charge less than Rs 2 for printouts to more than Rs 11. At the level of tea gardens, the geographical isolation has also attributed to negligence by the government authorities to carry out developmental activities. In one of the Tea Gardens in Dibrugarh, electricity is still not available 24\*7 making it difficult for the community to live a quality life.

There are days when there is no electricity for three

days and on an average, they receive electricity for 8 hours in a day. They said that they have submitted complaints for setting up the transformers, but they have not received any positive changes.

– A 53-year-old male tea garden worker at Digholiya Tea Estate. $^{\rm 11}$ 

For photocopy they have to travel long distance (5 to 6 km) and if there is no power then they are charged Rs 5 per page (which otherwise would beRs 3 per page). They said that there is no guarantee that after travelling for 5 to 6 km, the photocopy shops would be open. There is no public transportation, they have to spend Rs 50 per journey in auto which ultimately makes them pay Rs 100 for a page of photocopy.<sup>12</sup>

## 2.3 Banking Facilities at the Tea Estates

In the tea gardens, the workers receive their wages in cash after 15 days of work. Most of the tea plantation workers across gender and age had bank accounts. They said that they had bank accounts because it was essential to receive various government's DBT schemes (Direct Benefit Transfer). They would visit monthly or once in two months to get their passbooks updated.

 <sup>&</sup>lt;sup>11</sup> In a FGD held at Digholiya Tea Estate, Dibrugarh, Assam, 15th February, 2024.
 <sup>12</sup> In a FGD held at Digholiya Tea Estate, Dibrugarh, Assam, 15th February, 2024.



One of the older community member said that the during the bad weather conditions like heavy rainfall, the students had to miss their schools. If there is heavy rainfall, there is no proper shade for the students to wait. If there is any work like filling up forms, one has to travel to Mariani town, there is nothing in nearby areas.

#### Table 5: Percentage of people with ATM Cards<sup>13</sup>

District	Yes	No
Alipurduar	9.16	0.45
Cooch Behar	2.81	6.49
Darjeeling	7.8	1.71
Dibrugarh	28.56	32.55
Jalpaiguri	24.39	37.24
Jorhat	15.23	10.91
Sonitpur	2.99	0
Udalguri	9.07	10.64
Total	100	100

Source: Primary Data, DEF

ATM cards have become an important asset for making payments. In Assam the highest percentage of people using ATM is in the district of Dibrugarh and in West Bengal the highest ATM card users are in the district of Jalpaiguri. The second highest usage is in the districts of Jorhat in Assam and Alipurduar. The lowest percentage of users are in the district of Cooch Behar and Sonitpur.

Another important component of the financial situation of the tea plantation workers is the issue of debts. During the FGD and field visits, most workers preferred to take debts from their family members and relatives. There were also cases of taking debt from tea estate managers and in West Bengal, where FGD was conducted, workers would take loan from Bandhan Bank.<sup>14</sup>

<sup>&</sup>lt;sup>13</sup> Here, ATM cards refer to debit cards which are used for cash withdrawals at ATM kiosks. In rural India, the challenge has been that the ATM kiosks are situated at a distance, making it inaccessible for the population.

<sup>&</sup>lt;sup>14</sup> Bandhan Bank is a private sector bank in India.



They said that there is no guarantee that after travelling for 5 to 6 km, the photocopy shops would be open. There is no public transportation, they have to spend Rs 50 per journey in auto which ultimately makes them pay Rs 100 for a page of photocopy.12 Table 6: Percentage of population with debt inthe tea gardens

District	Yes
Cooch Behar	0.51
Darjeeling	0.51
Dibrugarh	54.55
Jalpaiguri	5.56
Jorhat	34.85
Udalguri	4.04
Total	100

Source: Primary Data, DEF

Debts are usually taken to make ends meet. In Assam, many respondents have debt, Dibrugarh with 54.55% debts, Jorhat 34.85%, Udalguri 4.04% and Sonitpur, no debt taken was found. In West Bengal the pattern of debt taken is low across the districts, the highest being in the district of Jalpaiguri of 5.56%.

# 2.4 Plantation Labour Act,1951 and the Provisions ofAmenities in the Tea Estates

The Plantation Labour Act came in the year 1951<sup>15</sup> for the welfare of the plantation labour vis-à-vis their working condition. The Act includes plantations of tea, coffee, rubber, cinchona, oil palm, cocoa and cardamom. Facilities like hospitals, dispensaries, schools, and offices within the plantations are covered by the Act. The state governments can also make changes in the act as per the state's requirements. The act has the following provisions - hours of work, interval of rest, health and welfare,

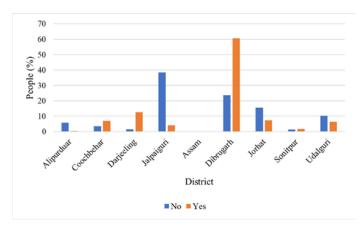
<sup>&</sup>lt;sup>15</sup> <u>https://labour.gov.in/sites/default/files/The-Plantation-Labour-Act-1951.pdf</u>

employment of children/adolescents and Annual leave with wages, along with medical, housing, recreation, education, canteens, creches and other basic facilities are within the health and welfare.

Table 7: District-wise percentage of Tea Plantation
workers aware of PLA

District	Percent
Alipurduar	7.64
Cooch Behar	5.71
Darjeeling	0.92
Dibrugarh	43.49
Jalpaiguri	27.46
Jorhat	7.89
Sonitpur	0.84
Udalguri	6.05
Total	100

Source: Primary Data, DEF



### Figure 11: Percentage of people aware about rules in the Plantation Labour Act

Source: Primary Data, DEF

In West Bengal, 12.52% workers in Darjeeling have awareness about rules in the Plantation Labour Act, with 0.32% being the lowest awareness in Alipurduar. In Assam, 60.51% workers are aware about the rules and only 1.77% in the district of Sonitpur.

In our study, we see that, in the district of Dibrugarh of Assam, 144 responded to being provided accommodation by the tea estate owners, though in the district of Jorhat, a different picture has been noticed where 109 workers responded not being provided with accommodation. Despite a different picture, the respondents across the districts gave a positive view of accommodation by the tea estate owners. As per the PLA, providing housing to the workers is an important provision which is being followed in most districts that have a greater number of tea estates.

The workers' rights have been won after several workers' and union movements has led to limiting the hours of work in the tea gardens and factories.

Working hours	Percent
8 hours	83.61
8-10 hours	16.22
More than 10 hours	0.17
Total	100

#### Table 8: Working hours

Source: DEF

The maximum working hours being eight hours for the workers in both Assam and West Bengal. Eight hours of work is the usual working hours as per the rules, and it is followed in the majority of the tea estates. The tea estate labourers get paid less as found from the literature and to add evidence, from our study area about 26.89% receive estimated salary of Rs 5,000 per month. To compensate for the low salary, labourers (26.25%) work elsewhere as well.

### Table 9: Healthcare facility at the Health Centres at the Tea Estates

Healthcare Facility	Percent
Doctor-OPD consultation	73.11
OPD consultation - Hospital admission for minor surgeries	13.90
Hospital admission for major surgeries	0.46
Hospital admission for minor surgeries	12.52
Total	100

Source: Primary Data, DEF

The workers also suffer occupational injuries while working in the tea factories which on occasions gets treated by the tea estate owners but, in most cases they have to incur the cost on their own. The PLA, 1951 provides workers with healthcare facilities. The major health facilities used by the workers are the OPD services at the health centres, which is 73.11%. OPD consultation with minor surgeries is 13.9%, minor surgeries share is 12.5% and the percentage of major surgeries is 0.4%.

The PLA, 1951, provides workers with healthcare facilities. The major health facilities used by the workers are the OPD services at the health centres, which is 73.11%. Disease like TB (Tuberculosis) are highly prevalent amongst the tea plantation workers. Mosquito borne disease like dengue and malaria are also rampant in the tea gardens.

The most important occupational hazard when talked to the tea plantation workers was the attack by animals. Human-animal conflict is one of the crucial concerns for the worker in the tea gardens. The workers also suffer occupational injuries while working in the tea factories which on occasions gets treated by the tea estate owners but, in most cases they have to incur the cost on their own.

One of the policy brief documents by ISEC (Institute for Social and Economic Change) calls for revisions in The Plantation Labour Act<sup>16</sup> as one of the major concerns identified are the exclusion of larger proportion of casual and temporary workers under the Act. It also doesn't included the small and the medium tea and other plantation growers. The other crucial revisions which ISEC proposed was the categorisation of the plantation sector in either of the Ministries – Ministry of Agriculture and Farmers' Welfare or the Ministry of Commerce and Industry. Currently the plantation sector is part of both the Ministries thereby complicating the various labour laws and rules.

<sup>&</sup>lt;sup>16</sup> <u>https://www.isec.ac.in/wp-content/uploads/2023/07/PB-19-Indias-Plantation-Labour-Act-1951-Need-a-Revisit.pdf</u>

One of the older community member said that the duringbad weather conditions like heavy rainfall, students had to miss their schools. If there was heavy rainfall, there is no proper shade for the students to wait. If there is any work like filling up forms, one had to travel to Mariani town, there is nothing in nearby areas., they said.<sup>17</sup>

<sup>17</sup> In a FGD held at Sycotta Tea Estate, Jorhat, Assam, 17th February, 2024.



Digital Poverty of the Adivasis and the Tea Plantation Workers



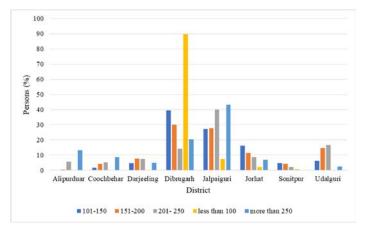


A few elderly women also complain that due to the internet, their children now stay on the phone most of the time. They sacrifice their sleep by using their phones. So many parents think that smartphone is mentally affecting their children.

### 3.1 Smartphone Usage and Internet Consumption

Having smartphone is nowadays considered as being part of the modern technological system, which has affected our lives in many ways. The percentage share of those owning a smartphone is highest in the district of Jalpaiguri (38.66%) in West Bengal, the lowest percentage in Cooch Behar (5.80%). In Assam, the district of Dibrugarh has the highest percentage owners of smartphones (20.89%) and lowest in the district of Sonitpur (2.01%). The purchasing capacity of the Adivasis and the tea plantation workers has been constrained, as most of them have bought their smartphones on EMI or monthly instalments. The older generation has a different viewpoint on the use of smartphones and internet usage.

A few elderly women also complain that due to internet, their children now stay on the phone most of the time. They sacrifice their sleep by using their phones. So many parents think that smartphone is mentally affecting their children.<sup>1</sup>

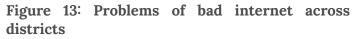


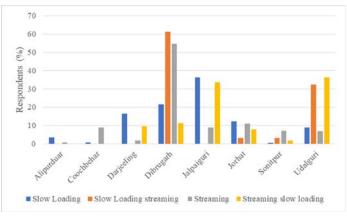
#### Figure 12: Average money spent on recharge

Source: Primary Data, DEF

<sup>&</sup>lt;sup>1</sup> In a FGD held at Dimakushi Tea Estate, Udalguri,Assam ,19<sup>th</sup> February,2024.

The average money spent on recharge in Dibrugarh is less than Rs100 i.e. 89.78% and more than Rs 250 in the district of Jalpaiguri of 43.32%. The lowest expenditure is in the district of Sonitpur of 0.73%.

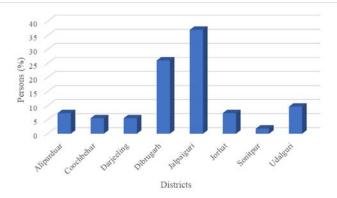




Source: Primary Data, DEF

The main issue of bad internet is slow loading and slow streaming. In district of Alipurduar, the issue is mainly of slow loading (3.36%), in Cooch Behar of streaming (8.93%), in Darjeeling slow loading (16.4%) and in Jalpaiguri of slow loading and streaming slow loading. Dibrugarh has the highest number of issues (61.29%) with slow loading streaming.

Figure 14: Percentage of people using WhatsApp for audio-video calls



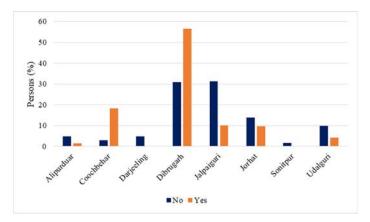
Source: Primary Data, DEF



The government school in Gopalpur Tea Estate has computer class facilities, but the children have yet to learn much. They started learning computer-related information in class 9th. These students have just learned very basic things, such as on/off and mouse navigation. Only one of them knows how to make a folder on the computer.

Technology has helped bring people closer staying miles away. The above bar graphs show the percentage of people using audio-video calls in the selected districts of Assam and West Bengal. The highest percentage of user is in the district of Jalpaiguri i.e. 36.91% followed by Dibrugarh (26.04%). The lowest percentage of users are in the district of Sonitpur of 1.81%.

### Figure 15: Percentage of people who received digital literacy training



Source: Primary Data, DEF

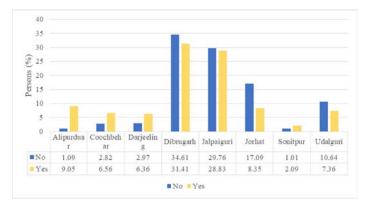
Digital literacy training helps in using the technology better, making us aware of the various issues in using digital modes for various purposes. Hence, Dibrugarh in Assam has the highest percentage (56.62) of people with digital literacy training, which is followed by Cooch Behar in West Bengal of 18.26%. The lowest level of training has been observed in the district of Alipurduar and no level of training in Darjeeling and Sonitpur.

The government school in Gopalpur Tea Estate has computer class facilities, but the children have yet to learn much. They started learning computerrelated information in class 9th. These students have just learned very basic things, such as on/ off and mouse navigation. Only one of them knows how to make a folder on the computer.<sup>2</sup>

<sup>&</sup>lt;sup>2</sup> In a FGD held at Gopalpur Tea Estate, Jalpaiguri, West Bengal, 21th February ,2024.

# 3.2 Digital Literacy and Digital Finance

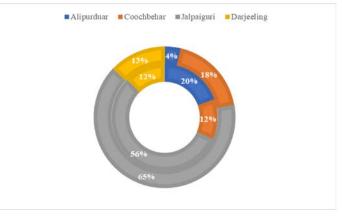
Figure 16: Percentage of people shopping online



Source: Primary Data, DEF

Online shopping has become quite common these days with the development of technology. The highest percentage of people shopping online is in the district of Dibrugarh of 34.61%, followed by Jalpaiguri of 28.83%. The lowest share is in the district of Sonitpur i.e. 2.09%. Most of the young women members has been buying clothes online through a website 'meesho'. They are not buying other commodities compared to clothes. Men member prefer to buy gadgets online.

### Figure 17: Mode of payment in online shopping in West Bengal (%)



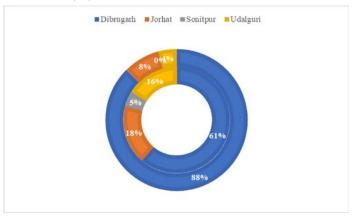
Source: Primary Data, DEF

District	Cash on delivery	Online payment	
Alipurduar	9.85	1.96	
CoochBehar	6.19	9.8	
Jalpaiguri	28.21	34.31	
Darjeeling	6.31	6.86	

Table 10: Mode of payment in online shopping in West Bengal

Source: Primary Data, DEFIn West Bengal online payment is being used by 34.31% users in the district of Jalpaiguri and cash on delivery is also high of 28.21%. Online payment is low for the district of Alipurduar and cash on delivery is low in Darjeeling.

When rain and rivers flow, one cannot go to school. Sometimes, one stays with relatives near the school during exams. It took them 1 hour to reach school by cycle. However, bike takes only half an hour. A bus is there but for children. No government bus due to the worse condition of the roads. they get a fellowship yearly through the SIRISH portal. There are three kinds of scholarship-pre*matric*, *post-matric* and for higher education. Some did not get the benefits because of a lack of caste certificates. They have to go to the block office for the caste certificate.



### Figure 18: Mode of payment in online shopping in Assam (%)

Source: Primary Data, DEF

#### Table 11: Mode of payment in online shopping

District	Cash on delivery	Online payment
Dibrugarh	30.31	41.18
Jorhat	8.85	3.92
Sonitpur	2.32	0
Udalguri	7.96	1.96

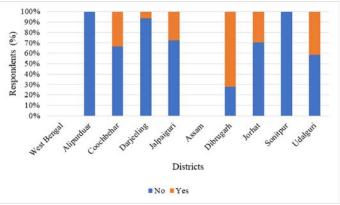
Source: Primary Data, DEF

In Assam, district of Dibrugarh has the highest percentage share in both cash on delivery (30.31%) and online payment (41.18%). Sonitpur has no respondents of online payment and lowest share in cash on delivery (2.32%).

Most of voter cards here have spelling mistakes and get the names corrected. We have been giving our names correctly in writing, but they would enter the names according to themselves, for example – "my name is Sanjay, but they made it Sanjoy"

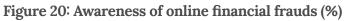
\_A 48 year old Man Tea Garden Worker at Digholiya Tea Estate

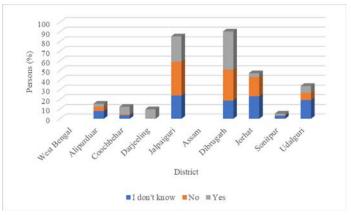
### Figure 19: Percentage of people received skill development training



Source: Primary Data, DEF

People receiving skill development training with the highest percentage share in Dibrugarh of Assam of 72.2%. Alipurduar of West Bengal and Sonitpur of Assam has respondents with not anyone receiving skill development training.





Source: Primary Data, DEF

With coming of online payment methods, online financial frauds have also become quite common. Among the selected districts of West Bengal, 26.3% of respondents are aware of online financial frauds in the district of Jalpaiguri and only 3.32% are aware

When the data balance used to get over in a day then he would ask his mother for money to recharge his phone, then his mother would say -" khane ke liye paisa nahi hain aur MB bharane ke liye paisa chahiye" (There is no money to buy food, and you are asking money to recharge your phone). His mother also said that there is no guarantee that people would watch his videos. A 14 year old male student at Bahoni Tea Estate ,Jorhat ,Assam

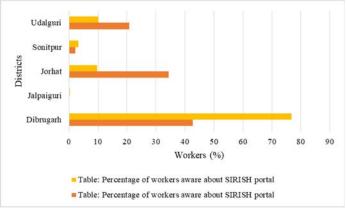
He said," I want to become a YouTube Blogger so that people can know me and recognise me. in the district of Alipurduar. Amongst the districts of Assam, Dibrugarh has the highest percentage share of awareness of 39.77% and lowest in the district of Sonitpur.

#### 3.3 Awareness of Offline and Online Government Schemes and Programmes

#### SIRISH portal access in Assam

In Assam SIRISH<sup>3</sup> is the online Application System of 'Tea Tribes and Adivasi Welfare Department' launched by the Directorate of Tea Tribes and Adivasi Welfare. It is an online portal run by the Assam State Government to provide an automated, online application system for filling forms . The purpose of the scholarship is to support the Adivasi and tea tribes present in the State. The scheme includeseducation, skill development, entrepreneursand hip, self-employment opportunities.

### Figure 21: Percentage of workers aware about SIRISH portal



Source: Primary Data, DEF

<sup>&</sup>lt;sup>3</sup> https://sirishassam.in/

SIRISH portal is mainly operational in the Assam. The percentage share of workers who are aware of the SIRISH portal is highest in the district of Dibrugarh (76.78%), followed by Udalguri of 10.12%, Jorhat 9.62% and Sonitpur 3.15%.

District	Yes	Never	Rarely	Some- times	Total
Dibrugarh	127	47	65	224	463
Jalpaiguri	1	0	0	1	2
Jorhat	19	4	4	31	58
Sonitpur	0	2	2	15	19
Udalguri	13	21	3	24	61
Total	160	74	74	295	603

Table	12:	Population	accessing	the	SIRISH
schem	e	_	_		

Source: Primary Data, DEF

The people in Dibrugarh are accessing the scheme and its components more compared to other districts (224 respondents). This is also because the survey respondents were higher in Dibrugarh. Majority of the people responded to accessing the scheme sometimes (295 respondents).

When rain and rivers flow, one cannot go to school. Sometimes, one stays with relatives near the school during exams. It took them 1 hour to reach school by cycle. However, bike takes only half an hour. A bus is there but for children. There is no government bus due to the bad condition of the roads. They get a fellowship yearly through the SIRISH portal. There are three kinds of scholarship- pre-matric, postmatric and for higher education. Some did not get the benefits because of a lack of caste certificates. They have to go to the block office for the caste certificate. $^4$ 

The Adivasi student community has been applying for scholarships and fellowships through the SIRISH portal, but they also miss the form submission dates when there is no internet connection in the tea gardens. SIRISH portal access can improve the timely access of the schemes by the Adivasis and the tea plantation workers in Assam.

#### Tea Plantation Employees' Welfare Fund Act, 2015 in West Bengal

The Act was initiated in the year 2015 with the aim to gather fund for the welfare of the tea plantation workers in West Bengal. It is operational in five districts - Jalpaiguri, Alipurduar, Darjeeling, Cooch Behar and Uttar Dinajpur. The fund is kind of voluntary donationfrom which any loan, grant-inaid and subsidy can be accessed.

Table 13: District wise tea garden workers aware
about Tea Plantation Welfare Fund

District	No	Yes	Total
Alipurduar	7.64	1.25	4.44
Cooch Behar	5.71	3.09	4.4
Darjeeling	0.92	7.86	4.4
Jalpaiguri	27.46	31.27	29.37

Source: Primary Data, DEF

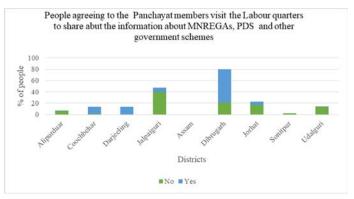
In West Bengal, the women members (between age 26 to 60 years) have been receiving monthly Rs 500 for general categorywomen and Rs 1,000 for

<sup>&</sup>lt;sup>4</sup> In a FGD held at Budalpara Tea Estate, Udalguri, Assam,19th February,2024.

I was in 5th semester of Graduation Examination and had to give my online viva under the streetlight at 9 pm, my teacher then asked me if I was on the street on the night, then she asked me to go back to my house and then I should not worry about my examination.-A 22 year old female student.

Adivasis women under the Laxmi Bhandar Scheme.<sup>5</sup> The women respondents in the tea gardens of West Bengal said that they have been receiving the money in their bank accounts.<sup>6</sup>

Figure 22: People agreeing to sharing information to Panchayat members visiting the labour quarters about MNREGAs, PDS and other government schemes



Source: Primary Data, DEF

In Darjeeling 13.59% people have agreed to the Panchayat members visit the Labour quarters to share about the information about MNREGAs, PDS and other government schemes, 12.93% in Coochbehar, 7.78% in Jalpaiguri and 0.66% in Alipurduar. In Dibrugarh 58.97% people have agreed, followed by Jorhat of 5.94% and Udalguri of 0.13%.

Most of voter cards here have spelling mistakes and get the names corrected. We have been giving our names correctly in writing, but they would enter the names according to themselves, for example – "my name is Sanjay, but they made it Sanjoy". A 48 year old male tea garden worker at Digholiya Tea Estate.<sup>7</sup>

<sup>&</sup>lt;sup>5</sup> <u>https://www.myscheme.gov.in/schemes/lbs-wb</u>

<sup>&</sup>lt;sup>6</sup> In an FGD held at Binnaguri Tea Estate, Jalpaiguri, West Bengal, 21<sup>st</sup> February, 2024.

<sup>&</sup>lt;sup>7</sup> In a FGD held at Digholiya Tea Estate, Dibrugarh, Assam, 15th February ,2024.



When asked how they communicate with their family members in emergencies, they said that they ask the 'sardar' of the Tea Garden to call their family.

# 3.4 Age and Gender relations to Critical Digital literacy

When the data balance would get over in a day, he would ask his mother for money to recharge his phone. His mother would say,- "khane ke liye paisa nahi hain aur MB bharane ke liye paisa chahiye" (There is no money to buy food , and you are asking money to recharge your phone). - A 14 year old male student at Bahoni Tea Estate, Jorhat, Assam<sup>8</sup>

His mother also said that there was no guarantee that people would watch his videos.He said,"I want to become a YouTube Blogger so that people can know me and recognise me."<sup>9</sup>

Age	Key- pad	Keypad Smart- phone	Smart- phone	Smart- phone Keypad	Total
18-25	15.08	13.89	23.42	0	21.47
26-35	24.02	33.33	35.32	0	32.89
36-45	24.02	30.56	27.58	33.33	26.92
46-55	21.23	19.44	9.59	33.33	12.23
Above 55	7.54	0	2.08	33.33	3.21
Below 18	8.1	2.78	2.01	0	3.27
Total	100	100	100	100	100

#### Table 14: Age and Smartphone Usage

Source: Primary Data, DEF

<sup>&</sup>lt;sup>8</sup> In a FGD held at SycottaTea Estate, Jorhat, Assam, 17<sup>th</sup> February, 2024.
<sup>9</sup> Ibid.

	Age	What kind of phone
Age	1	
What kind of phone	-0.2227	1
	0	

#### Table 15: Correlation of Age and Use of Smartphone

Source: Primary Data, DEF

Table shows correlation coefficients between two variables, Age and Smartphone Usage. Each cell in the table represents the correlation coefficient between the variables listed on the corresponding row and column.

- Correlation coefficients range from -1 to 1:
- If the coefficient is close to 1, it indicates a strong positive correlation, meaning that as one variable increases, the other tends to increase as well.
- If the coefficient is close to -1, it indicates a strong negative correlation, meaning that as one variable increases, the other tends to decrease.
- If the coefficient is close to 0, it indicates little to no linear correlation between the variables.

Hence from the table:

- The correlation coefficient between Age and itself is 1. This is expected since it's the correlation of a variable with itself, which is always 1.
- The correlation coefficient between Age and Smartphone use is -0.2227. This indicates a moderate negative correlation between age and smartphone usage. In other words, as age increases, smartphone usage tends to decrease, and vice versa.



The women Adivasi students are very aspirational and they want to gain higher education. The digital challenges in their access to higher education need to be reduced so that they can fulfil their higher education dreams. • The correlation coefficient between Smartphone use and itself is 1, which is expected.

### 3.5 Educational Qualifications in Relation to Critical Digital Literacy

I was in 5th semester of graduation examination and had to give my online viva under the streetlight at 9 pm.My teacher later asked me if I was on the street that, then she asked me to go back to my house and that I should not worry about my examination.- A 22 year old female student.<sup>10</sup>

The women Adivasi students are very aspirational and they want to gain higher education. The digital challenges in their access to higher education need to be reduced so that they can fulfil their higher education dreams.

	Smart		
Gender	0	1	Total
Man	43.85	47.62	46.84
Woman	56.15	52.38	53.16
Total	100	100	100

#### Table 16: Gender and Smartphone Usage

Source: Primary Data, DEF

#### Pearson chi2(1) = 1.6156 Pr = 0.204

The table above is a contingency table displaying the relationship between gender (Man/Woman) and the type of phone (Smartphone/Non-Smartphone).

<sup>&</sup>lt;sup>10</sup> In a FGD held at Digholiya Tea Estate, Dibrugarh, Assam, 15th February, 2024.

- The table is divided into categories of gender (Man/Woman) and the type of phone (Smartphone/Non-Smartphone).
- The numbers within the table represent the percentage of individuals falling into each category. For example:
- Among men, 43.85% have a non-Smartphone, and 47.62% have a Smartphone.
- Among women, 56.15% have a non-Smartphone, and 52.38% have a Smartphone.
- The total percentages in each row and column sum up to 100%.
- The Pearson chi-square test statistic is used to assess the independence of the variables. In this case, the chi-square value is 1.6156 with 1 degree of freedom, and the associated p-value is 0.204.
- The p-value (Pr) indicates the probability of observing a chi-square value as extreme as the one obtained, assuming that there is no relationship between gender and the type of phone. A p-value greater than 0.05 (commonly used significance threshold) suggests that there is no statistically significant relationship between the two variables.

Based on the provided p-value (0.204), we fail to reject the null hypothesis, indicating that there is no statistically significant relationship between gender and the type of phone they have at the 0.05 significance level.

When asked how they communicate with their family members in emergencies, they said that they ask the 'sardar' of the tea garden to call their family.<sup>11</sup>

 $<sup>^{\</sup>rm 11}$  In a FGD held at Sycotta Tea Estate, Jorhat, Assam, 17th February, 2024.

	Gender~w	SHGpar~w	Skill_~w
Gender_New	1		
SHGpart_ New	0.2487	1	
	0		
Skill_New	-0.0774	0.2271	1
	0.0002	0	

### Table 17: Correlation between Gender, SHG, Skill Development

Source: Primary Data, DEF

A correlation matrix between three variables: "Gender\_New" (Gender), "SHGpart\_New" (which represent participation in Self-Help Groups) and "Skill\_New" (Skill Development). Each cell in the table represents the correlation coefficient between the variables listed on the corresponding row and column. Correlation coefficients range from -1 to 1. If the coefficient is close to 1, it indicates a strong positive correlation, meaning that as one variable increases, the other tends to increase as well. If the coefficient is close to -1, it indicates a strong negative correlation, meaning that as one variable increases, the other tends to decrease. If the coefficient is close to 0, it indicates little to no linear correlation between the variables.

Hence table indicates:

• The correlation coefficient between "Gender\_ New" and "SHGpart\_New" is 0.2487. This indicates a moderate positive correlation between gender and participation in Self-Help Groups. In other words, there's a tendency for one's gender to be associated with their participation in Self-Help Groups, though the correlation is not very strong.

- The correlation coefficient between "Gender\_ New" and "Skill\_New" is -0.0774. This indicates a very weak negative correlation between gender and skill level. In other words, there's almost no linear relationship between gender and skill level.
- The correlation coefficient between "SHGpart\_ New" and "Skill\_New" is 0.2271. This indicates a moderate positive correlation between participation in Self-Help Groups and skill level. In other words, there's a tendency for individuals who participate more in Self-Help Groups to have higher skill levels.

Correlation				
	EduQua~w	UseNet~w		
EduQuaf_New	1			
UseNet_New	0.003	1		
	0.8826			

### Table 18: Correlation of Educational Qualification and Use of Internet

Source: Primary Data, DEF

The correlation coefficient between "EduQuaf\_ New" (Educational Qualification) and "UseNet\_ New" (Internet Usage) is 0.0030. Thus:

- The correlation coefficient measures the strength and direction of the linear relationship between two variables.
- In this case, the correlation coefficient is very close to zero (0.0030), indicating a very weak positive correlation between "EduQuaf\_New" and "UseNet\_New".

- Since the correlation coefficient is close to zero, it suggests that there is almost no linear relationship between the two variables.
- The associated p-value (0.8826) is greater than the conventional significance level of 0.05, indicating that the correlation coefficient is not statistically significant. This suggests that we fail to reject the null hypothesis that the correlation coefficient is equal to zero.
- Therefore, based on the correlation coefficient and its associated p-value, we can conclude that there is no significant linear relationship between Educational Qualification and Internet use.

Correlation				
	Age_New	UseNet~w		
Age_New	1			
UseNet_New	0.0639	1		
	0.0018			

#### Table 19: Correlation of Age and Use of Internet

Source: Primary Data, DEF

The correlation coefficient between "Age\_New" (Age) and "UseNet\_New" (Internet use) is 0.0639. The correlation coefficient measures the strength and direction of the linear relationship between two variables. In this case, the correlation coefficient is positive (0.0639), indicating a weak positive correlation between "Age\_New" and "UseNet\_New". Since the correlation coefficient is close to zero, it suggests that there is a weak linear relationship between the two variables. The associated p-value (0.0018) is less than the

conventional significance level of 0.05, indicating that the correlation coefficient is statistically significant. This suggests that we reject the null hypothesis that the correlation coefficient is equal to zero. Therefore, based on the correlation coefficient and its associated p-value, we can conclude that there is a statistically significant weak positive linear relationship between "Age\_ New" and "UseNet\_New".

Table 20	Gender	and	Digital	Payment
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	Frequen payment			
Gender	Frequently	Never	Occasionally	Total
Man	59.02	42.11	70	56.67
Woman	40.98	57.89	30	43.33
Total	100	100	100	100

Source: Primary Data, DEF

Table 21: Correlation of Gender and Digital payment

Correlation					
	Gender~w	UseNet~w			
Gender_New	1				
UseNet_New	0.0589	1			
	0.004				

Source: Primary Data, DEF

The correlation coefficient between "Gender\_

New" (Gender) and "FDigipay\_New" (Frequency of using digital payment) is 0.0033. Thus:

- The correlation coefficient measures the strength and direction of the linear relationship between two variables.
- In this case, the correlation coefficient is positive (0.0033), indicating a very weak positive correlation between "Gender\_New" and "FDigipay\_New".
- Since the correlation coefficient is very close to zero, it suggests that there is virtually no linear relationship between the two variables.
- The associated p-value (0.9755) is greater than the conventional significance level of 0.05, indicating that the correlation coefficient is not statistically significant. This suggests that we fail to reject the null hypothesis that the correlation coefficient is equal to zero.
- Therefore, based on the correlation coefficient and its associated p-value, we can conclude that there is no statistically significant linear relationship between "Gender\_New" and "FDigipay\_New".

Correlation					
Age_New FDigip~w					
Age_New	1				
FDigipay_New	0.1686	1			
	0.1122				

#### Table 22: Correlation of Age and Digital Payment

Source: Primary Data, DEF

The correlation coefficient between "Age\_New" (Age) and "FDigipay\_New" (Frequency of using digital payment in local market) is 0.1686.

- The correlation coefficient measures the strength and direction of the linear relationship between two variables.
- In this case, the correlation coefficient is positive (0.1686), indicating a weak positive correlation between "Age\_New" and "FDigipay\_New".
- Since the correlation coefficient is close to zero, it suggests that there is a weak linear relationship between the two variables.
- The associated p-value (0.1122) is greater than the conventional significance level of 0.05, indicating that the correlation coefficient is not statistically significant. This suggests that we fail to reject the null hypothesis that the correlation coefficient is equal to zero.
- Therefore, based on the correlation coefficient and its associated p-value, we can conclude that there is no statistically significant linear relationship between Age and Frequency of using digital payment in local market.

To answer this relationship, the analysis is based on a Baseline Survey conducted in 2024 from Tea Gardens of Assam (4 districts) and West Bengal (3 districts) to understand the socioeconomic and digital landscape. The survey consists of 2,387 individual responses. However, given the scope of the objective, 658 responses (belonging to the Scheduled Tribes or Adivasi category) were considered for the analysis<sup>12</sup>. Of 658, 654 respondents are from West Bengal, and only four

<sup>&</sup>lt;sup>12</sup> There are 288 Adivasis (ST) and tea garden workers. No separate analysis has been done for this sample unit. Here, respondents with a constitutional category of ST are used as an analytical category.

are from Assam. In terms of gender, 47.5% of responses are of Men, 52.28% of responses are of Women, and only 0.15% are of trans persons.

The primary variables include educational level and Critical Digital Literacy (CDL hereafter). Educational level already consists of six categorical responses: 'no formal education,' 'primary' 'secondary,' 'high school,' 'graduation,' and 'others.' CDL, however, is estimated by considering equally weighted dimensions like awareness of online financial frauds, experiences of online scams, misinformation regarding bank deposits, and reporting cybercrimes (as defined in the dataset). All the responses recorded under these dimensions are in binary categories ('Yes' & 'No'), except for the dimension of 'awareness of online financial frauds.' This exceptional dimension consists of an additional categorical response, like 'I Do Not Know.' This exception has been tackled by clubbing with the category 'No' for analytic usefulness. They have been clubbed as the analysis does not have much conceptual or practical implications (as such, responses are only about 6%). Following this, the response 'Yes' has been coded as 1 and 'No' as 0 in order to calculate a score value indicating the levels of CDL. Depending upon the score value, CDL has been categorised into five categories-ranging between the highest score, indicating a 'very good' CDL rate, and the lowest score, indicating a 'very low' CDL rate.

Additionally, variables like age (consisting of six age categories) and gender (consisting of three categories) have also been considered as potentially confounding.

Ordinal logistic regression (OLR)<sup>13</sup> is also performed to evaluate the impact of educational level on digital

<sup>&</sup>lt;sup>13</sup> OLR is a statistical method suitable for analysing data with ordered dependent variables.

literacy scores while controlling for potential confounding variables like age and gender.

As a descriptive observation, it can be mentioned that most of the respondents (more than 80%) have received education up to High Secondary. Around 40% of the Adivasi respondents either could attain only primary education or did not receive any formal education. The number of graduates among the respondents is very low (see Table below).

# Table 23: Levels of Education among the Adivasis (ST) of West Bengal and Assam

Level of Education	No. of Obs.
No Formal Education	18%
Primary	23%
Secondary	11%
High School	33%
Graduate	14%
Others	1%

Source: Primary Survey, DEF

The distribution of CDL ranged from very poor to very good, with most respondents falling below moderate. More than half of the respondents have a 'Very Poor' level of CDL, and about 45% fall under the category of 'Poor' levels. Hardly 1% of respondents have good CDL rates (see the below table). The prevalence of receiving misinformation seems to be the highest among them, and the tendency to report cybercrime is the lowest. Instances of being scammed among the respondents with primary education or no formal education are lesser.

## Table 24: Levels of Critical Digital Literacy among the STs of West Bengal and Assam

Levels of CDL	No. of Obs.
Very Poor	52.58%
Poor	44.68%
Moderate	2.43%
Good	0.15%
Very Good	0.15%

Source: Primary Data, DEF

Furthermore, if we cross-tabulate the levels of education and various dimensions of CDL (see the below table), it can be found that the lowest levels of awareness about online financial fraud can be seen among the respondents with no formal education. The prevalence of receiving misinformation seems to be the highest among them, and the tendency to report cybercrime is the lowest. Instances of being scammed among the respondents with primary education or no formal education are lesser. The respondents with primary education only appear to be the highest among those who report a cybercrime.

A few surprising observations can be highlighted in the case of respondents with more than secondary education: for example, one, such awareness can be seen more among respondents with secondary and higher secondary education than graduates; secondly, even though the levels of awareness are higher among the respondents with secondary education, the percentage of people being scammed is highest and reporting cybercrime is lowest. Thirdly, the number of instances of scams is higher among graduates.

Level of Education	Awareness of Online Financial Fraud	Being Scammed Online	Received Misinformation	Reporting Cybercrime
No Formal Education	17%	2%	8%	0%
Primary	41%	0	3%	3%
Secondary	62%	7%	3%	0%
High School	53%	1%	1%	1%
Graduate	45%	6%	2%	2%
Others	100	0	0	0

Table 25: Levels of Education & Critical Digital Literacy among the Adivasis of West Bengal and Assam

Source: Primary Data, DEF

OLR has been performed to evaluate the impact of educational level on CDL scores, as presented in the following table. It shows that the OLR model converged successfully. However, the overall model fit statistics did not indicate a strong association between the independent variables (education level, age category, gender category) and CDL Score  $(\square^2(3) = 1.78, p = 0.62)$ . While the coefficient analysis provided some directional trends. For example, the coefficient for education level might have shown a slight positive association with CDL scores, suggesting potentially higher scores for individuals with higher education levels. However, due to the lack of statistical significance (p > 0.05), we cannot definitively conclude that education level strongly predicts CDL in this dataset. Similarly, the coefficients for the age category and gender category might have indicated some directional tendencies, but they were not statistically significant either.

Table 26: Evaluation of the impact of Educational Level on Digital Literacy Scores while controlling for potential confounding variables like Age and Gender.

Iteration 1: lo Iteration 2: lo	og likelihood og likelihood og likelihood og likelihood	= -530.80703 = -530.80697				
Ordered logistic Log likelihood =	0			LR Pr	ob > chi2 =	658 1.78 0.6201 0.0017
 Crit_DigiLit_~r	Coefficient	Std. err.	z	P> z	[95% conf.	interval]
Edu_Category	.0315476	.0481763	0.65	0.513		.1259714
Gender_Category Age_Category	.015059 .0633229	.0775135 .0688039	0.19 0.92	0.846 0.357	1368646 0715303	.1669826 .1981761
/cut1 /cut2	.3880098	.2605366			1226325	.8986521
/cut2 /cut3 /cut4	6.082402 6.776931	.7519443 1.032157			4.608618 4.753941	7.556185 8.799921

Source: Primary Data, DEF

The findings suggest that education level, age category, and gender category might not be the primary factors influencing CDL in this dataset. This contradicts some studies that have found associations between these factors and digital literacy. The weak model fit suggests that other factors not considered in this study, such as access to technology, training opportunities, or personal motivation, might play a more significant role in developing strong digital skills.



# 04

Framing the Need for Digital Empowerment Among Adivasis and Tea Plantation Workers

The young students and members of the community have aspirations to learn newer things. but limitations exist in the form of unavailability of opportunities - like a closer place to their place of residence in the tea garden for accessing the internet at affordable prices for accessing their basic citizen rights.

This section provides an overview of the proposed interventions by the Digital Empowerment Foundation to provide support to the Adivasis and the tea plantation workers in the selected tea estates of Assam and West Bengal. Based on the Baseline Survey, the most important concern has arisen of the distance tea plantation workers and Adivasis have to travel to get their basic paperwork and documentation done. The young students and members of the community have aspirations to learn newer things, but limitations exist in the form of unavailability of opportunities - like a closer place to their place of residence in the tea garden for accessing the internet at affordable prices for accessing their basic citizen rights.

The Project would deploy and expand the reach of access for the community with critical information, resources, skills, and opportunities with the adolescents, youth, and women at the forefront in access for empowerment through the public access WIFI hotspot zones around the 'Community Internet Libraries' (CIL). This access program seeks to further leverage the Government of India's PM WANI Scheme<sup>1</sup> for last mile WIFI networkbased broadband delivery and create and expand the pool of community internet/digital fellows (Soochnapreneur/information entrepreneurs), largely young women, driving the network, access and services in each garden community, with close to 3,000 population approx.

The access for empowerment element shall be demonstrated in access to information and resources for critical – health, education, alternative livelihood, government schemes and entitlements, and entrepreneurship needs – enhanced by internet and digital skills to navigate the internet/ digital world beneficially and safely. This while

<sup>1</sup>https://dot.gov.in/sites/default/files/202-\_12\_11%20Brief%20PM%20WANI\_0\_0. pdf?download=1

The access for empowerment element shall be demonstrated in access to information and resources for critical - health, education, alternative livelihood. government schemes and entitlements, and entrepreneurship needs – enhanced by internet and digital skills to navigate the internet/digital world beneficially and safely.

reaching out to more than 50,000 community members, across 100 tea garden communities with access and services.

The project would expand and scale the 'Internet Roshni (Light)' access model/prototype, currently running across 5 Districts of Assam, in India, to newer vulnerable and inaccessible areas / districts for the tea plantation workers and Adivasi communities in Assam and in West Bengal States of India (the two leading tea producing states in India).

While the Phase – I of the 'Internet Roshni' focused on sowing the initial seed of enabling an internet community for the focused groups by building basic community network and access facility within the remotest tea gardens and opening up initial avenues of access of information and services, in the current phase, the model will find resonance in newer areas as well as see value-added integration of internet and digital for –

- (i) Integrating network and connectivity and access and the CIL set-ups with Panchayats (local self-government administration) offices as well as with the model schools for the tea garden community by the government in Assam;
- (ii) Enabling and building stronger digital citizenships in adolescents, youths, women in internet and digital skills, media literacy skills, personal and life skills, English skills through online access to resources, mentoring, and counselling services;
- (iii) Developing local oral content in the Sadri dialect of the community and promoting local access to critical information, and resources in the local dialect;

Developing local oral content in the Sadri dialect of the community and promoting local access to critical information, and resources in the local dialect.

- (iv) Access to information, resources and services in – health, public entitlements, jobs, employment, entrepreneurship, and developing and building alternative livelihood for the community with a focus on the women tea garden workers, as a resilience building against work vulnerability due to tea garden ownership and management's unreliable decisions, as well as, climate change impact in tea gardens and challenges; and;
- (v) Access to and development of vocational skills and local entrepreneurship in youths and women, with a focus on the existing and yet-to-be-active women's SHGs inside the tea gardens.

The model is unique as an integrated internet community approach for inclusive development for vulnerable communities in creating tea plantation workers and Adivasi (indigenous) internet communities, overcoming the digital representation divide of the community. This is enabled by weaving access to the internet with information and capacity building towards building effective Response, Resilience, and Recovery (RRR) from existing vulnerabilities of the community at all levels. This is through environmentally sustainable network access and building WIFI communities locally, with the CILs serving as community-based digital resource centres for the above needs while leveraging existing government last mile schemes and resources, including PM WANI.

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# Annexure 1: Baseline Survey Schedule

4/3/24, 11:48 AM

BOLT-2 Baseline Survey

## **BOLT-2 Baseline Survey**

Greetings.

My name is

#### and I am associated with

an organization working on Digital Emowerement in your community. We are conducting a research study so that our organisation can expand the scale of 'Internet Roshni (Light' community network accessmodel/prototype in the tea gardens of Assam and West Bengal. The study aims to seeks to deploy and expand the reach of access for the community with critical information, resources, skills, and opportunities with the adolescents, youth, and women at the forefront in access for empowerment, through the public access of WIFI hotspot zones around the 'Community Internet Libraries'. The survey will require about 30 -35 minutes of your time and your participation is completely voluntary. If you do decide to participate, you can change your mind at any point without consequences. You can also skip any particular question that you don't wish to answer during the study. All information shared by you would only be used for the purpose of this study and your responses would be kept completely confidential. The data as a part of this survey would not be visible to anyone other than the researchers of our team; and all the analysis would be presented in an aggregate form, such that it cannot be traced back to you.

#### Do we have your consent to proceed?

уууу-	mm-dd
Intervi	ew Date
Intervi	ew No/ID.
	Refused because elder members/
	Didn't understood the purpose of
	Busy in work
Reasor	n for Refusal
$\bigcirc$	No
$\bigcirc$	Yes

hh:mm

interview

make members were not present

#### Interview Time

yyyy-mm-dd

hh:mm

4/3/24	11:48 AM

BOLT-2 Baseline Survey

## Section 1: Socio-Economic Profile

## » PART A- Demographic details

1. Name

#### 2. Age

$\bigcirc$	Below 18
$\bigcirc$	18-25
$\bigcirc$	26-35
$\bigcirc$	36-45
$\bigcirc$	46-55
$\bigcirc$	Above 55

3. Address: (Enter the name of the Tea Estate)

4.	G	e	n	d	e	r
----	---	---	---	---	---	---

$\bigcirc$	Man
$\bigcirc$	Woman
$\bigcirc$	Transperson
$\bigcirc$	Non-Binary
$\bigcirc$	Others

4.1			

5. Marital Status			
$\bigcirc$	Single		
$\bigcirc$	Married		
$\bigcirc$	Divorced		
$\bigcirc$	Widowed		

6. How many family members are in the household

7. Place of Birth

#### 8. Language

https://kf.surveytime.defindia.org/#/forms/a748UTnLbRAEWA7PHVUtTa/landing

4/3/24, 11:48 AM	BOLT-2 Baseline Survey
9. Educational Qualification	
O No formal education	
O Primary	
Secondary	
High School	
Graduate	
Others	
9.1. Others	
10. Category	

$\bigcirc$	General
$\bigcirc$	Scheduled Castes
$\bigcirc$	Scheduled Tribes
$\bigcirc$	Don't want to disclose
11. Rel	igion
$\bigcirc$	Christianity
$\bigcirc$	Hinduism
$\bigcirc$	Islam
$\bigcirc$	Sikhism
$\bigcirc$	Others
11.1. 0	thers

О овс

12. Is y	our name on the ration card
$\bigcirc$	Yes
$\bigcirc$	No
13. Is y	our ration card linked with your AADHAR Card
$\bigcirc$	Yes
$\bigcirc$	No
14. Did	you and your family member has ever faced any difficulty in linking your Ration card with AADHAR
	Problem in biometrics
	Denied ration due to non-linkage of AADHAR
$\square$	Others

4/3/24	11:48 AM

BOLT-2 Baseline Survey

14.1. Others

15. Were you ever declined ration due to non-linkage of AADHAR

0	Yes
$\bigcirc$	No
$\bigcirc$	Don't remember

## 16. What ration card is your name listed on

0	AY
0	APL
0	BPL

## » PART B- Occupation and Workplace Details

17. Are	you	em	ploy	yed
---------	-----	----	------	-----

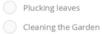
Ves

#### 18. What is your occupation

$\Box$	Business / shop
	Tea garden worker
	Security Guards
	Domestic Worker
	Agriculture labourer
	Others

18.1. Others

19. If working in the Tea Estate , what is your work



Both

20. What is the name of the Tea Estate

21. How long have you been working in the Tea Estate?

https://kf.surveytime.defindia.org/#/forms/a748UTnLbRAEWA7PHVUtTa/landing

4/3/24, 11:48 AM	BOLT-2 Baseline Survey
22. What are the working hours?	
8 hours	
8-10 hours	
More than 10 hours	
23. What type of Worker are you	
Casual Worker	
Temporary Worker	
Permanent Worker	
24. If you are worker in Tea Garden , how do you pluck leav	es
Hands	
Machine	
Both	
25. Do other family members work in the Tea Estate	
Yes	
No	
26. If Yes , then who works from the family in the Tea Estate	e
Husband	
Wife	
Mother	
Father	
Brother	
Sister	
Others	
26.1. Others	
27. Does the Tea Estate provides Accomodation	
Yes	
No	
28. If Yes , then how many rooms are there	
29. Is there a separate Kitchen	
Ves Yes	
No	

4/3/24, 11:48 AM	BOLT-2 Baseline Survey
30. Is there a toilet/latrine at your home	
Yes	
No	
31. What is the source of drinking water	
Tap Water	
Borewell	
Others	
32. How do you get paid	
Hourly	
Weekly	
Monthly	
33. Can you share your estimated salary per month	
34. Are you also working elsewhere apart from the Tea Esta	ate when the Tea Estate is closed
No	
35. If yes , then what work	
Construction Labour	
Agriculture Labour	
Others	
35.1. Others	
» PART C- Educational , Health and other Ameniti	es Details
36. Are there Schools in the Tea Estate	
◯ Yes	
O No	
37. What levels of School are in the Tea Estate	
Primary School	
High School	
Senior Secondary	

4/3/24, 11:48 AM	BOLT-2 Baseline Survey
38. Is there Aanganwadi in the area nearby to the Tea	a Estate
⊖ Yes	
No	
39. Do your children go to School	
○ Yes	
○ No	
40. How much do you spend on your children educati	on in a month : ( Enter in Rs p.m)
41. Are there Government Primary Health Care Centr	es in the Tea Estate
Yes	
O No	
42. What kind of health care facilites are available at	the Health Care Centre in the Tea Estate
Doctor -OPD consultation	
Hospital Admission for minor surgeries	
Hospital Admission for major surgeries	
43. How frequently do you visit to your nearest Healt	h centre
For regular check ups	
Only when ill	
44. Have you ever consulted Doctor online( over the p	phone)
🔘 Yes	
O No	
45. Do you have any Health insurance provided by the	e Tea Estates
🔘 Yes	
O No	
46. Do you avail any benefits from health card from t	he state or central government ( for example:Ayshman Bharat)
Yes	
O No	

47. What are the occupational hazards of working in the Tea Estates ? Please ask about the rcent disease they have suffered from or the most common disease in the Tea Gardens

4/3/24, 11:48 AM	BOLT-2 Baseline Survey		
	DOLI-2 Dasenine Survey		
48. How far is the nearest market place in (km)?			
less than 2 km			
2 to 4km			
<ul> <li>5 to 6 km</li> <li>7 to 9 km</li> </ul>			
more than 9 km			
<u> </u>			
49. How far you have to go to get photocopy of documents			
1 to 3km			
↓ to 5 km			
7 to 9 km			
more than 9 km			
50. How much do you pay for one page printout			
less than Rs 2			
Rs 3 to 5			
Rs 6 to 8			
Rs 9 to 11			
more than Rs 11			
51. How much do you have to pay to fill up the forms at the	e internet café shops		
less than Rs 50			
O Rs 51 to Rs 100			
Rs 101 to Rs 150			
More than Rs 151			
» PART D - Banking and Finance			
52. Do you have bank account			
◯ Yes			
O No			
53. Do you have ATM card			
Yes			
No			
54. Do you use ATM card			
Yes			
No			

https://kf.surveytime.defindia.org/#/forms/a748UTnLbRAEWA7PHVUtTa/landing

4/3/24, 11:48 AM	BOLT-2 Baseline Survey
55. How far is your Bank branch	
less than 2 km	
🔿 3 to 5 km	
0 6 to 8 km	
9 to 11 km	
O more than 11 km	
56. How far is the Customer Service point for banking	
less than 1 km	
2 to 4 km	
5 to 7 km	
8 to 10 km	
more than 10 km	
57. Do you take loan from Bank	
Yes	
No	
58. Are you in debt	
Yes	
No	
59. What are your sources of Debt	
Relatives	
Friends	
Private Money Lender	
Tea Estate Manager	
Banks	
For Women Members	
60. Are you part of any SHG?	

$\bigcirc$	Yes
0	No

61. Can you name the SHG you are part of

#### 4/3/24, 11:48 AM

BOLT-2 Baseline Survey

62. How many meetings do you have in a month of the SHG



#### 63. Have you taken any loan from the SHG in the recent past

$\bigcirc$	Yes
$\bigcirc$	No

#### 64. What was thepurpose of loan

- For building house For children marriage For medical purpose
- For buying vechile

## Section 2 : Access to Internet, Communication and Technology

## » PART E- Mobile Phones, Computers ownership and Internet Consumption Pattern

## 65. Do you own a mobile Phone

C	)	Yes
C	)	No

66. What kind of Phone it is

Keypad phone

Smartphone

## 67. Is it your first Smart Mobile Phone , how long did you buy

1 year ago
1 to 3 years ago
3 to 5 years ago
more than 5 years ago

## 68. Do you keep this phone with you



4/3/24, 11:48 AM	BOLT-2 Baseline Survey
69. Do you keep the phone locked	
With password	
With Pattern	
With Fingerprint lock	
70. Have you ever forgotten the password and then how di	d you unlock your phone
Took help of young members of the family	
Went to the internet café	
Others	
70.1. Others	
71. Do you have stable internet connection in your Phone	
Yes	
No	
72. What kind of cellular network you have	
2G	
3G	
4G	
5G	
73. What are the problems of bad internet connection	
Streaming	
Slow Loading	
74. Are you satisfied with the quality of internet for the pri	ce you pay
◯ Yes	
No	
75. Is there any public or community facility near the tea g	ardens to use internet
Digital Library	
Community centre	
School	
Panchayat Office	
76. How frequently do you recharge your phone	
Monthly	
Quarterly	
Half-Yearly	

4/3/24, 11:48 AM	BOLT-2 Baseline Survey
77. How much do you pay for the recharge	
less than 100	
101-150	
151-200	
201- 250	
more than 250	
78. Do you own any other gadgets	
Tablet	
Laptop	
Desktop	
None	
79. Do you have access to Wifi	
◯ Yes	
O No	
80. Do you know about PM-WANI Wifi Access Point	
◯ Yes	
O No	
81. Have you ever received any training regarding PM-WAI	NI Wifi
◯ Yes	
O No	
82. Have you ever accessed Wifi through PM-WANI on you	phone
◯ Yes	
O No	
83. Do you share internet hotspots with your family mem	bers
◯ Yes	
○ No	
84. How is the quality of the internet speed	
Very Poor	
O Poor	
Average	
Good	
O Very Good	

https://kf.surveytime.defindia.org/#/forms/a748UTnLbRAEWA7PHVUtTa/landing

4/3/24, 11:48 AM	BOLT-2 Baseline Survey
85. How much internet do you consume per day : in GB	
less than 1GB	
1 to 1.5GB	
1.5 GB to 2 GB	
86. What do you use internet mostly for	
For entertainment ( youtube and other apps)	
For education	
For social Media (watching and making content)	
Others	

## » PART F- Social Media Consumption Pattern

86.1. Others

87. Do	you have Whatsapp Account
$\bigcirc$	Yes
$\bigcirc$	No
88. Do	you use Whatsapp for Audio -Video Calls
	Audio Calls
	Video Calls
	Both
89. Car	n you yourself do Video Call
	Yes
	No
	Take help of young members in the family
90. Hov	w is the video quality, connection while Video Calls
	Very Poor
	Poor
	Good
	Very Good
91. Do	you have email id
$\bigcirc$	Yes
$\bigcirc$	No

4/3/24, 11:48 AM	BOLT-2 Baseline Survey
92. How frequently do you check your Email ID	
Frequently	
Sometimes	
Rarely	
93. Do you have any other social media account	
Facebook	
Instagram	
Others	
93.1. Others	
94. Did you face any difficulty in opening these accounts Yes No	
95. How do you receive any government office orders , notif	ications, programmes and schemes on your phone
via calls	
via text messages	
via whatsapp messages	
via telegram	
96. Do you follow any of the Government handles on social	Media( pages on facebook and whatsapp)
Yes	
◯ No	
Section 3 : Access and challenges to digi	tal learning skills

## » PART G- Digital Learning Skills

97. Have you ever received any digital /computer literacy training

0	Yes
0	No

98. How much did you pay for computer training: (Enter in Rs)

4/3/24, 11:48 AM	BOLT-2 Baseline Survey
99. If Yes, then who organised the training	
Government	
Tea-Estate	
Non-Governmental Organisation	
Community Organisations	
100. Where was the training	
At the Tea-Estate	
At a distance centre	
Online	
101. Was it helpful	
Yes	
No	
102. Do you want to pariticipate in Digital Learning Pro	ogramme
Basic learning	
Intermediate learning	
Advanced learning	
» PART H : Digital shopping and Finance	
103. Have you ever done online shopping	
Ves No	
U No	
104. Which app / website you have used	
Flipkart	
Amazon	
Meesho	
Others	
104.1. Others	
105. How do you mak payment for the online shopping	5
Cash on delivery	
Online Payment	
106. Why don't you prefer online payment	

low balance

4/3/24, 11:48 AM	BOLT-2 Baseline Survey
107. Do you have digital payment account	
Yes	
No	
108. Which are the digital payment accoun	ts you are using
PhonePe	
Paytm	
GooglePe	
Others	
108.1. Others	
109. How frequently do you use the digital	payment in the local market after scanning QR code
Never	
Frequnently	
Occassinally	
» PART I- Access to Online Content i	n Local Language
110. Do you get government schemes and	Programmes in local language

YesNo

111. Have you come across teaching mauals in local language

C	)	Yes
C	)	No

112. Do you want to learn digital tools in Local language

C	)	Yes
C	)	No

## » PART J : Access to other Skill Programmes

113. Have you have ever received any skill development training



114. Have you ever received any training for starting up business

С	)	Yes
С	)	No

https://kf.surveytime.defindia.org/#/forms/a748UTnLbRAEWA7PHVUtTa/landing

4/3/24, 11:48 AM BOLT-2 Baseline Survey
115. If no, then in which sector do you want to receive training for setting up business
Farm Sector
Non-farm sector
Education
Others
115.1. Others
116. In what mode , you will like to start the business
Online
Offline
» PART K : Critical Digital Literacy
117. Are you aware of online financial frauds?
○ Yes
O No
O I don't know
118. Have you ever been scammed online?
○ Yes
O No
119. Have you received any misinformation regarding deposits of money in your bank account ?
○ Yes
O No
120. Where have you received the misinformation
Email
Whatsapp
Text Message
121. Have you ever reported complaint against cybercrime
○ Yes
O No
Choose your state
Assam
West Bengal

4/3/24, 11:48 AM BOLT-2 Section 4: Challenges in Access to Governme	Baseline Survey ent Schemes , Information
» PART L(1): Directorate of Tea Tribes and Adivasi Welfa	re Schemes (For Assam)
122. Are you aware of the Tea Tribes and Adivasi Welfare Schemes	
123. Have you and your family member availed any schemes from	this department
Yes No	
124. If yes , then can you specify the name of the scheme	
125. Has there been any training programmes conducted by the D	epartment in the recent past
Ves No	
O Don't Remember	
126. Are you aware of the SIRISH portal O Yes	
○ No	
127. How often do you access the SIRISH portal	
Frequently	
Sometimes	
Rarely	
Never	
128. Do members of the Tea Tribes and Adivasi Welfare Departmen about the schemes	nt visit to your house for the awareness programmes
Ves	
O No	
» PART L(2): Schemes for Adivasis and Tea Workers (For	West Bengal)
129. Have you ever benefitted under Chai Sundari Scheme	
Cot patta land	

Got patta land

Got money to build house (partial/ full)

◯ Got house constructed under the scheme

https://kf.surveytime.defindia.org/#/forms/a748UTnLbRAEWA7PHVUtTa/landing

	BOLT-2 Baseline Survey
130. How did you apply for the scheme	
Offline (at panchayat office)	
Online (through internet café)	
131. Is the support under Chai Sundari	Scheme enough for building house
Bare minimum	
O Not enough	
C Enough	
132. Do you receive monthly payment	under Lakshmi Bhandar Scheme
O Yes	
O Not enough	
133. If Yes, then how much	
134. Any other Scheme, you benefitted	from the West Bengal state government
» PART M: Panchayats and labou	Ir Welfare office
» PART M: Panchayats and labou	Ir Welfare office
<ul> <li>» PART M: Panchayats and labou</li> <li>135. How often do you visit Panchayat</li> <li>Frequently</li> </ul>	Ir Welfare office
» PART M: Panchayats and labou	Ir Welfare office
» PART M: Panchayats and labou          135. How often do you visit Panchayat         Frequently         Rarely         Never	Ir Welfare office
<ul> <li>» PART M: Panchayats and labou</li> <li>135. How often do you visit Panchayat</li> <li>Frequently</li> <li>Rarely</li> <li>Never</li> <li>136. Do Panchayat members visit the L</li> </ul>	ur Welfare office Office
<ul> <li>» PART M: Panchayats and labou</li> <li>135. How often do you visit Panchayat         <ul> <li>Frequently</li> <li>Rarely</li> <li>Never</li> </ul> </li> <li>136. Do Panchayat members visit the L government schemes</li> </ul>	ur Welfare office Office
<ul> <li>» PART M: Panchayats and labou</li> <li>135. How often do you visit Panchayat</li> <li>Frequently</li> <li>Rarely</li> <li>Never</li> <li>136. Do Panchayat members visit the L government schemes</li> <li>Yes</li> </ul>	ur Welfare office Office .abour quarters to share about the information about MNREGAs, PDS and other
<ul> <li>» PART M: Panchayats and labou</li> <li>135. How often do you visit Panchayat</li> <li>Frequently</li> <li>Rarely</li> <li>Never</li> <li>136. Do Panchayat members visit the L government schemes</li> <li>Yes</li> <li>No</li> </ul>	ur Welfare office Office .abour quarters to share about the information about MNREGAs, PDS and other



» PART N: The Plantation Labour Act (For those working in the Tea-Estates)		
139. Are you aware about the rules in the Plantation Labour Act		
◯ Yes		
O No		
140. Are there public notices and display of the important rule of the Plantation Labour Act		
○ Yes		

BOLT-2 Baseline Survey

~	/	
$\left( \right)$	)	No

4/3/24, 11:48 AM

141. Do you wish to have online copy of The Plantation Labour Act available in local language online

$\bigcirc$	Yes
$\bigcirc$	No

## Section 5: ICT and Enviornmental Concerns

#### » PART O: Disposal of e-waste

142. Where do you go to repair your phones ,computers , headphones if they don't work

Nearby shop	р
-------------	---

Nearby town

#### 143. Is the repair cost affordable

- O Yes
- O No

#### 144. What do you do with your phone when its damaged



- keep it safely at home away from children
- give that to children to play with

#### 145. Do you have access to any community centre or government portal for disposal of e-waste

YesNo

## **Secction 6: Suggestions**

## » PART P: Suggestions related to stable and affordable internet

146. If you are provided with stable and affordable internet, what you will do

https://kf.surveytime.defindia.org/#/forms/a748UTnLbRAEWA7PHVUtTa/landing

4/3/24, 11:48 AM	BOLT-2 Baseline Survey
147. What could be done to make internet affordable	
Community resource centre at the Tea Garden	
Wifi spots at the Tea Garden	
Others	
147.1. Others	
148. How do you think is internet is useful for you	
For education	
For government's schemes and programmes	
For entertainment	
For learning new skills	
For online shopping	
Others	

148.1. Others

# Annexure 2: Baseline Survey: Training Layout for Field Surveyors

## **Project Objectives:**

- Improve internet access with increased bandwidth in tea garden areas.
- Provide affordable internet access for the poor and vulnerable communities.
- Equip community members with skills to navigate internet and digital media safely and beneficially.
- Increase access and utilization of internetbased services and opportunities for the community.

## Training Content:

## 1. Project overview and objectives:

- » Explaining the goals and vision of Project Internet Roshni.
- » Clearly defining the 4 objectives and their importance for the community.
- » Discussing the impact of improved internet access on the target population.

## 2. Understanding the targeted communities :

- Discussing the social, economic, and cultural context of the tea plantation workers and the Adivasi communities.
- Highlighting their existing challenges and potential benefits from internet access.
- Sensitising field surveyors to cultural

sensitivities and communication approaches.

## 3. Survey tools and techniques:

- Introducing the baseline survey and its format (kobo app).
- Explaining the purpose of each question and its link to the project objectives.
- Training the field surveyors on ethical survey practices (informed consent, confidentiality, respect).
- Practicing administering the survey with mock scenarios and role-playing exercises.

## 4. Data collection logistics:

- Planning sampling strategies to ensure coverage and representativeness of the target population.
- Discussing appropriate locations and times for conducting interviews.
- Addressing safety and security concerns for fieldworkers in the tea garden areas.
- Introducing data recording and storage protocols (digital platforms).

## 5. Interview skills and communication:

- Training the field surveyors in active listening, open-ended questioning, and probing techniques.
- Emphasising respectful and culturally sensitive communication with diverse community members.
- Equipping them with strategies to handle communication challenges (language barriers, illiteracy).

• Encouraging unbiased data collection and avoiding personal opinions or assumptions.

## 6. Quality control and reporting:

- Discuss procedures for checking the completeness and accuracy of collected data.
- Training the surveyors to identify and manage any inconsistencies or missing information.
- Explaining reporting protocols and deadlines for submitting survey data.

## **Guidelines for Field Surveyors:**

- Professionalism: Maintaining a professional and respectful demeanour throughout the survey process.
- Impartiality: Avoiding personal opinions or biases influencing data collection.
- Confidentiality: Ensuring data security and anonymity of participants.
- Empathy: Showing understanding and sensitivity towards the concerns and experiences of community members.
- Active listening: Paying close attention to responses and ask clarifying questions when needed.
- Cultural sensitivity: Respecting local customs and adapt communication to the language and understanding of participants.
- Transparency: Explaining the purpose of the survey and answer questions honestly.
- Rapport building: Developing trust and rapport with community members for better participation.

• Problem-solving: Being prepared to handle unexpected situations and find solutions to ensure successful data collection.

## Additional Resources:

• Organising group discussions or feedback sessions to address any challenges or concerns.

# Annexure 3: Interview Questions for Focus Group Discussion

# **Project Objectives:**

- Improved internet access with increased bandwidth in tea garden areas.
- Affordable internet access for the poor and vulnerable tea plantation workers and Adivasi community.
- Skills to navigate the internet and digital media safely, securely and beneficially.
- Improved and increased access to internet and digital based services and opportunities for the community.

Target Respondents: Adivasi communities and tea plantation workers in Assam and West Bengal , India

## Assessment Stage: Baseline

The information and data being collected is only for the purpose of the survey to understand the internet access and services needs of the community under proposed project implementation. The data collected will not be used for any other purpose.

Do you agree to share information for this survey?

YES

NO

[Pl proceed if yes, if no, pl move on to the next respondent)

## **Interview Section**

#### I. General Information:

- » Age
- » Gender
- » Caste/Community
- » Educational attainment (including literacy status)
- » Occupation (primary and secondary)
- » Monthly household income
- » Family size and composition
- » Location (specific tea garden/village)
- » Do you own a smartphone? (If yes, what model and data plan)
- » Do you have access to a computer at home or a community kiosk?

#### II. Internet Access and Usage:

- Current access:
  - » Do you have access to the internet? (If no, skip to section III)
  - » How do you primarily access the internet (smartphone, computer, community kiosk, etc.)?
  - » How often do you use the internet in a typical week/month?
  - » What are the main reasons you use the internet (communication, information, education, entertainment, etc.)?
  - » Can you tell me about the most important things you have learned or achieved through the internet?

- Bandwidth and satisfaction:
  - » What is your internet bandwidth at home/ community kiosk (if known)?
  - » Are you satisfied with the current internet speed? Why or why not?
  - » What challenges do you face with the current internet speed (slow loading, streaming issues, etc.)?

### III. Affordability of Internet Access:

- Current costs:
  - » How much do you spend on internet access per month (data plans, kiosk fees, etc.)?
  - » What percentage of your household income does this represent?
- Financial challenges:
  - » Is the current cost of internet access affordable for you and your family? Why or why not?
  - » What challenges do you face in accessing affordable internet (data plan limitations, kiosk accessibility, etc.)?
- Willingness to pay:
  - » Would you be willing to pay more for faster and more reliable internet access? If so, how much?
  - » What financial support mechanisms would make internet access more affordable for you (subsidies, community plans, etc.)?

#### **IV. Digital Literacy:**

Basic skills:

- » Do you feel confident using the internet and digital media?
- » Can you navigate basic internet functions (searching, emailing, using social media, etc.)?
- » Have you received any formal or informal training in digital literacy skills?
- Safety and security awareness:
  - » Are you aware of online safety and security issues (phishing, scams, malware, etc.)?
  - » Where do you get information about online safety and security (friends, family, community, etc.)?
  - » Do you feel like you have the knowledge and tools to protect yourself online?
- Information seeking and evaluation:
  - » How do you evaluate the credibility and trustworthiness of information you find online?
  - » Have you ever encountered misinformation or disinformation online? How did you deal with it?

# V. Access to and Use of Digital Services and Opportunities:

- Awareness of digital services:
  - » What digital services are you aware of (e-commerce, online education, telemedicine, government services, etc.)?
  - » Which of these services do you think would be most beneficial for you and your community?

- Current service utilization:
  - » Which, if any, of these digital services do you currently use?
  - » What challenges do you face in accessing and using these services (technical issues, language barriers, lack of awareness, etc.)?
- Potential impact of digital services:
  - » How do you think internet access and digital services could improve your life and the lives of your community members (education, healthcare, income generation, social connection, etc.)?
  - » What specific services or opportunities are you most interested in exploring?

### VI. Impact on Wellbeing and Quality of Life:

- Overall impact:
  - » How has internet access, if any, impacted your overall wellbeing and quality of life?
  - » Has it helped you connect with family and friends more easily?
  - » Has it helped you access information and learn new things?
  - » Have you noticed any changes in your income or livelihood since gaining internet access?

### VII. Suggestions and Feedback:

- What improvements would you like to see in internet access in your community?
- What kind of support would you need to use the internet more effectively and safely?
- Do you have any suggestions for the Project Internet Roshni?



# Annexure 4: List of FGD participants

#### 1. Jorhat, Assam (Sycotta Tea Estate)

S.No	Name	Gender	Age	Occupation
1	Borun	Male	14	Student
2	Rupohi Patnayak	Female	15	Student
3	Nokul Tasa	Male	40	Tea garden Worker
4	Pushpa Tasa	Female	38	Tea garden Worker
5	Gaithri Tasa	Female	37	Tea garden Worker
6	Bina Patnayak	Female	35	Tea garden Worker
7	Topan Patnayak	Male	32	Electrician
8	Tuleshori Patnayak	Female	30	Housewife
9	Sahil Karmakar	Male	17	Student
10	Abhijit Karmakar	Male	17	Student
11	Pahi Patnayak	Female	21	Student
12	Parish Patnayak	Male	19	Student
13	Subha Patnayak	Female	31	Housewife
14	Romen Patnayak	Male	43	Tea garden Worker
15	Protlem Kurmi	Male	18	Student
16	Neet Patnayak	Male	28	Electrician
17	Bishal Tanti	Male	34	Tea garden Worker
18	Gono Tasa	Male	17	Student
19	Prodeshi Patnayak	Male	42	Tea garden Worker
20	Mun Karmakar	Male	21	Student

### 2. Jorhat, Assam (Bahoni Tea Estate)

S.No	Name	Age	Gender	Occupation
1	Gupal Karmakar	37	Male	Tea garden Worker
2	Dipali Karmakar	29	Female	Tea garden Worker
3	Santi Guwala Tanti	48	Female	Tea garden Worker
4	Biren Tanti	51	Male	Tea garden Worker
5	Rupa Tanti	33	Female	Tea garden Worker
6	Ajay Panika	28	Male	Capenter
7	Paulush Nag	40	Male	Tea garden Worker
8	Nandeswar Sharma	40	Male	Tea garden Worker
9	Birsen Tanti	44	Male	Tea garden Worker
10	Puja Tanti	40	Female	Tea garden Worker
11	Kartik Tanti	34	Male	Tea garden Worker
12	Dipali Tanti	55	Female	Tea garden Worker
13	Bijay Tanti	45	Male	Tea garden Worker
14	Soniyaro Tanti	32	Female	Tea garden Worker

### 3. Jorhat, Assam (Kharikatia Tea Estate)

S.No	Name	Age	Gender	Occupation
1	Binashi Singh	32	Female	Housewife
2	Alina Urang	42	Female	Tea garden Worker
3	Jobu Tanti	36	Male	Tea garden Worker
4	Mohesh Singh	35	Male	Tea garden Worker
5	Arup Nayak	27	Male	Tea garden Worker

S.No	Name	Age	Gender	Occupation
6	Bishal Nayak	38	Male	Tea garden Worker
7	Dhaneswar Rajput	35	Male	Tea garden Worker
8	Noyon Nahook	30	Male	Tea garden Worker
9	Priya Gorait	16	Female	Student
10	Payal Gorait	16	Female	Student
11	Mamta Karmakar	19	Female	Student
12	Monti Karmakar	20	Female	Student
13	Anup Nahook	18	Male	Student
14	Tutan Gorait	29	Male	Tea garden Worker
15	Santi Gorait	35	Female	Tea garden Worker

# Dibrugarh ,Assam(Digholiya Tea Estate)

S.No	Name	Age	Gender	Occupation
1	Dibya Jyoti Kachap	47	Female	Tea Garden Worker
2	Nayanmoni Kachap	28	Female	Homemaker
3	Binita Kachap	50	Female	Tea Garden Worker
4	Kripa Kachap	37	Female	Tea Garden Worker
5	Jilanti Kachap	40	Female	Tea Garden Worker
6	Rupjyoti Hassa	37	Female	Tea Garden Worker
7	Nayami	38	Female	Tea Garden Worker
8	Manju Nag	48	Female	Small business
9	Meera Kachap	35	Female	Tea Garden Worker
10	Pabitra Nag	53	Male	Tuition teacher

S.No	Name	Age	Gender	Occupation
11	Sanjay Nag	45	Male	Daily wage earner
12	Pradip Nag	60	Male	Cultivator
13	Khristo Kachap	54	Male	Daily Wage Earner
14	Nuwel Kachap	55	Male	Daily Wage Earner
15	Emmanuel Kachap	31	Male	Daily Wage Earner
16	Ranjit Nag	45	Male	Shopkeeper
17	Magdali Kachap	45	Female	Tea Garden Worker
18	Meena Kachap	52	Female	Tea Garden Worker
19	Dina Kachap	48	Female	Homemaker
20	Sumanti Dhan	40	Female	Tea Garden Worker
21	Kripani Kachap	50	Female	Tea Garden Worker
22	Ranjit Kachap	48	Male	Daily Wage Earner
23	Robert Kachap	25	Male	Daily Wage Earner
24	Pranjal Kachap	30	Male	NGO worker
25	Pradip Kachap	40	Male	Shopkeeper

# Alipurduar, West Bengal (Bundapani Tea Estate)

S.No	Name	Gender	Age	Occupation
1	Usha lakra soreng	Female	30	Tea Garden Worker
2	Soniya minj	Female	34	Homemaker
3	Romita oraon	Female	37	Tea Garden Worker
4	Pushpa lohar	Female	28	shopkeeper

S.No	Name	Gender	Age	Occupation
5	Sukro minj	Female	63	Homemaker
6	Jyotisarita beck	Female	32	Tailor
7	Sarfina lakra	Female	31	Homemaker
8	Puja oraon	Female	24	Student
9	Sital lakra	Female	26	Tea Garden Worker
10	Bimla bakla	Female	41	Shopkeeper
11	Bimala panna	Female	43	Animal husbandry
12	Arti Sharma	Female	27	Tea Garden Worker
13	Anima xalxo	Female	32	Panchayat member
14	Hemani Kerketta	Female	36	Tea Garden Worker
15	Anita oraon	Female	23	Student
16	Depa urao	Female	25	Tea Garden Worker
17	Munni devi	Female	36	Tea Garden Worker
18	Hemanti lakra	Female	27	Homemaker
19	Anu munda	Female	32	Tea Garden Worker
20	Kiran xalxo	Female	29	Tea Garden Worker
21	Suhana baraik	Female	19	Student
22	Kabita tamang	Female	28	Shopkeeper
23	Preeti minj	Female	18	Student
24	Manti lakra	Female	24	Homekaer
25	Mina singh	Female	35	tailor
26	Shantimuni oraon	Female	23	Unemployed
27	Sarita oraon	Female	27	Tea Garden Worker
28	Reshma oraon	Female	26	Tea Garden Worker
29	Mahamaya oraon	Female	22	Student

S.No	Name	Gender	Age	Occupation
30	Sunita oraon	Female	32	Tea Garden Worker
31	Radhika gowala	Female	29	Tea Garden Worker
32	Monika Gope	Female	20	Student
33	Reema oraon	Female	32	shopkeeper
34	Ritu thapa	Female	23	Student
35	Anita mahali	Female	20	Student
36	Priya bakla	Female	22	Student
37	Niha das	Female	24	Homemaker
38	Nutan devi	Female	28	Homemaker

# Jalpaiguri, West Bengal (Lankapara Tea Estate)

S.No	Name	Gender	Age	Occupation
1	bindiya yakha	Female	29	ASHA worker
2	rupa tamang	Female	40	homemaker
3	suman yakha	Female	45	homemaker
4	radhika tamang	Female	55	homemaker
5	sangita moktan tamang	Female	36	homemaker
6	manjita tamang	Female	28	beautician
7	jharna tamang	Female	49	homemaker
8	bimla yakha	Female	58	homemaker
9	nilma thapa	Female	36	teacher
10	bulbul rai	Female	35	icds worker
11	nisha chhetri	Female	37	teacher
12	sumita tamang	Female	52	teacher
13	rabina thapa mangar	Female	27	homemaker

S.No	Name	Gender	Age	Occupation
14	junkeri tamang	Female	58	homemaker
15	uma tamang	Female	43	homemaker
16	maya limbu	Female	25	student
17	shika tamang	Female	21	student
18	riya thapa	Female	19	student
19	naina tamang	Female	30	tailor
20	sunena tamang	Female	30	teacher
21	anjana tamang	Female	51	homemaker
22	kanchi tamang	Female	30	homemaker
23	sangmaya tamang	Female	50	homemaker

# Jalpaiguri, West Bengal (Gopalpur Tea Estate)

S.No	Name	Gender	Age	Occupation
1	Sujati Oraon	Female	62	homemaker
2	Rima Oraon	Female	36	Tea Garden Worker
3	Sushma Oraon	Female	40	Tea Garden Worker
4	Salu Oraon	Female	25	Tea Garden Worker
5	Rita Oraon	Female	39	Tea Garden Worker
6	Anamika Oraon	Female	20	Student
7	Isha Oraon	Female	17	Student
8	Anisha Oraon	Female	15	Student
9	Pinki Oraon	Female	30	Tea Garden Worker
10	Reshma oraon	Female	24	Student
11	Reshmu Oraon	Female	27	Tea Garden Worker
12	Sojan Oraon	Male	18	Student

S.No	Name	Gender	Age	Occupation
13	Unit Oraon	Male	19	Student
14	Sonia Oraon	Female	17	Student
15	Puna Oraon	Female	28	Tea Garden Worker
16	Shekhar Oraon	Male	20	Student
17	Shuvam Oraon	Male	30	Tea Garden Worker
18	Kishan Oraon	Male	35	Tea Garden Worker
19	Miki Oraon	Female	28	Tea Garden Worker
20	Amita Oraon	Female	29	Tea Garden Worker
21	Rumila Oraon	Female	35	Tea Garden Worker
22	Rishni Oraon	Female	28	Tea Garden Worker
23	Rahita Oraon	Female	26	Student
24	Runi Oraon	Female	42	Tea Garden Worker
25	Sitamuni Oraon	Female	48	Homemaker
26	Tulita Oraon	Female	49	Tea Garden Worker

# Jalpaiguri, West Bengal (Binnaguri Tea Estate)

S.No	Name	Gender	Age	Occupation
1	Chanda Oraon	Female	30	Homemaker
2	Chandrika Oraon	Female	30	Teacher
3	Karishma Oraon	Female	33	Tea Garden worker
4	Aarti Oraon	Female	34	Tea Garden worker
5	Manali munda	Female	17	Tea Garden worker
6	Sarswati oraon	Female	17	Tea Garden worker
7	Babita oraon	Female	34	T.G worker
8	Divya oraon	Female	30	Tea Garden worker

S.No	Name	Gender	Age	Occupation
9	Lalita oraon	Female	36	Tea Garden worker
10	Laxmi kujur	Female	25	Homemaker
11	Anju oraon	Female	28	Tea Garden worker
12	Sati Kujur	Female	25	Student
13	Sudha Kujur	Female	28	Student
14	Esha Oraon	Female	16	Student
15	Sweta Sarki	Female	21	Student
16	Hema Sarki	Female	22	Student
17	Manshika Thapa	Female	21	Student
18	Radha Oraon	Female	19	Student
19	Ritika Oraon	Female	17	Student
20	Niramala Minj	Female	35	Tea Garden worker
21	Anushka Minj	Female	18	Student
22	Sarmila Thapa	Female	39	Homemaker
23	Sumitra Thapa	Female	45	Homemaker
24	Mamata Oraon	Female	33	Student
25	Bulbuli Kharia	Female	33	Tea Garden worker
26	Benami Shaw	Female	50	Tea Garden worker
27	Lilabati shaw	Female	60	Tea Garden worker
28	Dipa oraon	Female	25	Student
29	Ratan oraon	Male	42	Tea Garden worker
30	Suni oraon	Male	54	Tea Garden worker
31	Uttam minj	Male	45	Tea Garden worker
32	Hari minj	Male	42	Tea Garden worker
33	Mantu oraon	Male	56	Tea Garden worker

S.No	Name	Gender	Age	Occupation
34	Sunil kharia	Male	33	Tea Garden worker
35	Amit munda	Male	30	Tea Garden worker
36	Saurav kharia	Male	25	Student
37	Krishna oraon	Male	26	Student
38	Nishant oraon	Male	21	Student
39	Rahul oraon	Male	19	Student
40	Pintu oraon	Male	29	Tea Garden worker
41	Himex oraon	Male	16	Student
42	Anu oraon	Male	17	Tea Garden worker
43	Raja oraon	Male	17	Student
44	Deep oraon	Male	16	Student

### Udalguri, Assam (Dimakushi Tea Estate)

S.No	Name	Age	Gender	Occupation
1	Asminta ekka	44	Female	CSP operator
2	Junita kujur	42	Female	Tea Garden Worker
3	Punam toppo	30	Female	Tea Garden Worker
4	Munu xalxo	35	Female	Tea Garden Worker
5	Benjamin fraklin kujur	38	Male	Casual worker
6	Pritam tigga	25	Male	Tea Garden Worker
7	Rudh orang	32	Female	Tea Garden Worker
8	Junita orang	35	Female	Tea Garden Worker
9	Rojdina orang	42	Female	Tea Garden Worker
10	Lili kujur	52	Female	Tea Garden Worker
11	Shanti orang	54	Female	Tea Garden Worker

S.No	Name	Age	Gender	Occupation
12	Jasinta tigga	53	Female	Tea Garden Worker
13	Shanti beck	48	Female	Tea Garden Worker
14	Elizabeth orang	55	Female	Tea Garden Worker
15	Maristala orang	52	Female	Tea Garden Worker
16	Laisa ekka	35	Female	Tea Garden Worker
17	Anna tigga	22	Female	Student
18	Kiron munda	28	Male	Factory worker
19	John ekka	45	Male	Factory worker
20	Amit ekka	39	Male	Factory worker

# Annexure 5: Photos from FGD and Baseline Survey













# Annexure 6: A Poem by Kamal Kumar Tanti in Assamese and its English Translation

#### ত**োমাল**োকৰ বৰিুদ্ধকেবতিা: আম**ি** সূখতইে থাক**োঁ**

তোমালোক পৃথিৱীখনৰসিটো মূৰত থাকা সেয়ে সুখত থাকা চেতনাহীনৰ দৰে আমি থাকোঁ আমাৰ গলিত কুন্তাৰ দৰে

তোমালোকে নুশুনিব পাৰা আমাৰ আত্মাৰ চিৰসেউজীয়া মাত আমি পিছে তোমালোকৰ প্ৰলাপ শুনোঁ শুনোঁ তোমালোকৰ ভিজ্ঞা মেকুৰীৰ দৰে তেলীয়া মাত

তোমালোকে মানুহৰ তেজবোৰ ৰঙা হ'বলৈ নিদিয়া ক'লা বিহ আৰু সেন্দুৰৰ ৰং ছৰ্টিয়াই তোমালোকে আমাৰ তেজবোৰ ঘোলা কৰি পেলাইছা এদল বিদ্বান মানুহৰ চল আৰু চাতুৰীৰে তোমালোকে আমাৰ তেজবোৰ ৰঙা হ'বলৈ নিদিয়া

আমাৰ মগজুবোৰ তোমালোকে কিনি থৈছা আৰু সময়ত সেইবোৰ ডাষ্টবিনত দলিয়াই পেলাইছা

সত্যৰ প্ৰতি তোমালোকৰ সংশয় আছে মানুহৰ প্ৰতি আছে ভয়ানক বিদ্বেষ

আমি কুন্তাবোৰে সেয়ে ঘৃণা কৰোঁ তোমালোকক, তোমালোকৰ দূৰ্বল মনস্তত্ত্বক যিয়ে ভয় কৰে সঁচা মানুহক যিয়ে ভয় কৰে সঁচা কথাক

তোমালোক পৃথিৱীখনৰ সিটো মূৰত থাকা সেয়ে সুখত থাকা চেতনাহীনৰ দৰে আমি থাকোঁ আমাৰ গলিত সুখতেই থাকোঁ, কুন্তাৰ দৰে

#### A poem against you all: We are happy

#### Dr. Kamal Kumar Tanti

You live at the other end of the world so you are happy empty of intelligence, we live in our lanes like strays

You do not hear the rising voices of our souls yet we hear your ramblings listen to your glib talk, your oily voices like purring cats

You pollute our blood with dark poison and cinnabar with the craft and cunning of scholarship you stop our blood from turning red

You purchase our brains and in time you throw them away in dustbins you fear truth you are a mob of misanthropists

So we strays hate you you and your cold intelligence you who fear the heart of a human you who fear truth

You live at the other end of the world so you are happy empty of intelligence, we live in our lanes like strays, we are happy too

Source: <u>https://exchanges.uiowa.edu/issues undercurrents/seven-poems-tanti/</u>

# **Digital Empowerment Foundation**

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