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# **Land Resource Utilisation in Tea Industry: Current Problems and Future Prospects with Special Reference to Labour**

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2017

Online at <https://mpra.ub.uni-muenchen.de/91435/>  
MPRA Paper No. 91435, posted 16 Jan 2019 18:52 UTC

## **Land Resource Utilisation in Tea Industry: Current Problems and Future Prospects with Special Reference to Labour**

*Central focus of this study is to analyse two very important issues: land utilization patterns in tea gardens and the socio-economic profile of tea garden labour. In India there are presently an estimated thirteen hundred tea factories and thirty seven thousand large and small estates with more than two million people earning their livelihood from tea related activities. These mainly include production, value addition at different levels, marketing of tea and related activities. In the tea industry, it is well known that despite such overwhelming dependence on tea related activities, the country is perhaps operating much below its capacity. In this regard, we observed that vast areas located under the big tea estates are not under tea plantation. Proper use of unutilised resource may generate higher returns to capital and land along with higher employment levels. However, the question remains as to what level of production and employment should be deemed optimal in tea plantations. This study strives to look at some of these aspects with the help of detailed survey based data from West Bengal, Assam and Tamil Nadu. Based on this extensive sample survey on tea gardens in all these major tea producing regions the study pragmatically examines the labour market issues too.*

### **OVERVIEW**

The central focus of this study is to analyze two very important issues: land utilization patterns in tea gardens and the socio-economic profile of tea garden labor. In India there are presently an estimated thirteen hundred tea factories and thirty seven thousand large and small estates with more than two million people earning their livelihood from tea related activities. These mainly include production, value addition at different levels, marketing of tea and related activities. In the tea industry, it is well known that despite such overwhelming dependence on tea related activities, the country is perhaps operating much below its capacity. In this regard, we observed that vast areas located under the big tea estates are not under tea plantation. Proper use of unutilised resource may generate higher returns to capital and land along with higher employment levels. However, the question remains as to what level of production and employment should be deemed optimal in the tea plantations. This study strives to look at some of these aspects with the help of detailed survey based data from West Bengal, Assam and Tamil Nadu.

The literature on tea garden labourers mostly talks about the inadequacies of various amenities and services. Based on the extensive sample survey on tea gardens in all the major tea producing regions of West Bengal, Assam and Tamil Nadu the study pragmatically examines the labor market issues.

Our survey results suggest that the percentage of unutilised land is highest for Assam and accounts for three-fourth of the sample estates. West Bengal and Tamil Nadu are not too dissimilar in this respect accounting nearly 40 per cent for unutilised land. For small tea growers, however, unutilised land is rarely a problem. As opposed to the big growers, who operate on land leased in for tea production, small growers typically converted their own land from other activities into tea plantation. We observe that predominantly agricultural and/or unused lands are converted into tea plantation as far as small growers are concerned.

Alternative use of unutilised land under the occupancy of large tea estates includes agricultural cultivation as the major practice for Assam. It continues to remain vacant for most estates in West

Bengal and Tamil Nadu. Based on the responses on alternative best possible use of unused land, the following is an order: around 13 per cent and 36 per cent estates in Assam and Tamil Nadu respectively, is unusable and unprofitable. The terrains and land distribution may be against cultivation of any form. The survey yields that 9 per cent in West Bengal and Tamil Nadu and 5 per cent of estates in Assam have not yet planned on this aspect.

Recognizing the problems in labour market and associated socio-economic issues of labourers in tea industry, the study discusses six fundamental aspects: garden-wise demographic characteristics, current occupation (tea related or else) and expectation about future of their children, wage income and ownership of assets, educational status, access to health facilities and household amenities. The large tea garden labourers in our sample are spread over 1744 households with a population of 7661. For small tea garden labour households, we surveyed 526 households from large concentrations of small growers in the three regions. The total population size in our sample is 2070.

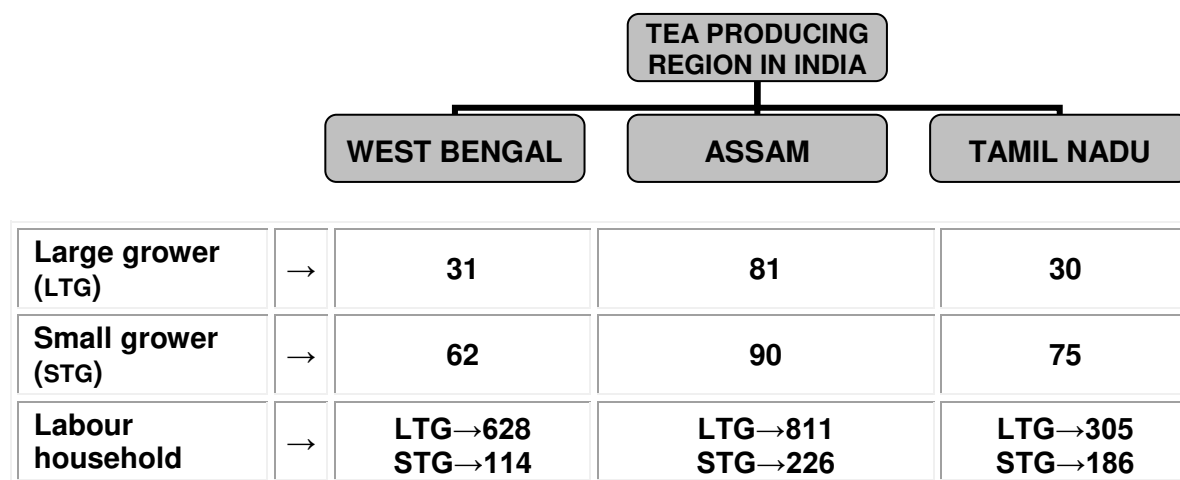
### **Survey design**

Using the procedure of stratified random sampling we create a sample of large tea growers (estate owners) and labourers. The sampling pattern and methodology is invariant across the pair of studies we conduct for the tea related issues in India. Therefore, the sample cluster includes the same set of large and small tea growers and bought leaf factories that have been surveyed for both the pricing issues and the labor market issues.

To begin with, the major tea producers in India are divided into three different regional clusters namely West Bengal, Assam and Tamil Nadu. Worthwhile to mention here that there are two different setups in tea production: one, the garden setup which supplies green tea leaves (the large and small tea growers) and two, the factory setup which finally produces the tea (garden factories are owned by large growers and bought leaf factories/ cooperative factories are independent entities). Thus, three types of primary stakeholder are involved in the production of tea in India: big tea estates comprising of large gardens with factory setups, small tea estates cultivating exclusively the green tea leaves and bought leaf factories (BLF)/ cooperative factories (CF) producing made tea. The primary producers of made tea in these regions include garden factory (GF) and BLF/CF, with approximate distributions of: 310 (GF) and 80 (BLF) in West Bengal; 810 (GF) and 180 (BLF/CF) in Assam; and 300 (GF) and 200 (BLF/CF) in south India, respectively. We consider ten per cent factories (GF as well as BLF/CF) in each of these regions. Since GFs and large growers are quite similar, the sample categorizes GFs as large growers. Small growers with garden size less than 10.12 hectares, we selected nearly five times the number of BLF/CF in each region. Certain field-based adjustments have been carried out in view of the feasibility of the study, particularly when there is large heterogeneity of gardens or large homogeneity. Subsequently, ten worker households from each big grower are randomly selected for the socio-economic survey. Importantly, in the literature review section we note various complexities regarding the socio-economic issues mainly in northern tea producing regions of the country. To better comprehend the results, statistically speaking, we doubled the labor size in West Bengal since the sample size for Assam is large due to greater number of estates (810 labour households in number). For the small growers' we include as much information as available from the worker households. In majority of cases, the owners of the small tea estates are themselves the labour resources for the marginal holdings. On an average the

number of labour households surveyed for small tea estates is approximately two and half per garden across regions. The distribution of survey units from each category and from each region is depicted in figure 1.

Figure - 1: Sampling distribution of tea stakeholders



## Section - 1

### Land resource utilization of tea industry

This section starts with the basic information regarding land coverage under tea plantation. It is however obvious for the tea estates that the total recorded area is not fully available for plantation since some parts necessarily have to be retained for other purposes like building labour quarters, drainage, garden-based factory (if applicable), etc. Therefore, we do not consider directly the difference between total recorded area and plantation area for each estate. Essentially, this should give the true picture on land use statistics for the tea estates. In this fashion we estimated the net area, which is not covered by tea bushes, and the distribution of our sample big estates as per land use status is depicted in table 1.1.

Table 1.1: Distribution of large growers as per land use status

		No unutilised land	Unutilised land up to 50% of total area	Unutilised land above 50% of total area
West Bengal	Darjeeling	44.4	22.2	33.3
	Terai	75.0	12.5	12.5
	Dooars	60.0	30.0	10.0
	Total	59.3	22.2	18.5
Assam	Sibsagar	17.4	56.5	26.1
	Darrang	23.5	76.5	Nil
	Dibrugarh	31.0	51.7	17.2
	Cachar	9.1	18.2	72.7
	Total	22.5	53.8	23.7
Tamil Nadu	Nilgiris	63.3	33.3	3.3

Table 1.1 shows that the large tea growers can be divided into two broad groups according to land use patterns: the estates which cover all of their total area under tea plantation and infrastructure, and the other group that fail to utilize the entire area – further sub-categorized according to the intensity of unutilised land (in the sense that it is not used for the purpose for which it was acquired, as per total recorded area). We found the unutilised land is highest for Assam involving three-fourth of the sample estates. West Bengal and Tamil Nadu are quite analogous in this respect with nearly 40 per cent of unutilised land for the tea estates on average. Intra-state variation across plantation districts exists in all the regions. For instance, compared to Dibrugarh in Assam with 69 per cent of estates with unutilised land, the Cachar region records a very high 90 per cent.

Evidently, this is not pertinent for the small tea growers. Table 1.2 shows the distribution of small tea growers as per pre-tea land characteristics which they converted to tea plantation.

Table 1.2: Distribution of small growers as per land use prior to tea plantation

	Unutilised land	Agricultural land	Homestead land	Unutilised plus agricultural land
West Bengal	59.7	40.3	Nil	Nil
Assam	57.8	30.0	4.4	7.8
Tamil Nadu	Nil	100	Nil	Nil

It is found that mainly agricultural and/or unused lands are transformed into tea production by small growers in all the states. In Tamil Nadu, the pre-tea land was purely agricultural in nature. Interestingly, in the northern tea producing regions of West Bengal and Assam an overwhelming part of the pre-tea lands were unused land.

## 1.1 Land use pattern

### 1.1.1 Profile of unutilised land

Since the present use of unutilised land under tea plantation is of limited importance in view of small tea growers we focus on the large growers/estates only. Clearly, an important issue is: what is the present status of this land while a considerable number of estates retain this under their lease from year to year? We observed earlier in table 1.1, it is sometimes above 50 per cent of the total area, particularly in northern tea producing states like West Bengal and Assam. Table 1.3 portrays these results. While agricultural cultivation is the major practice in Assam, the majority of estates hang on to this land in unused forms both in West Bengal and Tamil Nadu. Apart from these, alternative uses include composite events such as new plantation and afforestation in West Bengal or cultivation and fisheries in Assam etc.

Table 1.3: Distribution of growers as per present use of vacant land

	West Bengal	Assam	Tamil Nadu
No present use	63.6	14.5	63.6
New plantation	18.2	9.7	9.1
Agricultural cultivation	9.1	51.6	9.1
Afforestation	Nil	3.2	18.2
Other uses (water tanks, fisheries etc.)	Nil	1.6	Nil

Cultivation and new plantation	Nil	4.8	Nil
Cultivation and fisheries	Nil	6.5	Nil
Cultivation and afforestation	Nil	3.3	Nil
New plantation and afforestation	9.1	Nil	Nil
New plantation, cultivation and fisheries	Nil	1.6	Nil
A part vacant, cultivation and other uses	Nil	3.2	Nil

### 1.1.2 Prospective use of vacant land

Based on the perceptions of respondent tea estates we offer possible alternate uses of land in table 1.4. Around 13 per cent and 36 per cent estates in Assam and Tamil Nadu respectively believe that the unutilised land cannot be used in any profitable form. Likewise about 9 per cent in West Bengal and Tamil Nadu and 5 per cent of estates in Assam are yet to come up with any plans on this matter. Other reasons, however, are not found significant in number.

Table 1.4: Distribution of growers as per prospective use of vacant land

	West Bengal*	Assam	Tamil Nadu
Not possible	Nil	12.9	36.4
Yet not thought	9.1	4.8	9.1
New plantation	18.2	19.4	27.2
Agricultural cultivation	9.1	29.0	Nil
Afforestation	27.3	3.2	Nil
Fisheries and water bodies	Nil	1.7	Nil
Ecotourism	Nil	Nil	9.1
Floriculture	Nil	Nil	9.1
Unfeasible (a part) and floriculture/ afforestation/ new plantation	18.2	8.0	Nil
New plantation and floriculture	Nil	1.6	Nil
New plantation and afforestation	Nil	3.3	Nil
New plantation and fisheries	Nil	1.6	Nil
Afforestation and floriculture	Nil	6.5	Nil
Cultivation and afforestation	9.1	3.2	Nil
Ecotourism and afforestation	Nil	1.6	Nil
New plantation and cultivation/ floriculture/ fisheries/ afforestation	Nil	3.2	9.1

\* No information is available for 9 per cent estate

Clearly, by proper utilization of the idle assets like unutilised land under tea estates one could observe regeneration of productive assets, with positive implications for the labour and capital markets. The productive resource conversion will evidently open up opportunity of employment in labour market on the one hand and facilitate flow of funds through the credit market on the other. The perceptions of are available in table 1.5.

Table 1.5: Labour absorption and credit via prospective use of vacant land

		Possible	Impossible
Labour absorption	West Bengal	54.5	36.4*
	Assam	6.5	93.5
	Tamil Nadu	Nil	72.7@
Credit receiving	West Bengal	36.4	63.6
	Assam	8.1	83.9#
	Tamil Nadu	Nil	100

\* No information is available for 9.1% estate; @ No information is available for 27.3% estate; # No information is available for 8.1% estate

Despite of the failure of some estates to report definitively on this aspect, about 55 per cent estates in West Bengal have some idea that prospective use of unutilised land might help them to create jobs for the surplus labour force. Others (Assam and Tamil Nadu) however are not in agreement with this view. Regarding credit, respondents in West Bengal show positive attitude. Here, above 35 per cent estates deem that they can receive credit via mortgaging the unused land.

## Section - 2

### Socio-economic profile of tea garden labour

In the existing reports on socio-economic aspect of tea garden labourers there seems to be an intense debate about the housing facilities and basic amenities such as drinking water and sanitation available to the tea garden labourers. The tea estate management claims that the labourers are provided with these facilities while the labour activists report that these services are rather inadequate. According to one such report, more than three lakh tea workers in Assam live in the 'coolie' hutments adjacent to the tea estates. Neither do they own a house nor a piece of land. According to one labour activist, more than two thirds of the permanent workforce in the tea industry are either denied free housing or live in *kaacha* houses built on garden land (Labour File, vol. 5, July-September 1999).

According to the same report in *Labour File*, the average literacy rate in the plantation enclaves of Assam hovers around 20 per cent. There are gardens where the literacy rate is as low as 8 per cent and female literacy rate is 3 per cent. The children can avail only of lower primary (LP) schools. But, the attendance is very low. The children of the temporary workers are not allowed to enrol in garden schools. Adequate number of teachers are not appointed; there are insufficient classrooms and books are just not available. For instance, in a tea estate in Dibrugarh district, a school constitutes of a single room where one teacher takes care of four classes. According to the report, the few who cross the hurdle of LP school, the further prospect of schooling in far away government-run institutions is less attractive than joining the tea garden labour force. The education department of the Government of Assam tried to stem the rot by taking control of the garden schools. But nothing much has happened since then and the dropout rate continues to be high.

In his article entitled 'Cha Bagichai Sonkoter Gotiprokriti' in the Sharodia volume of Baromas (in Bengali) Suparno Pathak (2007) examined the tea gardens in Dooars and suggests that the problem in the gardens is a product of vested interests of tea garden union leaders, owners and the system suffers largely due to lack of administrative efficiency. A number of new gardens opened during 1994-95 where the owners wanted to have quick profits. He suggests that there was a boom in construction activities during 1994-95 and some people earned money by selling iron rods and invested this money in tea plantations. Since the owners of such gardens were interested in quick returns they ensured plucking all the leaves during the next five years without nurturing the tea bushes. They did not follow the practice of planting new bushes in 25 per cent of the garden resulting in the declining production. Dwelling on the labour issues, he suggests that the labour unions are to be blamed for the sorry state of the affairs. Every worker is supposed to pluck 21-26 kg to get a day's work and one gets 50 paisa for every additional kg of leaf plucked beyond 26 kg.

But the labour unions play a very detrimental role by ensuring that the permanent workers pluck a lesser quantity of leaf and never plucks the additional kgs of leaf. The unions argue that if a permanent worker does not pluck the additional kgs of leaf, it will create opportunities for the casual labourers. With the coming of casual labour, comes the source of income for the union leaders in the form of *tola*. The people supposed to protect the interest of labourers turn their exploiters. The union leaders are creating pressure on both management and labour. It has resulted in changing the equation of recruitment – there are three casual labourers for every permanent labourer. The things have worsened to such a situation that for every 26 kg of leaf plucked, now the management needs to recruit one permanent and two temporary workers.

On the basis of problems in labour market reported thus far and the associated socio-economic issues in the tea industry, the following section offers six fundamental aspects starting from the basic population features of tea garden labour households.

## 2.1 Population distribution, occupation, education, health and amenities

### 2.1.1 Basic population distribution

The survey in large tea garden labourers covered 1744 households with a population of 7661 and spread over three major tea plantation regions like West Bengal, Assam and Tamil Nadu (table 2.1a). Among the eight surveyed tea plantation districts in northern and southern tea producing states of the country the proportion of females compared to males is larger in Darjeeling of West Bengal, Darrang of Assam and Nilgiris of Tamil Nadu. The sex ratio is as high as 1057 in Nilgiris while it is very low in Sibsagar, at 901 only. Table 2.1a also offers the age specific distribution of total population into four major age groups: infant accounts population up to age 5 years, children group covers the age range of population between 6 to 14 years, adult group between age 15 to 65 years in the sense that they may participate in the labour market, and the older age group comprising the population aged above 65 years. Among the three columns in each individual age specific distribution of population in table the ‘total’ depicts the proportion of that particular group in total population, while ‘male’ and ‘female’ take into account the proportion of such particular gender group into total of this gender group in population. That is to say, for example, the share of male infant to total male in the population in Darjeeling is 6.5 per cent. Since the age group of adult population is expectedly high compared to other age groups in the population owing to the coverage of a wider range between age 15 to 65, the table shows that such a working adult is as large as 83.3 in Nilgiris and lower in Sibsagar involving 65.2 per cent of its total population.

Table 2.1a: Demographic features of large garden labour households

		Total population		Infant (age up to 5)		
		Male	Female	Total	Male	Female
West Bengal	Darjeeling	557 (49.9)	559 (50.1)	5.6	6.5	4.7
	Terai	462 (50.5)	453 (49.5)	10.5	10.6	10.4
	Dooars	507 (52.5)	459 (47.5)	7.8	8.1	7.4
	Total	1526 (50.9)	1471 (49.1)	7.8	8.3	7.3
Assam	Sibsagar	584 (52.6)	526 (47.4)	8.7	8.9	8.6
	Darrang	309 (49.0)	321 (51.0)	9.7	10.4	9.0



	Dibrugarh	663 (50.2)	659 (49.8)	6.6	5.3	7.9
	Cachar	371 (50.5)	363 (49.5)	10.2	9.4	11.0
	Total	1927 (50.8)	1869 (49.2)	8.4	8.0	8.9
Tamil Nadu	Nilgiris	422 (48.6)	446 (51.4)	1.8	2.6	1.1

Note: figures in parenthesis represent proportional distribution of population

Table 2.1a: continue

		Child (6-14 age group)			Adult (15-65 age group)			Older (age above 65)		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
West Bengal	Darjeeling	14.5	14.2	14.8	75.4	73.8	77.1	4.5	5.6	3.4
	Terai	18.1	19.3	17.0	69.5	67.7	71.3	1.9	2.4	1.3
	Dooars	17.7	17.2	18.3	73.3	73.2	73.4	1.2	1.6	0.9
	Total	16.6	16.7	16.6	72.9	71.8	74.2	2.6	3.3	2.0
Assam	Sibsagar	25.6	26.7	24.3	65.2	63.9	66.7	0.5	0.5	0.4
	Darrang	24.4	24.9	24.0	65.7	64.4	67.0	0.2	0.3	Nil
	Dibrugarh	22.8	23.2	22.5	70.5	71.3	69.7	0.1	0.2	Nil
	Cachar	20.2	19.4	20.9	69.3	71.2	67.5	0.3	Nil	0.6
	Total	23.4	23.8	23.0	67.9	67.9	68.0	0.2	0.3	0.2
Tamil Nadu	Nilgiris	14.5	13.1	15.9	83.3	84.3	82.3	0.3	0.0	0.7

Turning now to the case of small tea garden labour households, the 526 households surveyed in West Bengal, Assam and Tamil Nadu cover the total population of 2070 persons. Compared to the household size of 4.39 in large gardens the small garden labour household size is 3.94. The small tea garden labour households show that the working age population is 66.6 per cent in Assam, and 80 per cent in Tamil Nadu. The later state also has the highest female proportion (about 51 per cent).

Table 2.1b: Demographic features of small garden labour households

	Total population		Infant (age up to 5)		
	Male	Female	Total	Male	Female
West Bengal	266 (51.36)	214 (48.64)	9.6	10.9	7.9
Assam	522 (54.32)	439 (45.68)	9.5	9.8	9.1
Tamil Nadu	308 (48.97)	321 (51.03)	3.5	3.6	3.4

Note: figures in parenthesis represent proportional distribution of population

Table 2.1b: continue

		Child (6-14 age group)			Adult (15-65 age group)			Older (age above 65)		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
West Bengal		20.2	20.7	19.2	70.0	67.7	72.9	0.4	0.8	Nil
Assam		22.9	26.8	18.2	66.6	62.8	71.1	1.0	0.6	1.6
Tamil Nadu		14.9	13.6	16.2	80.0	81.8	78.2	1.6	1.0	2.2

Regarding the religious status of large tea garden labourers, a overwhelming number of households belong to Hindus (see table 2.2a) followed by Buddhists in Darjeeling (33.7 per cent), Christians in Terai (29.4 per cent), Dooars (16.5 per cent), Sibhsagar (9.4 per cent), Darrang (17.6 per cent) and Dibrugarh (4.4 per cent). Compared to this, Muslims account for 8.6 percent of households in Cachar and 6.5 per cent in Nilgiris. The study offers the religious status of small garden labour households in table 2.2b.

Table 2.2a: Religion status of large garden labour households

		Hindu	Islam	Christian	Buddhist	Others
West Bengal	Darjeeling	61.3	Nil	4.7	33.7	0.4
	Terai	70.6	Nil	29.4	Nil	Nil
	Dooars	74.5	6.2	16.5	1.0	1.8
	Total	68.4	2.0	16.0	12.9	0.7
Assam	Sibsagar	86.0	4.1	9.4	0.5	Nil
	Darrang	81.7	0.6	17.6	Nil	Nil
	Dibrugarh	95.1	0.5	4.4	Nil	Nil
	Cachar	89.0	8.6	2.2	0.3	Nil
	Total	89.1	3.1	7.6	0.2	Nil
Tamil Nadu	Nilgiris	93.0	0.6	6.5	Nil	Nil

Table 2.2b: Religion status of small garden labour households

	Hindu	Islam	Christian	Buddhist	Others
West Bengal	86.8	7.5	3.3		2.3
Assam	92.9	4.7	2.4	Nil	Nil
Tamil Nadu	96.3	1.1	2.5	Nil	Nil

Furthermore, an overwhelming number of households in large gardens belong to the socially deprived groups such as scheduled tribes or scheduled castes (table 2.3a). Scheduled tribes are predominant in the northern tea producing states while the scheduled castes are dominant in south.

Table 2.3a: Caste status of large garden labour households

		Schedule tribe	Schedule caste	Other backward caste	General
West Bengal	Darjeeling	44.8	6.6	31.9	16.7
	Terai	76.6	9.2	2.4	11.7
	Dooars	49.7	34.5	3.6	12.2
	Total	56.3	15.8	14.2	13.8
Assam	Sibsagar	98.2	0.7	1.1	Nil
	Darrang	73.4	6.8	10.3	9.5
	Dibrugarh	78.6	2.3	17.2	1.9
	Cachar	85.7	3.9	8.2	2.2
	Total	89.8	9.3	1.0	Nil
Tamil Nadu	Nilgiris	7.3	78.8	0.1	13.8

For the small garden labour households, labourers belonging to other backward castes (OBCs) are also significant in the south, accounting for 55.6 per cent followed by scheduled castes at 41.5 per cent.

Table 2.3b: Caste status of small garden labour households

	Schedule tribe	Schedule caste	Other backward caste	General
West Bengal	9.1	76.8	6.7	7.4
Assam	94.1	2.7	Nil	3.3
Tamil Nadu	Nil	41.5	55.6	2.9

## 2.1.2 Occupation and future

Tables 2.4a and 2.4b give the occupational profiles of the working population for large and small tea garden labour households, respectively. The distribution of working population by different occupational categories in the large garden labourers suggest that not unexpectedly, larger sections of the population are involved in the tea industry (either garden sector or factory, table 2.4a). Among the eight tea plantation districts we surveyed, the residential permanent labourers are as low as 27 per cent in Darjeeling and at a high of about 54 per cent in Dibrugarh. In the Nilgiris it is 42.2 per cent. The non-resident permanent labourers are hardly noteworthy in our sample. The results of the primary survey suggests that cultivation does not play much role in any of the regions but non-tea sector daily wage earners engaged in non-cultivation related activities are strong. Self employed and the service holders are active mainly in West Bengal. However, there is also high open unemployment in West Bengal.

Table 2.4a: Distribution of working group population as per main occupation for large garden labour households

	West Bengal				Assam					Tamil Nadu
	Darjeeling	Terai	Dooars	Total	Sibsagar	Darrang	Dibrugarh	Cachar	Total	Nilgiris
Tea garden labourer (resident-permanent)	26.7	41.2	36.2	34.0	44.2	53.4	54.2	40.9	48.6	42.2
Tea garden labourer (outside-permanent)	0.8	0.8	2.7	1.4	0.1	Nil	Nil	Nil	0.0	0.8
Tea garden labourer (temporary)	2.3	12.6	4.5	6.0	37.4	21.5	23.0	36.7	29.5	6.7
Non-garden tea labourer	12.6	4.7	3.3	7.2	7.7	11.8	11.9	9.6	10.3	34.3
Working outside garden (daily wage earner)	2.5	4.1	6.2	4.2	3.0	2.2	3.1	0.4	2.4	2.4
Self employed	4.8	5.0	1.7	3.8	Nil	Nil	Nil	Nil	Nil	0.1
Service holder	3.3	1.1	1.1	2.0	0.1	Nil	Nil	Nil	0.0	Nil
Cultivator	Nil	Nil	Nil	Nil	0.1	0.2	Nil	Nil	0.1	Nil
Maid servant	Nil	Nil	Nil	Nil	Nil	0.7	0.2	Nil	0.2	0.7
Unemployed	17.6	8.3	13.0	13.4	0.7	2.2	1.9	Nil	1.2	1.8
Others (housewife, student, incapable, etc.)	29.5	22.1	31.4	28.0	6.6	8.0	5.7	12.5	7.6	10.9

Presently, we analyse the employment trends for the three major tea growing states using time series data between 1981 and 2005. Figure 2 reveals that the majority of labourers in Assam (about three-fourth) are residents of the tea estates. Permanent non-resident labourers constitute about 8 per cent. The non-resident temporary labourers, who may be considered as casual labourers constituted only 15 per cent in 2005. The proportion of resident labourers in Assam declined marginally over the period 1981 to 2001. It declined from about 78 per cent in 1981 to 75 per cent in 1991 and further to 70 per cent by 2001. But over the period 2001 to 2005, it has increased to about 76 per cent. On

the other hand, the non-resident temporary labourers which earlier constituted a very small proportion of labour force increased from 15 per cent in 1981 to 22 per cent in 2001 but once again declined to 15 per cent in 2005.

Figure 2: Observed pattern of labours in tea industry over time

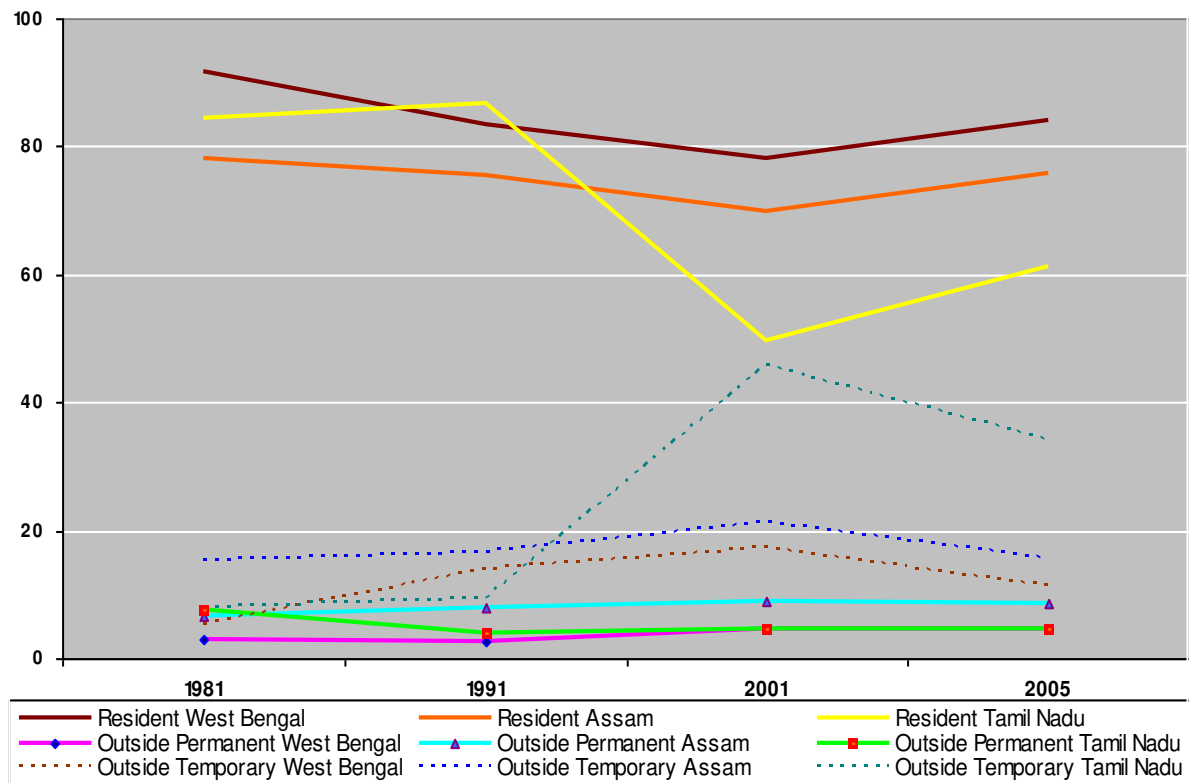


Figure 2 also reveals that resident labourers constituted about 84 per cent, non-resident permanent labourers 4 per cent while the non-resident temporary labourers constitute about 11 per cent of tea garden labourers of West Bengal in 2005. The resident labourers underwent a declining trend from 1981 to 2001 but reversed to an increasing trend over the period 2001 to 2005.

For Tamil Nadu, the resident labourers constitute about 61 per cent, non-resident permanent labourers 4 per cent and the non-resident temporary labourers about 35 per cent of the total tea garden labourers in Tamil Nadu. The figure also reveals that there is a major shift of labour from resident to non-resident permanent labour over the period 1991-2001. The former declined sharply from 87 per cent to about 50 per cent with corresponding increase in non-resident permanent labourer. However, the percentage of resident labourers increased once again from about 50 per cent to about 61 per cent over the period 2001 to 2005.

Overall, it seems that the gardens are operated with large number of casual labourers. Casualisation is as high as 82 per cent in Assam followed by Tamil Nadu (65 per cent). However, the rate is pretty low in West Bengal at 20 per cent.

Table 2.4b: Distribution of working group population as per main occupation for small garden labour households

	West Bengal	Assam	Tamil Nadu
Tea garden labourer (resident-permanent)	7.4	0.8	Nil
Tea garden labourer (outside-permanent)	11.3	2.0	Nil
Tea garden labourer (temporary)	18.8	81.8	64.6
Non-garden tea labourer	14.6	8.2	0.2
Working outside garden (daily wage earner)	10.4	0.5	1.2
Self employed	1.2	Nil	0.6
Service holder	Nil	Nil	6.0
Cultivator	3.6	0.8	11.5
Maid servant	0.6	Nil	Nil
Unemployed	6.8	Nil	Nil
Others (housewife, student, incapable, etc.)	25.3	6.0	15.9

This section finally offers an analysis of what the tea garden workers contemplate about the future of their children. We intend to shed some light on a fairly critical issue: whether the modern day tea garden workers want their children to continue in the same industry as has been the practice over the last century? We tried to elicit this answer from the respondents based on their ideas about the opportunities outside the tea gardens. We found that the perception about the future of the children leaving the tea industry is lowest in Tamil Nadu, while it is very high at 75 per cent in the Dooars region of West Bengal. We also enquired about the demand for industrial and technical training not excluding but generally more broad based than that applicable to the tea industry and the aggregated responses are summarized in table 2.5.

Table 2.5: Distribution of large garden labour households as per future expectation about the children

		Expect child to switch from garden	Want training for child	Reason for non-switching from tea garden			
				Not interested	Don't think since too young child	Others*	Unable to answer
West Bengal	Darjeeling	57.6	42.9	64.2	9.4	24.5	1.9
	Terai	56.9	41.4	25.6	38.5	28.2	7.7
	Dooars	75.8	23.8	75.0	Nil	25.0	Nil
	Total	64.5	35.0	49.0	20.8	26.0	4.2
Assam	Sibsagar	54.2	9.5	26.1	13.0	60.9	Nil
	Darrang	53.7	6.1	33.3	Nil	44.5	22.2
	Dibrugarh	54.8	5.8	50.0	33.3	16.7	Nil
	Cachar	52.7	8.6	28.0	12.0	48.0	12.0
	Total	54.0	7.8	30.2	12.7	49.2	7.9
Tamil Nadu	Nilgiris	47.9	1.5	9.1	36.4	50.0	4.5

\* Others include limited finance for education, failure to get jobs, marriage of child, etc.

Table 2.5 shows that the demand for training is considerable in West Bengal. Despite nearly half of the households responded that they intend their children to move out of the tea sector in both Assam and Tamil Nadu, their demand for such job training is very low, particularly in the Nilgiris. The respondent households which do not want to switch from the tea sector, however, frequently reply their reasons that either they are not interested in non-tea sector or other causes like unable to provide proper education for non-tea jobs, tried but not succeed for such jobs, etc. Nevertheless, it is important to mention here that most of the parents thinking or thought about some limited occupation like clerical jobs, teaching, etc; they are not shown very interest on the self employment via proper training.

### 2.1.3 Wage and assets

Following table 2.6 shows the prevailing wage rates in different markets like large garden, small garden vis-à-vis non-tea sector. We also estimated the real wage for each market using the consumer price index for industrial workers in 2009 (with 2001 base) in the nearest regions like Darjeeling, Siliguri and Jalpaiguri for West Bengal, Guwahati for Sibsagar, Darrang and Dibrugarh as well as Silchar for Cachar, and Coonoor for Nilgiris region. We typically found that the non-tea wage rate is always greater than the tea sector irrespective of the large or small gardens.

Table 2.6: Nominal and real wage rates of workers in different labour markets like large garden, small garden as well as outside the garden

		Large garden		Small garden		Non-garden	
		Nominal	Real	Nominal	Real	Nominal	Real
West Bengal	Darjeeling	64.59	42.17	NA	NA	99.45	64.93
	Terai	65.34	41.84	NA	NA	92.62	59.31
	Dooars	71.53	47.79	64.26	41.95	91.63	61.22
	Total	67.22	NA	64.26	41.95	95.41	NA
Assam	Sibsagar	66.61	46.74	66.29	46.52	100.82	70.75
	Darrang	66.86	46.92	NA	NA	84.83	59.53
	Dibrugarh	66.57	46.72	67.21	47.16	73.84	51.82
	Cachar	53.17	34.36	64.88	41.93	96.25	62.20
	Total	63.97	NA	65.54	NA	88.91	NA
Tamil Nadu	Nilgiris	129.91	87.82	166.1	112.29	190.89	129.05

Another income based analysis appears in this section is essentially related to the households possession of assets like livestock and durable assets. Table 2.7 presents average number of the individual asset per households with their proportion of the ownership of particular asset. We found the proportion of households possession of fowl, pig/horse/goat for livestock and cycle are remarkably higher in the northern part like West Bengal and Assam irrespective of large and small gardens labourers. However, the average numbers of durable assets per households, which control over these assets, are quite homogeneous across the regions.

Table 2.7: Stock of specified assets (livestock and durable assets) per households in large and small garden labourers

	West Bengal		Assam		Tamil Nadu	
	Large grower	Small grower	Large grower	Small grower	Large grower	Small grower
Fowl	4.9 (48.1)	5.6 (15.8)	7.1 (77.6)	7.4 (84.5)	5.5 (1.3)	Nil
Cow/bullock/buffalo	2.1 (24.8)	2.3 (51.8)	2.1 (36.1)	1.5 (29.6)	1.0 (1.3)	1.3 (39.2)
Pig/horse/goat	2.8 (35.4)	2.5 (40.4)	3.3 (49.8)	3.2 (75.2)	2.3 (1.3)	1.2 (4.3)
Other livestock	2.8 (5.9)	6.3 (2.6)	1.2 (1.6)	2.5 (0.9)	1.0 (0.3)	1.0 (3.2)
Cycle	1.4 (45.9)	1.3 (73.7)	1.2 (67.1)	1.2 (75.7)	1.1 (4.6)	1.0 (9.7)
Motorcycle	1.0 (4.9)	1.0 (0.9)	1.1 (3.3)	1.0 (3.5)	1.0 (2.6)	1.0 (26.3)
Television	1.0 (64.2)	1.1 (6.1)	1.0 (36.3)	1.0 (24.3)	1.0 (82.3)	1.0 (97.8)
Telephone	1.3 (47.9)	1.1 (11.4)	1.1 (62.8)	1.1 (68.1)	1.2 (72.5)	1.2 (79.0)

\* Figures in the parenthesis represent proportion of households possession of particular assets

## 2.1.4 Educational scenario

There are two types of educational scenarios portray in the following tables 2.8a (for large garden labour households) and 2.8b (for small garden labour households), and these are educational status of the adult group (age between 15 to 65) and child population (aged at 6 to 14 years). Moreover, the children education is portrayed by sex (M = male and F = female). Among the eight regions we studied the illiteracy is highest in Cachar (44.4 per cent) and lowest in Darjeeling (14.5 per cent) as well as Nilgiris (14.7 per cent). Most of the cases the literate adult group is limited up to junior secondary level (eighth standard). Quite expectedly, the children are mainly concentrated in pre-primary to primary stages.

Table 2.8a: Distribution of child and working group populations as per educational status for large garden labour households

			West Bengal				Assam					Tamil Nadu
			Darjeeling	Terai	Doors	Total	Sibsagar	Darrang	Dibrugarh	Cachar	Total	Nilgiris
Illiterate	Child	M	1.3	4.5	5.7	3.9	7.7	1.3	3.9	18.1	7.0	Nil
		F	Nil	5.2	9.5	4.9	14.1	3.9	1.4	21.1	9.1	1.4
	Adult	14.5	39.6	31.1	27.2	28.9	39.9	37.4	44.4	36.8	14.7	
Pre-primary	Child	M	51.9	48.3	50.6	50.2	56.4	51.9	57.1	63.9	57.1	Nil
		F	60.2	48.1	45.2	51.2	59.4	68.8	56.8	60.5	60.3	45.1
	Adult	12.1	9.9	14.2	12.2	32.2	14.7	14.6	37.7	29.5	31.2	
Primary	Child	M	43.0	44.9	39.1	42.4	34.6	42.9	39.0	18.1	34.9	43.6
		F	34.9	44.2	44.0	41.0	26.6	23.4	41.9	18.4	29.8	52.1
	Adult	19.0	16.0	20.8	18.7	32.0	30.0	41.1	15.5	32.0	28.6	

Junior secondary	Child	M	3.8	2.2	4.6	3.5	1.3	3.9	Nil	Nil	1.1	1.8
		F	4.8	2.6	1.2	2.9	39.1	3.9	Nil	Nil	0.7	1.4
	Adult	31.7	17.9	22.3	24.7	5.5	44.0	5.2	2.2	5.9	14.0	
Secondary	Child	M	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
		F	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	Adult	13.7	12.1	6.1	10.8	1.2	2.2	0.9	0.2	1.0	5.4	
Professional diploma	Adult		0.4	Nil	Nil	0.1	Nil	Nil	Nil	Nil	0.1	
Senior secondary			5.9	2.7	4.1	4.4	Nil	0.5	0.1	Nil	0.1	3.3
Graduate			2.4	1.7	1.4	1.9	0.1	Nil	Nil	Nil	0.0	2.5
Postgraduate			0.2	Nil	Nil	0.1	Nil	Nil	Nil	Nil	Nil	Nil
Non-formal education			0.1	Nil	Nil	0.0	Nil	Nil	Nil	Nil	Nil	0.0

Pertaining to the small growers case, the adult illiteracy is as highest as 47.3 per cent in West Bengal, while it is nil in Tamil Nadu region (see table 2.8b). For the literate adults the most density is at pre-primary stage (read and write only) in the northern tea producing states like West Bengal and Assam, while in Tamil Nadu it is at secondary level. Like the large garden case both male and female child are mainly concentrate at pre-primary and primary levels.

Table 2.8b: Distribution of child and working group populations as per educational status for small garden labour households

			West Bengal	Assam	Tamil Nadu
Illiterate	Child	M	1.8	0.7	Nil
		F	Nil	5.0	Nil
	Adult	47.3	13.9	Nil	
Pre-primary	Child	M	61.8	73.6	57.1
		F	51.2	72.5	51.9
	Adult	26.8	42.1	6.8	
Primary	Child	M	32.7	23.6	35.7
		F	43.9	18.8	38.5
	Adult	9.8	26.1	16.2	
Junior secondary	Child	M	3.6	2.1	7.1
		F	4.9	3.8	9.6
	Adult	12.5	13.0	20.2	
Secondary	Child	M	Nil	Nil	Nil
		F	Nil	Nil	Nil
	Adult	3.3	3.9	39.4	
Professional diploma	Adult		Nil	Nil	0.8
Senior secondary			0.3	1.1	8.4



Graduate		Nil	Nil	8.2
Postgraduate		Nil	Nil	Nil
Non-formal education		Nil	Nil	Nil

Next section we offer the status of school going children aged between 6 to 14 years by types of garden labour. The large garden case is depicted in table 2.9a. Among the regions we found highest school non-going child in Cachar and expectedly the lowest in Nilgiris. In spite of the highest average distance to travel for school as well as highest spending (rupees per month) on schooling in West Bengal the school non-going children restricts at nearly 12 per cent.

Table 2.9a: Distribution of child population as per schooling information for large garden labour households

	West Bengal				Assam					Tamil Nadu
	Darjeeling	Terai	Dooars	Total	Sibsagar	Darrang	Dibrugarh	Cachar	Total	Nilgiris
Children not going to school (proportion)	15.8	15.1	5.6	12.2	25.0	13.0	12.6	36.5	20.6	0.8
Average distance to travel (km)	4.3	2.7	4.1	3.7	1.1	1.3	0.8	1.4	1.1	1.9
Average monthly fees to paid for schooling	48	87	128	88	43	54	21	41	35	Nil

For the small garden labour case, however, Assam registered as highest school non-going children around 12 per cent, and interestingly the Tamil Nadu is non-negligible and above the West Bengal figure. Tamil Nadu is also registered high score in terms of average distance to travel for school and the monthly spending on schooling.

Table 2.9b: Distribution of child population as per schooling information for small garden labour households

	West Bengal	Assam	Tamil Nadu
Children not going to school (proportion)	7.3	11.8	8.3
Average distance to travel (km)	1.8	1.6	3.3
Average monthly fees to paid for schooling	21	63	281

Finally we offer the reasons for not going to school by sex of the children in table 2.10a (for large garden labours) and table 2.10b (for small garden labours) in this section. As may be found in table 2.10a that out of the five specified reasons (school is unavailable in the locality, financial problems like earning for the household, help the household for domestic works, unwillingness for schooling and others like incapability or youngness for travel in distanced school) Darjeeling accounts for 87.5 per cent cases comprising unavailable of school in locality, financial problems and domestic help.

Interestingly, while cent per cent female child are not going to school for the domestic help of the parent in household, the same for Nilgiris is simply the unwillingness.

Table 2.10a: Distribution of child population by sex as per reasons for not going to school for large garden labour households

			Unavailable in the locality	Financial problem	Help to parent in household	Not willing	Others (incapable)
West Bengal	Darjeeling	M	25.0	37.5	25.0	Nil	12.5
		F	Nil	Nil	100	Nil	Nil
	Terai	M	5.6	50.0	5.6	22.2	16.7
		F	Nil	14.3	14.3	14.3	42.9
	Dooars	M	Nil	35.7	Nil	7.1	57.1
		F	Nil	Nil	7.7	23.1	53.8
	Total	M	7.5	42.5	5.6	12.5	30.0
		F	Nil	4.8	14.3	19.0	47.6
Assam	Sibsagar	M	2.7	16.2	Nil	35.1	45.9
		F	Nil	11.8	Nil	41.2	41.2
	Darrang	M	Nil	14.3	Nil	42.9	42.9
		F	Nil	15.4	7.7	15.4	38.5
	Dibrugarh	M	Nil	8.6	Nil	30.4	60.9
		F	Nil	13.3	13.3	26.7	33.3
	Cachar	M	Nil	Nil	Nil	44.4	55.6
		F	Nil	14.8	3.7	40.7	40.7
Total	M	1.1	9.6		37.2	52.1	
	F	Nil	13.5	4.5	34.8	39.3	
Tamil Nadu	Nilgiris	M	Nil	Nil	Nil	Nil	Nil
		F	Nil	Nil	Nil	100	Nil

\*Indeed each row sum should be equal to the hundred, sometimes underestimated due to missing of information. It is also applicable elsewhere.

The children of the small garden labour households are not going to school simply other reason for entire male and half of the female in West Bengal. The rest half of female child are not going due to financial problems which is the reason for cent per cent female in Tamil Nadu also. A major part of male in Assam is not going to school since they are unwilling to do so.

Table 2.10b: Distribution of child population by sex as per reasons for not going to school for small garden labour households

		Unavailable in the locality	Financial problem	Help to parent in household	Not willing	Others (incapable)
West Bengal	M	Nil	Nil	Nil	Nil	100
	F	Nil	50.0	Nil	Nil	50.0
Assam	M	Nil	25.0	Nil	62.5	12.5
	F	Nil	16.7	11.1	33.3	38.9
Tamil Nadu	M	Nil	Nil	Nil	Nil	Nil
	F	Nil	100	Nil	Nil	Nil

## 2.1.5 Health status

In this section we provide information on some basic aspects of health facilities availing by the garden labourers. As we found in table 2.11a that most of the case the large tea garden labourers use their garden dispensary for general health matters. Although the majority of the household do not suffer from major illness like heart diseases, cancer, etc. If situation arises for them, expectedly, they prefer to use government health centre. However, the necessary help provided for them by the garden authority includes arrangement of vehicle, contacting the doctor/hospital, monetary support, etc. These supports are provided to them in various combinations (for example, all the supports as required are availed by the labourers in Cachar).

Table 2.11a: Distribution of large garden labour households as per accessibility of health facilities

		West Bengal				Assam					Tamil Nadu
		Darjeeling	Terai	Dooars	Total	Sibsagar	Darrang	Dibrugath	Cachar	Total	Nilgiris
Place of treatment for general illness	Tea garden dispensary	73.4	64.1	88.9	76.7	89.1	98.5	89.0	98.8	92.7	87.2
	Govt. health centre	19.7	27.6	8.2	17.5	9.7	0.7	10.2	Nil	6.3	10.9
	Private health centre	6.9	8.3	2.9	5.7	1.3	0.7	0.8	1.2	1.0	2.0
Suffer from major illness		5.4	15.5	10.7	10.4	2.5	7.5	2.8	3.0	3.5	32.9
Place of treatment for major illness	Govt. health centre	90	76.9	80	80.3	83.3	70	100	100	84.6	14.6
	Private health centre	10	11.5	12	11.5	Nil	20	Nil	Nil	7.7	6.3
	Informal health centre	Nil	3.8	Nil	1.6	16.7	Nil	Nil	Nil	3.8	42.7
Received major support from tea garden authority for major illness		4.5	47.5	61.6	35.4	12.6	33.3	42.4	4.4	21.7	15.1
Help from tea garden authority for treatment	Arrangement of vehicle	35.2	36.1	36.4	35.6	15.4	Nil	10.3	Nil	8.0	Nil
	Contracting doctor/ hospital	Nil	1.2	Nil	0.5	Nil	Nil	Nil	Nil	Nil	19.3
	Monetary support	1.6	1.2	9.1	1.8	57.7	Nil	Nil	Nil	12.0	Nil
	Arrangement of vehicle plus contracting doctor	34.6	11.6	Nil	23.4	3.8	Nil	10.3	Nil	5.6	1.8
	Arrangement of vehicle plus monetary support	13.6	38.3	36.4	24.3	Nil	2.8	10.5	Nil	5.6	Nil
	Contracting doctor plus monetary support	0.8	Nil	9.0	0.9	Nil	2.8	3.4	Nil	2.4	Nil
	All supports mentioned above	14.2	11.6	9.1	13.5	23.1	94.4	65.5	100	66.4	78.9

The tea garden dispensary facility is however limited to the small garden labourers (see table 2.11b). They usually travel to the government health centre in the general health matters. In case of major illness they receive full support from the garden authority in Assam. However, it is very limited for them in Tamil Nadu region. The authority either arrange vehicle or contract doctor/hospital in Assam, while in West Bengal and Tamil Nadu they receive mainly the financial support.

Table 2.11b: Distribution of small garden labour households as per accessibility of health facilities

		West Bengal	Assam	Tamil Nadu
Place of treatment for general illness	Tea garden dispensary	Nil	18.6	51.1
	Govt. health centre	85.1	75.2	45.2
	Private health centre	14.9	6.2	3.8
Suffer from major illness		Nil	0.9	18.3
Place of treatment for major illness	Govt. health centre	Nil	100	61.8
	Private health centre	Nil	Nil	29.4
	Informal health centre	Nil	Nil	8.8
Received major support from tea garden authority for major illness		30.7	100	3.1
Help from tea garden authority for treatment	Arrangement of vehicle	Nil	50.0	Nil
	Contracting doctor/ hospital	Nil	50.0	Nil
	Monetary support	93.9	Nil	100
	Arrangement of vehicle plus contracting doctor	Nil	Nil	Nil
	Arrangement of vehicle plus monetary support	3.0	Nil	Nil
	Contracting doctor plus monetary support	Nil	Nil	Nil
	All supports mentioned above	3.0	Nil	Nil

### 2.1.6 Household amenities

Our socio-economic analysis of the tea garden labour households is ended with the analysis of amenities that provided to them. The following tables 2.12a and 2.12b describe these facts for large and small tea garden labourers respectively. In the amenities case we consider first the availability of the electricity followed by water supply and sanitation. For the large garden labour households the availability of electricity is cent per cent in the Nilgiris region, while the Cachar is in most worst condition (below 30 per cent households have the facility). Even if, the water is manly supplied to them by the garden authority anywhere in our study regions, private arrange of water in all the plantation regions of West is parallel important. Similar type of analysis is almost applicable for the sanitation facilities like toilet use and sewerage connection.

Table 2.12a: Distribution of large garden labour households as per accessibility of drinking water and sanitation facilities

		West Bengal				Assam					Tamil Nadu
		Darjeeling	Terai	Dooars	Total	Sibsagar	Darrang	Dibrugarh	Cachar	Total	Nilgiris
Availability of electricity		99.6	84.5	89.2	91.9	51.9	59.0	58.5	28.1	50.4	100
Water supplier	Tea garden	34.0	59.7	48.8	46.2	95.0	78.4	82.6	95.2	88.3	82.8
	Private	65.6	32.0	48.8	50.5	0.8	19.4	0.4	Nil	3.7	0.3
	Panchayat	0.4	8.3	2.5	3.3	4.2	2.2	17.0	4.8	8.1	16.9
Distance to fetch water	< 15minutes	61.1	95.0	71.4	74.2	53.4	67.9	18.6	77.8	49.9	90.1
	15-30 minutes	29.1	3.9	3.0	13.4	46.6	32.1	81.4	22.2	50.1	9.9
	30 mins-1hr	6.1	1.1	0.5	2.9	Nil	Nil	Nil	Nil	Nil	Nil
	>1hr	3.7	Nil	25.1	9.6	Nil	Nil	Nil	Nil	Nil	Nil
Duration of water supply	8-24hrs	57.0	81.8	71.9	68.9	83.1	93.3	85.4	74.9	83.8	100
	4-8hrs	23.8	7.2	8.4	14.0	16.5	3.7	12.6	25.1	14.9	Nil
	<4hrs	13.5	8.3	19.7	14.0	Nil	0.7	0.4	Nil	0.3	Nil
	On alternative day	4.5	Nil	Nil	1.8	0.4	Nil	Nil	Nil	0.1	Nil
	Other than these	1.2	2.8	Nil	1.3	Nil	2.2	1.6	Nil	0.9	Nil
Whether spent on water		7.4	1.7	10.8	6.8	2.1	Nil	0.4	1.8	1.1	1.3
Toilet use	Individual toilet by garden authority	5.3	14.4	26.6	14.8	68.1	38.3	72.6	41.0	58.8	92.1
	Own individual	87.7	14.9	16.7	43.8	2.1	11.3	3.2	1.8	3.9	1.0
	Community toilet by garden authority	3.3	0.6	7.9	4.0	6.3	2.3	1.2	1.2	2.9	Nil
	Open ground	3.7	68.5	48.3	36.8	8.0	42.9	6.7	40.4	20.3	0.3
	Provided by panchayat	Nil	1.7	0.5	0.6	15.5	5.3	16.3	15.7	14.1	6.6
Sewerage connection	Individual	38.9	9.4	7.9	20.4	7.6	1.5	0.4	1.2	2.9	Nil
	Community	0.4	Nil	21.2	7.0	0.4	0.8	0.8	Nil	0.5	0.3
	Individual septic tank	51.6	22.1	14.3	31.1	55.9	42.1	79.7	13.8	52.2	7.2
	Community septic tank	5.7	Nil	8.4	4.9	19.7	2.3	7.2	20.4	12.9	92.5
	No connection	3.3	68.5	48.3	36.6	16.4	53.4	12.0	64.7	31.4	Nil

The availability of electricity is fairly low for the small garden labour households in Assam region (see table 2.12b). The dominant suppliers of their water are panchayat in Assam, both panchayat and garden authority in Tamil Nadu, and private arrangement by themselves in West Bengal respectively. Indeed the availability of water supply is 8-24 hours per day in most of the cases in all

the regions, the time to fetch water is below 15 minutes in West Bengal and Tamil Nadu (Assam registered 15 to 30 minutes for most cases). Use of toilet is unhygienic in West Bengal since 93 per cent households use open ground. Almost all of them do not have the sewerage connection (Assam also falls in the same category in this respect). Sanitation facility uses by the households of small garden labourers is fairly better only in Tamil Nadu region.

Table 2.12b: Distribution of small garden labour households as per accessibility of drinking water and sanitation facilities

		West Bengal	Assam	Tamil Nadu
Availability of electricity		97.3	29.0	98.4
Water supplier	Tea garden	8.1	21.7	50.0
	Private	78.4	2.7	Nil
	Panchayat	13.5	75.7	50.0
Distance to fetch water	< 15minutes	93.0	22.1	99.5
	15-30 minutes	7.0	75.2	0.5
	30 mins-1hr	Nil	2.7	Nil
	>1hr	Nil	Nil	Nil
Duration of water supply	8-24hrs	100	98.2	100
	4-8hrs	Nil	1.8	Nil
	<4hrs	Nil	Nil	Nil
	On alternative day	Nil	Nil	Nil
	Other than these	Nil	Nil	Nil
Whether spent on water		Nil	0.4	0.5
Toilet use	Individual toilet by garden authority	Nil	13.7	Nil
	Own individual	4.4	23.0	16.7
	Community toilet by garden authority	Nil	4.9	Nil
	Open ground	93.0	6.2	0.5
	Provided by panchayat	2.6	52.2	82.8
Sewerage connection	Individual	3.6	4.4	Nil
	Community	Nil	Nil	Nil
	Individual septic tank	0.9	0.4	79.6
	Community septic tank	0.9	1.8	19.9
	No connection	94.6	93.4	0.5

## Section - 3

### Conclusion

This report provides an extensive survey of tea garden labourers at the household level. To the best of our knowledge such detailed and comprehensive survey at the household level is hardly available in the existing literature. We analyze the overall socio-economic conditions in the tea gardens with special reference to the labourers. In this respect we interviewed a staggering 2270 labour households (1744 from large garden labour and 526 from small garden) spanning the north and south. In the process, we collected sample information from 9731 individuals as part of the tea garden working population.

The detailed results are available directly in the main text above. On the basis of this report, we observe that there are several issues which the tea industry in general might find amenable to appropriate policies to go with the larger planning of the tea industry. We observed that there are certain plans pertaining to the use of unutilised land resources in the possession of larger tea estates. Many have already begun devoting the excess capacity towards tourism related to tea, but the practice is still fairly low to argue in favour of a comprehensive plan. Moreover, the tea estates everywhere cannot for obvious reasons including geographic and other factors, practice tourism efficiently. Thus, the alternatives are limited to floriculture and cultivation of other cash crops. We do not have adequate instruments to judge if such orientations would lead to optimal outcomes in view of the excess land reserves.

The socio-economic conditions in the tea gardens offer an equally large number of complicated and intertwined problems, for which no single policy seems capable of acting as a panacea. On the one hand, the surplus labour in the north is in complete contrast to that in the south and yet free and full mobility of labour remains a problem owing to cultural or language heterogeneity across regions. Regarding preferences in favour of alternative occupations outside the tea industry, we observe that neither Assam nor Tamil Nadu display clear patterns. Some parts of West Bengal record high preference regarding alternative occupations. Consequently, the demand for industrial and allied training is limited to areas where high sectoral mobility is warranted. This is coupled with a much more general problem of inadequate facilities available within the tea industry – including poor education and infrastructure facilities. Although the tea gardens still provide some basic amenities at subsidised or occasionally no cost to the resident labour, the wage rates remain below the outside opportunities in various other sectors. In this regard, the example of Thirupur garment factory is of considerable importance. The daily wage rate is substantially higher than what the tea industry, locally and perhaps in the entire country, can afford and stay competitive at the same time. There is a clear trade off between quality and quantity of tea when remaining cost competitive locally and globally is a constraining factor. In other words, if the tea industry is to pay matching wages and benefits available elsewhere, then the optimal level of production must be redesigned. The inflow of foreign capital, as argued in the other report could help to lower the credit constraints and hence the costs of capital to some extent, and still allow the tea gardens to retain the most skilful workers. It is common knowledge in the trade that resident garden workers, in particular with respect to plucking of tea leaves acquire certain skills which are often inimitable and irreplaceable. The machine based harvesting can hardly do justice to this concern about quality, which to our understanding remains

one of the greatest advantages of Indian tea compared to its growing competitors. It is therefore imminent that (depending on the various grades of tea) the authorities must design appropriate mechanisms to maintain high productivity without sacrificing the quality. It seems that growing casualisation of labour and cultivation/ harvesting techniques to stay viable in the short run may cause more harm to the industry than realised at the moment.

After all, the mechanisms that make Indian tea special are time tested and robust. Neither short run profit-seeking ventures nor treating the industry as any other run-of-the-mill activity could help the industry gaining back some of the glory that it enjoyed for centuries. In addition, aggressive marketing strategies internationally, popularising of tea as a staple drink and continuous adjustments to suit the unstable consumer bases globally are much needed emphases as part of a long term plan for the industry as a whole.

**Acknowledgements:** This study is supported by the National Tea Research Foundation (NTRF), Tea Board of India (Government of India). The research team likes to thank Sohel Firdos (former co-investigator), Ritwik Sasmal, Priyanjali Sarker, Jayanti Ghosh, Anindita Majumder and Triparna Sinha, for excellent research support. We are indebted to many officials of the Tea Board in West Bengal, Assam and Tamil Nadu for their cooperation and guidance. We have benefited from two seminars organized by the NTRF and incorporated relevant comments. Thanks are also due to several officials in most tea estate-units we surveyed without whose active support this project could not be successfully completed.