

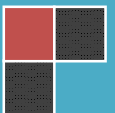
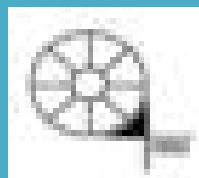
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# Social Impact Assessment (SIA) Study of Rajpura- Bathinda Rail line Doubling Project

**State Institute of Rural Development & Panchayati Raj,  
Government of Punjab**



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	<b>CONTENT</b>	<b>PAGE. NO.</b>
CHAPTER 1	INTRODUCTION	<b>1-6</b>
CHAPTER-2	GEOGRAPHICAL PROFILE OF THE AREA	<b>7-14</b>
CHAPTER-3	SOCIO-ECONOMIC STATUS OF THE AFFECTED HOUSEHOLDS / FAMILIES	<b>15-33</b>
CHAPTER-4	STATUS OF INFRASTRUCTURE FACILITIES	<b>34-37</b>
CHAPTER-5	SOCIAL IMPACT ASSESSMENT	<b>38-46</b>
CHAPTER-6	FINDINGS AND SUGGESTIONS	<b>47-48</b>

## LIST OF TABLES

Page No.

### CHAPTER 1

Table 1.1	Station wise and Village / Town wise size of Notified Land	2
Table 1.2	Station wise and village wise number of surveyed households	5

### CHAPTER 2

Table 2.1	Size of population	9
Table 2.2	Child population (0-6 group Population)	10
Table 2.3	Sex Ratio	11
Table 2.4	Scheduled Caste Population	12
Table 2.5	Literacy	13
Table 2.6	Workers	14

### CHAPTER 3

Table 3.1	No. of Households surveyed in each village / town	16
Table 3.2	Size of the affected population	17
Table 3.3	Size of Child Population (0-6 age group)	17
Table 3.4	Size of Households	18
Table 3.5	Caste Composition and Economic Categories	19
Table 3.6	Age Structure of Family Members	19
Table 3.7	Education Status of Surveyed Population	22
Table 3.8	Main Occupation of the Surveyed Population	23
Table 3.9	Subsidiary Occupation of the surveyed Population	24
Table 3.10	Number of Family Members Having Bank Account	25
Table 3.11	Size of Notified land (in Kanals)	25
Table 3.12	Land Holding Size of the affected Farmers	26
Table 3.13	Main Source of Drinking Water	27
Table 3.14	Cooking Fuel Used in Kitchen	27
Table 3.15	Number of Households having buffaloes	28
Table 3.16	Number of Households having Cows	28
Table 3.17	Number of Households having Dairy animals	29
Table 3.18	Milk Production per Household (in liters) per day	29
Table 3.19	Milk old per household per day (in liters)	30
Table 3.20	Items owned by the Household	30
Table 3.21	Annual Income of Households	31
Table 3.22	Total Loan from All source (Frequency)	32
Table 3.23	Source of Providing loan	32

### LIST OF FIGURE

Page No



## INTRODUCTION

1.1 **Project Background:** Rajpura-Bathinda rail line takes off from the Delhi-Ambala-Amritsar BG double line at Rajpura. The total length of this segment from Rajpura to Bathinda is about 173 Kms. Many important trains, such as Intercity Express between Sri Ganganagar and Rishikesh, Intercity Express between Fazilka and Delhi, Intercity Express between Sri Ganganagar and Ambala Cantt, Barmer express between Barmer and Haridwar and Bathinda-Jammu Tawi Express (weekly) runs through this section. Two most important towns of southern Punjab namely, Patiala and Bathinda, are located on this route, apart from other important towns located on this route such as Nabha, Dhuri, Barnala, Hariyana, Tapa, Rampura Phul and Bhucho Mandi. At present Rajpura-Bathinda route has a single line BG track. The line capacity utilization of this route has reached its saturation point. To enhance the line capacity of this route, Northern Railway has decided to upgrade the rail line between Rajpura and Bathinda. The up gradation project has two main components. First, conversion of the single line track into a double line track between Rajpura and Bathinda. Second, creation of loading/unloading goods facility for goods trains at new locations away from the existing railway stations at six places. These locations are main food grain loading points on this route. This facility of loading/ unloading goods at separate locations for goods trains will further enhance the line capacity of this section of Railway. These locations are near railway stations Dhuri, Handiaya, Tapa, Rampura Phul, Lehra Mohabat and Bhucho presently.

Northern Railway does not require acquisition of any land for laying the second track. However, for the creation of separate facilities for loading/unloading of goods, some land near some of the above mentioned railway stations have been notified for acquisition. The notified land falls in 4 towns (Rampura Phul, Tapa, Handiaya and Lehra Mohabat) and 6 villages (Dohla, Harchandpur, Khudi Kalan, Gill Kalan, Lehra Dhulkot and Lehra Khana).

The land notified for acquisition near Tapa, Lehra Mohabat and Bhucho stations fall in single village or town, in each case respectively and in case of Dhuri and Handiaya stations, the land falls in two settlements each. In Rampura Phul, the land is located in three settlements. The total area of notified land is 42.775 acres or 17.31 hectares. Station wise and village wise breakup of this land is detailed in Table 1.1

**Table 1.1**  
**Station wise and Village / Town wise size of Notified land**

<b>Sr. No</b>	<b>Name of the station</b>	<b>Land Notified for acquisition (in acres)</b>	<b>Name of the Village</b>	<b>Land Notified for acquisition (in acres)</b>
1	Dhuri	8.3125	Dohla	4.6250
			Harchandpur	3.6875
2	Handiaya	5.6625	Handiaya	0.9375
			Khudi Kalan	4.7250
3	Tapa	8.7250	Tapa	8.7250
4	Rampura Phul	7.7625	Gill Kalan	1.7750
			Rampura Phul	2.00625
			Lehra Dhulkot	3.98125
5	Lehra Mohabat	3.3875	Lehra Mohabat	3.3875
6	Bhucho	8.9250	Lehra Kalan	8.9250
Total		42.775	Total	42.775

### 1.2 Time Line

It is a five year project and the work on this project it is expected to be completed by the end of 2022.

### 1.3 Need for Social Impact Assessment (SIA)

- ✘ The notification for land acquisition was issued under the Right to Fair Compensation and Transparency in the Land Acquisition, Rehabilitation and Resettlement Act, 2013. As per this act, it is mandatory to conduct Social Impact Assessment of the affected population within six months of the notification for land acquisition. The purpose of conducting social impact assessment is:
- ✘ To know how the life of the people in the project area will be affected positively and negatively by the project in short term and long term as well.
- ✘ To identify the affected persons.
- ✘ To know the socio-economic background of the affected persons.
- ✘ To identify possible threats as well as opportunities for the various groups of people like farmers including dairy farmers, unskilled, semi-skilled and skilled workers; self employed persons; transporters ; regular job holders; shopkeepers; women and school going children.
- ✘ To take appropriate steps to mitigate the adverse impact of the project, if any, on the life of affected persons.
- ✘ To make life of the people more comfortable in the project area by upgrading the services/facilities in the area.
- ✘ To chalk out plans to enhance the income of the affected persons.



## 1.4 Objectives of the Study

The specific objectives of the study are:

- ✘ To estimate the number of families affected in the village, magnitude of their land loss relative to their total land holdings.
- ✘ To assess the number of houses, shops, other commercial, industrial, religious institutional properties, vacant residential/commercial plots etc., likely to be affected by the proposed acquisition.
- ✘ To assess the number of households likely to be displaced from their homes, shops or other properties.
- ✘ To assess the socio-economic status of the households affected by land acquisition for the road project.
- ✘ To benchmark the status of infrastructure, facilities and services available in the project area.
- ✘ To study the short term as well as long term Social Impact of the project on the land losers and others as well.
- ✘ To suggest Social Impact Management Plan or Mitigation Plan to minimise the adverse impact, if any, of the doubling of rail line project.

## 1.5 Benefits of the Project

After the completion of the project, capacity constraints of this route between Rajpura and Bathinda will be eliminated. Doubling of a single line track results in many fold increase in the line capacity. Northern Railway can introduce many new trains on this route. Creation of loading/unloading facilities for goods trains at separate places away from the railway stations will not only make loading / unloading of goods and food grains more convenient but will also contribute towards enhancing the line capacity of this route. Doubling of the line will reduce travel time of all trains passing through this route very significantly thereby effecting the train occupancy between Bathinda and Rajpura/Ambala. The project will also created enhance employment and business opportunities for the local population during its construction stage. Creation of better food grain loading facilities at new locations will also create employment and business opportunities for the local population near these points.

## 1.6 Methodology:

- This study is based on primary as well as secondary data.
- Sources of secondary data were:
  1. DPR of the project along with drawings of the six sites where land has been notified for acquisition to create facility of loading/unloading for the goods trains.

2. Railway maps of Punjab and adjoining states as well as annotated satellite imageries of the project area (from Rajpura to Bathinda) available on Google Maps site.
3. Copies of the notification of land acquisition for the project.
4. Revenue records of the notified land.
5. District census handbooks of Sangrur, Barnala and Bathinda.

DPR of the project helped the CRRID team to understand the need, objectives and main components of the project. Some doubts regarding certain aspect of the project were got clarified in meetings which the CRRID team organized with the project implementing team of the Northern Railway comprising mainly of:

1. Mr. Pawan Kumar Garg.....Chief Project Manager - II
  2. Mr. R.K Kalra.....Additional General Manager
  3. Mr. S.P Singh Batra.....Joint General Manager
  4. Mr. Manohar Lal.....Kanungo
- Maps were used to understand the alignment of rail line between Rajpura and Bathinda as well as connectivity of this route with major towns of Punjab, Haryana, Rajasthan, Uttar Pradesh and Uttrakhand.
  - Satellite imageries helped in the understanding of the topography of the area, drainage lines and other water bodies, soils, vegetation cover, land use, location of the affected villages and notified land in these villages; and site characteristics of the notified land.
  - Copies of the notification of land acquisition for the project were used to assess the size of land to be acquired at each station, khasra numbers of notified land and size of each khasra number.
  - Name of the effected farmers are not provided in the land acquisition notification. Copies of the revenue records for notified Khasra numbers were taken from Suvidha Centres to know the name of land owner/owners for each plot of notified land. Since many khasra numbers are recorded as joint property with two or more shareholders in revenue records and many farmers have share in more than one khasra numbers, it was not possible to know the exact number of effected farmers in every village. However in some of the villages, like Khudi Kalan and Lehra Mohabat, where the number of affected farmers in very small, CRRID team was able to identify almost all the affected farmers. In most other cases except Tapa the CRRID team succeeded in identifying and interviewing between 80 to 90 percent of the affected households. In Tapa, despite repeated visits CRRID team could contact only about half of the total affected land owners.

- Main characteristics of population of the affected 6 villages and 4 towns are based on Census data of 2011, published in District Census Handbooks of Sangrur, Barnala and Bathinda.
- Primary data was collected through **Focus Group Discussions** (FGDs) household surveys and interviews of shopkeepers at and near railway stations.
- FGDs were conducted in all the affected villages and towns, except Rampura Phul. These were attended by affected farmers, village/Nagar Panchayat (NP) Sarpanches as members of village Panchyat/N.P and other residents of the village/town. Large number of persons participated in the discussions in each village/town. They listed problems which they are likely to face due to land acquisition. Some of them also reported about the possible gains to them from this project. It may not be out of place to mention here that two officers of the project implementing team of the Northern Railway, namely Mr. S.P Singh Batra JGM and Mr. Manohar Lal (Kanungo) also accompanied the CRRID team to Dohla and Harchandpur villages near Dhuri station for conducting FGDs in these villages.
- A detailed household survey of 98 affected land owners was done through personal visit to their homes. A pre-structured questionnaire was used for this survey. The main objective of this survey was to assess the socio-economic status of affected households, magnitude of land loss in each case and impact of land acquisition on each affected land owner. The number of households covered in this survey in each village is provided in Table 1.2

**Table 1.2**  
**Station wise and village-wise number of surveyed households**

Sr..No	Station	Village	No of HHs surveyed
1.	Dhuri	1.Dohla	13
		2.Harchandpur	13
2.	Handiaya	1. Handaya	6
		2. Khudi Kalan	6
3.	Tapa	1. Tapa	13
4.	Rampura Phul	1. Rampura Phul	0
		2. Gill Kalan	6
		3. Lehra Dhulkot	20
5.	Lehra Mohabat	1.Lehra Mohabat	8
6.	Bhucho	1. Lehra Khana	13
Total			98

Apart from affected households a survey of 55 shopkeepers from different railway stations was also conducted. The survey covered those shopkeepers who are located at the railway

platforms or near the railway stations. A separate pre-structured questionnaire was used for this survey.

- Information regarding the status of road and train connectivity, health facilities, educational facilities, anganwaris, drinking water, LPG, Toilet facility, streets, drains and markets etc in the surveyed villages was collected through FGDs.
- The collected primary data was coded and entered in MS Excel to create a data base for better understanding of the reality various tables.

## GEOGRAPHICAL PROFILE OF THE AREA

Geographical profile of the area includes natural as well as human aspects of the project area. It covers briefly (i) location of the project area, (ii) topography, (iii) climate, (iv) soils, (v) natural vegetation, (vi) land use & land cover, and (vii) demographic profile.

### 2.1 Location of the Project area

Doubling of Rajpura- Bathinda Rail line Project is located in the southern part of Punjab state which is often referred to as Malwa region. The project area is in a **linear form** with a very narrow width of about 24.5 meters and a length of about 173 Kms. It runs roughly in east-west direction. Rajpura is located on its eastern end and Bathinda on the western end. Even the land which has been notified for acquisition at six locations is in a narrow strip form, located mostly cases adjacent to the railway land along the rail tracks.

### 2.2 Topography

The rail track from Rajpura to Bathinda passes through an area which is almost flat and featureless. The monotony of flat surface is broken here and there by remnants of some old water channels, some local seasonal streams and isolated sand dunes here and there. The area is very gently sloping from north east to south west. The altitude of Rajpura station from the mean sea level (MSL) is 274 meters (899 feet) and of Bathinda station 207 meters (679 feet), a difference of only 67 meters or 220 feet, indicating a gradient of just about 0.04%.

### 2.3 Climate

The project is located in a climatic zone which is generally referred to as sub-tropical or Monsoon type. The area experiences extremes of temperatures. During May-June maximum day temperature often remains above 40°C which can cross 44°C on certain days, particularly towards its western part. The minimum night temperature during winter months (December – January) generally remains below 10°C and on certain days can fall below 4°C. Fog and frost are common feature of this area during winter. Like rest of north India, most of the rainfall in the project area is received during monsoon months, that is, June, July, August and September. Some rainfall is also received during winter months, especially from mid December to end of February due to Western Disturbances. The distribution of rainfall in Punjab is not uniform. It goes on decreasing as one moves from north east to south west. The average annual rainfall of

Rajpura, which is located at the eastern end of the project area is 787 mm, while that of Bathinda, at the western end, is only 421 mm.

## **2.4 Soils**

The entire project area has alluvial soils. However texture of the soil goes on changing from dominantly clayey soils in the eastern side to loamy in the middle section and sandy in the western part.

## **2.5 Vegetation**

Natural vegetation in Punjab can be seen in the hilly tracts along the border with Himachal in the north eastern part of the state. In the plains it is confined to a few pockets of forest lands, Kikar, Shisham, Dhak, Jand, Dek and thorny bushes are the common natural trees of this area. Most trees in the plains are planted. Poplar and Eucalyptus are the common agro forestry trees. Eucalyptus is also planted along roads, canals and on common lands. Pipal and Bohr are generally planted within settlements, temple compounds, cremation grounds, etc. Mango, Kinnow, Guava, Ber, Lemon and Jamun are the most common fruit trees planted by farmers in the area.

## **2.6 Land Use and Land Cover**

The rail line from Rajpura to Bathinda passes through a very fertile irrigated land which has a very high agricultural intensity. Rice, sugarcane, cotton and fodder crops are the main crops of Kharif season of the project area. Wheat is the crop of Rabi season. Green fodder, potato and seasonal vegetables and oil seeds are the other main crops of this area during winter/Rabi season. The land which is to be acquired at Dhuri, Handiaya, Tapa, Rampura Phul, Lehra Mohabat and Bhucho is also irrigated agricultural land where above mentioned crops are cultivated. While selecting land for creating separate facility for loading / unloading at above mentioned six stations, every effort has been made to avoid built up structures. Thus most of the notified land is either agricultural or uncultivable like road, paths, water bodies, etc. bearing some pockets of built up houses / shops etc.

## **2.7 Demographic Profile**

Demographic profile of the affected villages / towns is based on the census 2011 data. The main characteristics of the affected villages / towns are described below.

### **2.7.1 Size of the Population**

Table 2.1 shows the number of households and size of population of all the affected villages / towns along with male – female composition, density of population and average family size. In

rural areas rough estimates of population are generally made from the number of households. Table – 2.1 shows that the number of households in the affected villages and towns varies between minimum of 213 (Dohla) and maximum of 10,071 (Rampura Phul). In another two villages (Harchandpur and Lehra Khana) the number of households is less than 500. Three settlements (Khudi Kalan, Gill Kalan and Lehra Dhulkot have between 500 and 1000 households. The remaining three settlements, namely Lehra Mohabat, Handiaya and Tapa have 1949, 2702 and 4516 households respectively.

The Table 2.1 shows that Rampura Phul with a population of over 51 thousand is the largest town and Dohla (near Dhuri) with a population of a little over one thousand is the smallest village among the affected villages / towns. Four other villages, namely, Harchandpur, Gill Kalan, Lehra Dhulkot and Lehra Khana have population between 1-5 thousand. Khudi Kalan and Lehra Mohabat have population between 5-10 thousand. There is one (Handiaya) class IV town (Population 10,000-19999) and one (Tapa) class III town (population 20,000-49,999). Rampura Phul with a population of 51023 persons is a class II town ( 50,000 -99,999).

**Table 2.1**  
**Size of Population**

Station	Village/Town	Area In Sq. Km.	No. of HHs	Total population	Males	Females	Females as percent of Total Population	Density of Population per sq. km.	Average HH size
Dhuri	Dohla	2.80	213	1060	564	496	46.8	379	4.98
	Harchandpur	5.48	301	1560	848	712	45.6	285	5.18
Handiaya	Handiaya	3.00	2702	12507	6810	5697	45.6	4169	4.63
	Khudi Kalan	18.31	961	5142	2784	2358	45.9	281	5.35
Tapa	Tapa	10.75	4516	23248	12591	10657	45.8	2163	5.15
Rampura Phul	Rampura Phul	8.88	10071	51023	27213	23810	46.7	5746	5.07
	Gill Kalan	11.72	784	3880	2024	1856	47.8	331	4.95
	Lehra Dhulkot	7.28	538	2965	1546	1419	47.8	407	5.51
Lehra Mohabat	Lehra Mohabat	26.70	1949	9792	5212	4580	46.77	367	5.02
Bhucho	Lehra Khana	13.67	404	2103	1091	1012	48.10	154	5.21

**Source:** Census of India, 2011

### 2.7.2 Male – Female ratio

Table 2.1 also shows that the proportion of females in the total population in all the villages and town is less than males and varies between minimum of 45.6 percent (Harchandpur and Handiaya) and maximum of 48.1 percent (Lehra Khana).

### 2.7.3 Density of Population

Density of Population is an indicator of population pressure on the land resources. Table 2.1 shows that out of the 4 towns, 3 (Rampura Phul, Handiaya and Tapa) have a very high density of population, which is 5746 persons per sq.km in Rampura Phul, 4169 in Handiaya and 2163 in Tapa. The density of population in Lehra Mohabat and the six villages is comparatively low and varies between minimum of 154 (Lehra Khana) and maximum of 407 (Lehra Dhulkot).

### 2.7.4 Household Size

The average household size in the surveyed villages and towns is about 5 persons per family (see table 2.1). It indicates two things. First, the joint family system has almost vanished from the urban as well as rural areas of Punjab. Second, number of children in most families has declined very significantly.

### 2.7.5 Child Population (0-6 age groups)

Proportion of children (0-6 age group) in the total population indicates the stage of that area in the Demographic Transition Model. It is also very important for future planning, especially with regard to school education and health facilities. As per census 2011, proportion of children in the total population in India is 13.12 percent. In the surveyed villages and towns this ratio was higher than the national level only in one town, that is, Handiaya, where this ratio is 13.35 percent. In the remaining 9 villages / towns this ratio was less than 10 percent in two villages, between 10 and 11 percent in 5 villages / towns and between 11 and 13 percent in two towns. (See table 2.2)

**Table 2.2**  
**Child Population (0-6 age group Population)**

Station	Village / Town	Village / Town	0-6 age group Population		
			Total	Males	Females
Dhuri	Dohla	106	61	45	10.00
	Harchandpur	162	88	74	10.38
Handiaya	Handiaya	1670	906	764	13.35
	Khudi Kalan	502	292	210	9.76
Tapa	Tapa	2905	1613	1292	12.50
Rampura Phul	Rampura Phul	5654	3085	2569	11.08
	Gill Kalan	411	225	188	10.59
	Lehra Dhulkot	295	153	142	9.95
Lehra Mohabat	Lehra Mohabat	1011	546	465	10.32
Bhucho	Lehra Khana	229	122	107	10.89

**Source:** Census of India, 2011



### 2.7.6 Sex Ratio

Sex ratio is a ratio between males and females in a population and is generally expressed in terms of number of females per 1000 males. Under normal conditions the ratio between males and females in an area or in a group of people should be almost equal. However this balance can get disrupted due to number of factors, such as, male selective immigration or out migration; preference for male child and neglect of female child; higher mortality rate among females in the reproductive age group (15-50 years) due to lack of health facilities and malnutrition, particularly during pregnancy and child birth; infanticide; male selective deaths during wars; etc. Punjab has a sex ratio of only 895 females per 1000 males as compared to national average of 940. In the surveyed villages and towns this ratio is above the state average only in 3 villages. In rest of the settlements sex ratio of total population is less than the state average. The sex ratio in the surveyed villages and towns varies between minimum of 837 and maximum of 928. Like the total population sex ratio of SC population in these villages and towns is also very low. In fact in 5 of these settlements the sex size of SC population is even less than the total population. Sex ratio of child population (0-6 age group) is even more imbalanced and varies between minimum of 719 and maximum of 928. Out of 10 settlements child sex ratio is less than the sex ratio of total population in as many as 7 settlements (See Table 2.3).

**Table 2.3**  
**Sex Ratio**

Station	Village / Town	Number of females per 1000 males		
		Total Population	SC Population	0-6 age group Population
Dhuri	Dohla	879	855	738
	Harchandpur	840	806	841
Handiaya	Handiaya	837	885	843
	Khudi Kalan	847	878	719
Tapa	Tapa	846	856	801
Rampura Phul	Rampura Phul	875	903	833
	Gill Kalan	917	911	843
	Lehra Dhulkot	918	897	928
Lehra Mohabat	Lehra Mohabat	879	867	852
Bhucho	Lehra Khana	928	936	877

**Source:** Census of India, 2011

### 2.7.7 Scheduled Caste Population

Scheduled castes form 31.94 percent of the total population in Punjab which is highest in the country. In the study area their proportion in the total population is above the state average in

as many as 7 settlements out of 10. Out of the remaining 3, their proportion is almost equal (31.6%) to state average in 1 village and more than 25 percent in 1 village and 1 town. In village Lehra Dhulkot, SCs form nearly half (49.4%) of the total population. In village Harchandpur too their proportion is above 40 percent. Their proportion is between 35-40 percent in Handiaya, Lehra Mohabat and Gill Kalan, In Lehra Khana, Tapa and Khudi Kalan their proportion is between 30-35 percent. Out of the remaining 2 settlements their share in the total population in one (Rampura Phul) is 25.3 percent and in the other (Dohla) 26.6 percent (See Table 2.4)

**Table 2.4**  
**Scheduled Caste Population**

Station	Village / Town	Village / Town	SC Population		
			Total	Males	Females
Dhuri	Dohla	282	152	130	26.60
	Harchandpur	643	356	287	41.22
Handiaya	Handiaya	4887	2592	2295	39.07
	Khudi Kalan	1626	866	760	31.6
Tapa	Tapa	7486	4034	3452	32.20
Rampura Phul	Rampura Phul	12902	6779	6123	25.29
	Gill Kalan	1443	755	688	37.19
	Lehra Dhulkot	1466	773	693	49.44
Lehra Mohabat	Lehra Mohabat	3657	1959	1698	37.35
Bhucho	Lehra Khana	695	359	336	33.05

**Source:** Census of India, 2011

### 2.7.8 Literacy

As per population census, 2011, literacy rate of Punjab's population is 75.84 percent. While male literacy rate stands at 80.44 percent, female literacy rate is only 70.73 percent. It is very surprising that out of the 6 villages and 4 town in the study area, these percentages were only marginally higher than the state averages only in one town, that is Rampura Phul. In all other villages and towns these percentages are less than the state averages. The literacy rate of total population in these settlements is between 60-70%. Male literacy rate mostly between 70-75% and female literacy rate mostly between 50-65 % (See Table 2.5)

**Table – 2.5**  
**Literacy**

Station	Village / Town	Literacy rate		
		Total	Males	Females
Dhuri	Dohla	68.87	74.16	62.97
	Harchandpur	62.52	70.79	52.66
Handiaya	Handiaya	66.26	71.29	60.25
	Khudi Kalan	66.83	71.71	61.17
Tapa	Tapa	69.84	73.86	65.13
Rampra Phul	Rampura Phul	77.63	81.37	73.38
	Gill Kalan	61.49	66.85	55.70
	Lehra Dhulkot	66.37	71.93	60.30
Lehra Mohabat	Lehra Mohabat	69.84	75.65	63.26
Bhucho	Lehra Khana	64.57	71.21	57.46

**Source: Census of India, 2011**

### **2.7.9 Work Force**

There are vast variations in the percentage of workers in the total population. While village Harchandpur recorded 69.74 percent of its population as workers, this proportion is only 32.36 percent in village Khudi Kalan. This is even less than half of the percentage recorded in Harchandpur. The proportion of workers in the total population is also very high (53.11 %) in village Lehra Khana. It is high (40-50%) in Gill Kalan and Lehra Dhulkot. In the remaining settlements it is less than 40 percent. High percentage of workers is generally recorded by those villages / towns which have fairly high percentage of SC population or relatively high percentage of female workers or both. For example village Harchandpur where workers form nearly 70 % of the total population also has highest percentage (46.23%) of female workers. Most of these female workers are engaged in Household industry (See Table 2.6). In almost all villages most of the workers are engaged in agriculture, either as cultivators or as agricultural laborers. By contrast in towns most workers are engaged in non-farm activities.

**Table 2.6**  
**Workers**

Station	Village/Town	Workers as percent of total population	Female workers as percent of total workers	Male workers as percent of total workers	AS percent of main workers		
					Cultivators	Agricultural labourers	Household industry
Dhuri	Dohla	38.77	22.38	97.08	37.09	4.26	0.50
	Harchandpur	69.74	46.23	61.76	30.95	11.16	34.23
Handiaya	Handiaya	33.70	11.20	94.45	6.20	15.25	1.21
	Khudi kalan	32.36	8.23	91.11	46.44	14.51	1.06
Tapa	Tapa	36.43	16.42	93.54	6.31	10.11	1.77
Rampura Phul	Rampura Phul	33.26	12.81	90.49	6.45	4.60	3.12
	Gill Kalan	46.88	34.80	71.41	28.64	18.63	1.39
	Lehra Dhulkot	42.93	32.21	89.71	17.43	40.37	3.94
Lehra Mohabat	Lehra Mohabat	39.41	24.77	82.40	27.86	27.20	1.64
Bhucho	Lehra Khana	53.11	39.21	82.45	42.13	40.61	8.69

**Source:** Census of India, 2011

## **SOCIO-ECONOMIC STATUS OF THE AFFECTED HOUSEHOLDS / FAMILIES**

In this chapter effort has been made to map the socio-economic status of the affected households. The assessment of socio-economic status of the affected households is based entirely on the primary data which was collected through household survey by the CRRID team. It includes the following aspects of the affected population:

- Size of the affected population
- Family size
- Religious composition
- Social and caste composition
- Age structure
- Age pyramid
- Educational status
- Occupation of household members
- Size of land to be acquired
- Size of land holdings
- Animal wealth
- Milk production
- Status of family with regard to MGNREGA Card, Bank Account, membership of Self Help Group, etc.
- Facilities at home, especially with regard to
  - a) Electricity and toilet facility at home
  - b) Source of drinking water
  - c) Use of fuel for cooking
- Household assets
- Household income
- Debt status of family

### 3.1 Size of the sample

A total of 98 households were surveyed for this study. The village / town wise break up these households is provided in Table – 3.1. This table shows that the number of households surveyed varies from village to village. This variation is largely due to the fact that the number of affected households also varies from village to village. Moreover many affected land owners are not residing in the affected villages/towns or were not traceable. No. household was surveyed in Rampura Phul as no private land is being acquired in this town. Only government / MC land has been notified for acquisition TRANSFER TO Railways in the village. Since the number of surveyed households in some of the villages is too small, these have been clubbed together station-wise for Dhuri, Handiaya and Rampura Phul stations. For the remaining three stations, i.e., Tapa, Lehra Mohabat and Bhucho, no clubbing has been done as the notified land at these stations is located in a single village / town in each case (See Table 3.1)

**Table 3.1**  
**No. of Households surveyed in each village / town**

Station	Village / Town	No. of Surveyed HHs
Dhuri	Dohla	13
	Harchandpur	13
	Total	<b>26</b>
Handiaya	Handiaya	6
	Khudi Kalan	6
	Total	<b>12</b>
Tapa	Tapa	<b>13</b>
Rampura Phul	Rampura Phul	Nil
	Gill Kalan	6
	Lehra Dhulkot	20
	Total	<b>26</b>
Lehra Mohabat	Lehra Mohabat	<b>8</b>
Bhucho	Lehra Khana	<b>13</b>
<b>Total</b>		<b>98</b>

### 3.2 Size of the affected population

The total population of the surveyed households is 509 out of which 272 (53.4%) are males and 237 (46.6%) females. Table 3.2 shows that the population size varies from minimum of 45 persons (Lehra Mohabat) to maximum of 137 persons (Rampura Phul) between different stations. The size of the affected population was more than 100 in only one more station, i.e. Dhuri. At the remaining four stations the size of population of the surveyed households varies from minimum of 45 persons (Lehra Mohabat) to 74 persons (Handiaya).

**Table 3.2**  
**Size of the affected population**

	Male	Female	Total	Sex Ratio
Dhuri	74	55	129	743
Handiaya	41	33	74	805
Tapa	35	28	63	800
Rampura Phul	73	64	137	877
Lehra Mohabat	19	26	45	1368
Bhucho	30	31	61	1033
Total	272	237	509	871

### 3.3 Sex Ratio

The average sex ratio of the surveyed households is 871 females per 1000 males. It varies from minimum of 743 (Dhuri) to maximum of 1368 (Lehra Mohabat). Sex ratio is above 1000 in Bhucho also. In the remaining villages of three stations, this ratio is between 800-899 (See Table 3.2). However no generalization can be drawn from these values because the sample size in most cases is too small.

### 3.4 Size of Child Population (0-6 age group)

As mentioned in the previous chapter, size of child population in a village or a town is very significant for future planning, especially for providing Child Health and School Educational facilities. It also indicates the stage of an area in the Demographic Transition Model. In the survey households Child Population forms only about 5.9 percent of the total population which is even less than half of the national average (13.12%). This shows that birth rate in the area has declined to a very low level. Table 3.3 shows that the proportion varies from minimum of 1.64% (Bhucho) to maximum of 8.89% (Lehra Mohabat).

**Table 3.3**  
**Size of Child Population (0-6 age group)**

	Male	Female	Total	%age of Total Population
Dhuri	3	3	6	4.65
Handiaya	5	1	6	8.11
Tapa	2	2	4	6.35
Rampura Phul	3	6	9	6.57
Lehra Mohabat	0	4	4	8.89
Bhucho	0	1	1	1.64
Total	13	17	30	5.89

### 3.5 Household Size

Household size indicates the family type, that is, nuclear family or joint family. Table 3.4 shows that more than 64% of the families have upto 5 members. Infact most families (56.16%) have 3-5 members. The number of households having 6-7 members is also fairly large (19.39%). Surprisingly 16.33% of the surveyed families are having between 8 to 12 members. This shows that though most of the surveyed families are nuclear, yet the joint families system is still surviving in rural and semi-urban areas of Punjab, particularly among the farming families.

**Table 3.4**  
**Size of Households**

	Size of Households											Total
	1	2	3	4	5	6	7	8	9	10	12	
Dhuri	-	1	7	5	6	2	-	1	4	-	-	26
Handiaya	1	-	1	1	3	-	2	-	3	1	-	12
Tapa	-	1	4	2	2	1	1	-	2	-	-	13
Rampura Phul	-	1	2	5	7	7	2	-	2	-	-	26
Lehra Mohabat	-	1	2	-	2	1	-	-	1	-	1	8
Bhucho	1	-	2	5	1	1	2	-	1	-	-Z	13
<b>Total</b>	<b>2</b>	<b>4</b>	<b>18</b>	<b>18</b>	<b>21</b>	<b>12</b>	<b>7</b>	<b>1</b>	<b>13</b>	<b>1</b>	<b>1</b>	<b>98</b>

### 3.6 Religious Compositions

Out of 98 surveyed households, 95 (96.9%) profess Sikh faith. There are only 3 Hindu households in the sample, out of which 2 are from Handiaya and 1 from Tapa

### 3.7 Caste Composition and Economic Categories

Out of 98 surveyed households, 85 (86%) belong to General Castes, 4 (4.1%) to OBC and 9 (9.2%) to SCs. Out of the 9 SC households, 6 are from Lehra Mohabat and 3 from Rampura Phul. Similarly out of the 4 OBC households, 3 are from Rampura Phul and 1 from Handiaya. Surprisingly all the surveyed households, including SC households, belong to APL Category (See Table 3.5).



**Table 3.5**  
**Caste Composition and Economic Categories**

	General	OBC	SC	APL	Total
Dhuri	26	0	0	26	26
	100.0%	0.0%	0.0%	100.0%	100.0%
Handiaya	11	1	0	12	12
	91.7%	8.3%	0.0%	100.0%	100.0%
Tapa	13	0	0	13	13
	100.0%	0.0%	0.0%	100.0%	100.0%
Rampura Phul	20	3	3	26	26
	76.9%	11.5%	11.5%	100.0%	100.0%
Lehra Mohabat	2	0	6	8	8
	25.0%	0.0%	75.0%	100.0%	100.0%
Bhucho	13	0	0	13	13
	100.0%	0.0%	0.0%	100.0%	100.0%
Total	85	4	9	98	98
	86.7%	4.1%	9.2%	100.0%	100.0%

### 3.8 Age Structure

Understanding of the age structure of a population of an area is very essential for future planning. What proportions of the population are in pre-school age group (0-5 Years), school going age group (6-17 years), higher education age group (18-24years), working age group (25-59 years), and old persons (60 years and above) help in fixing priorities for health and educational facilities, child care facilities, old age homes, etc.

**Table 3.6**  
**Age Structure of Family Members**

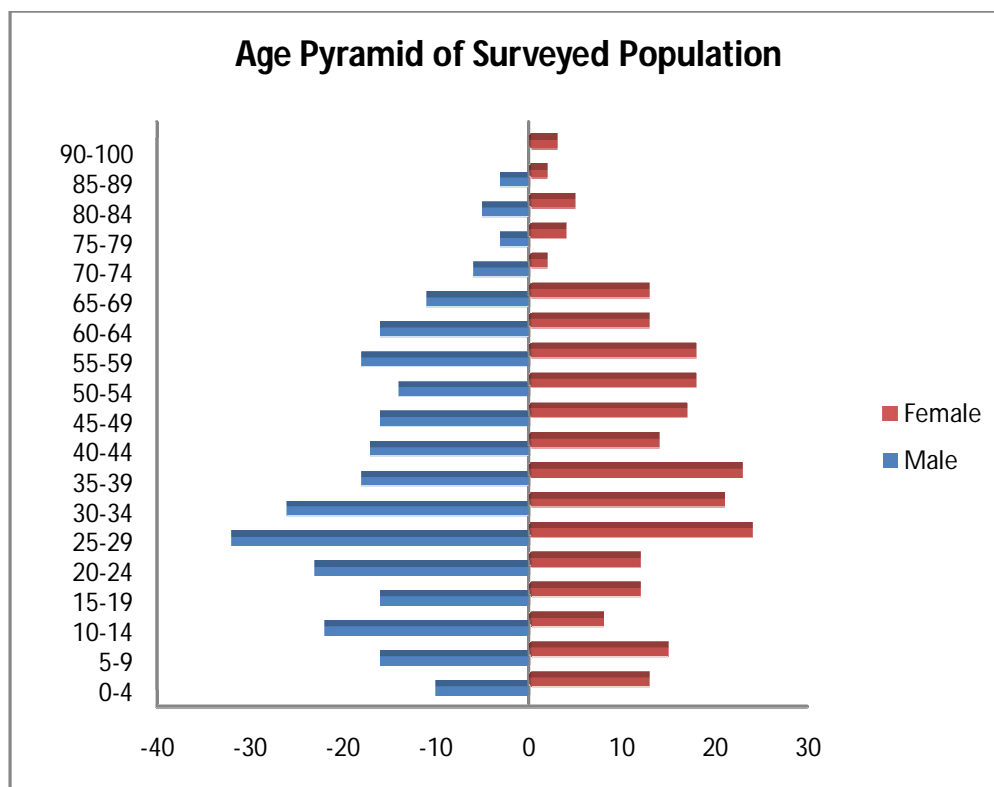
	Upto 5	6-17	18-24	25-34	35-49	50-59	60-74	75 and above	Total
Dhuri	6	20	10	19	36	15	17	6	129
	4.7%	15.5%	7.8%	14.7%	27.9%	11.6%	13.2%	4.7%	100.0%
Handiaya	6	12	3	15	15	8	9	6	74
	8.1%	16.2%	4.1%	20.3%	20.3%	10.8%	12.2%	8.1%	100.0%
Tapa	4	10	6	12	12	9	8	2	63
	6.3%	15.9%	9.5%	19.0%	19.0%	14.3%	12.7%	3.2%	100.0%
Rampura Phul	9	15	10	40	20	24	13	6	137
	6.6%	10.9%	7.3%	29.2%	14.6%	17.5%	9.5%	4.4%	100.0%
Lehra Mohabat	4	7	6	7	8	4	6	3	45
	8.9%	15.6%	13.3%	15.6%	17.8%	8.9%	13.3%	6.7%	100.0%
Bhucho	1	8	10	10	14	8	8	2	61
	1.6%	13.1%	16.4%	16.4%	23.0%	13.1%	13.1%	3.3%	100.0%
Total	30	72	45	103	105	68	61	25	509
	5.9%	14.1%	8.8%	20.2%	20.6%	13.4%	12.0%	4.9%	100.0%

Table 3.6 shows that about 54 % of the total surveyed population is in the age group of 25 to 59 years, which is the most productive age group. If the age group 18-24, which is also a working age group, then the percentage of working population will increase to 63 %. The percentage of children (0-17 year's age group) in the surveyed population is 20% and of old persons 60 years and above is 16.9 %.

The ratio between these three broad groups of population, that is, child population, working age group and old persons, is more or less similar at the village level too. Minor deviation from the general pattern in some cases is largely due to the small sample size.

### 3.9 Age Pyramid

Age Pyramid, also called as population pyramid, is a graphical illustration that shows the distribution of various age groups in a population, which forms the shape of a pyramid when the population is growing. The shape of the pyramid indicates the stage of that area in the Demographic Transition Model. The age pyramid of the surveyed population shows that the proportion of children in the total population is shrinking. The proportion in the age group 20-34 is increasing. The proportion of population in the age groups from 35 to 69 is also fairly large. It sharply declines after 69 years. The pyramid is widest in the 25-29 age groups. It starts shrinking gradually or remains stable till the age group of 50-54. It again widens slightly in the 55-59 age-group. After that it starts shrinking gradually. The pyramid also shows that there are few female above the age of 90. This shows that the area is passing through the 3<sup>rd</sup> stage of the Demographic Transition Model where the base of the pyramid is shrinking due to decline in birth rate and its middle portion is expanding. The population in the working age group is increasing and the dependent population in lower age group (0-14 years) is decreasing. Age expectancy is increasing. The size of population above the age of 70 however is still very small. So the problem of old population is not very serious as yet (see Figure 3.1)



### **3.10 Education Status of Surveyed Population**

Table 3.7 shows station-wise education status of the surveyed population. It shows that 27.5% of the total surveyed population is illiterate. The level of illiteracy among females is much higher than the males. Compared to about 21.7% males, 34.2% of females are illiterate. The table shows that out of the total surveyed population only 46.17% have received education upto Matric level or above. Here also, while more than half of the total males are educated upto matric or above level, this level in education is achieved only by about 41% of the females. The table further shows that a very small proportion of males and females have done graduation, post graduation or some technical degree. The overall pattern of education at the station level too is more or less similar. The minor deviations from the general pattern here and there are largely due to very small size of the sample. A comparative low level of illiteracy and higher percentage of those who have done Senior Secondary in Gill Kalan and Lehra Dhulkot (Rampura Phul Station) is largely due to the fact that these two settlements are located very close to Rampura Phul which is a class II town (Population between 50,00 and 99,999).

**Table 3.7**  
**Education Status of Surveyed Population**

	Illiterate			Under Matric			10/10+2			Graduate/postgraduate and technical			Total		
	M	F	total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Dhuri	17	20	37	26	17	43	24	13	37	7	5	12	74	55	129
	22.97	36.36	28.68	35.14	30.91	33.33	32.43	23.64	28.68	9.46	9.09	9.30	100.00	100.00	100.00
Handiaya	15	11	26	4	5	9	16	12	28	6	5	11	41	33	74
	36.59	33.33	35.13	9.76	15.15	12.16	39.02	36.36	37.84	14.63	15.15	14.86	100.00	100.00	100.00
Tapa	9	9	18	10	8	18	12	6	18	4	5	9	35	28	63
	25.71	32.14	28.57	28.57	28.57	28.57	34.29	21.43	28.57	11.43	17.86	14.28	100.00	100.00	100.00
Rampura Phul	7	17	24	21	20	41	35	21	56	10	6	16	73	64	137
	9.59	26.56	17.52	28.77	31.25	29.93	47.95	32.81	40.87	13.70	9.38	11.68	100.00	100.00	100.00
Lehra Mohabat	4	11	15	6	3	9	5	7	12	4	5	9	19	26	45
	21.05	42.31	33.33	31.58	11.54	20.00	26.32	26.92	26.67	21.05	19.23	20.0	100.00	100.00	100.00
Bhucho	7	13	20	8	6	14	12	8	20	3	4	7	30	31	61
	23.33	41.94	32.78	26.67	19.35	22.95	40.00	25.81	32.78	10.00	12.90	11.47	100.00	100.00	100.00
Total	59	81	140	75	59	134	104	67	171	34	30	64	272	237	509
	21.69	34.18	27.50	27.57	24.89	26.37	38.24	28.27	33.59	12.50	12.66	12.57	100.00	100.00	100.00

### 3.11 Main Occupation

Table 3.8 shows the main occupation of the surveyed population. The table shows that nearly two thirds of the females are engaged only in household work. It is however very encouraging that nearly one fifth of the females are going to school and colleges. Among the males 46.32 % are engaged in farming. Male students form 27.2% of the total males. About 14.3% of the males are retirees, non workers or seeking work. Only a little over 6% of the males are government or private employees. Only about 2.2% of the males are self employed or engaged in transport, storage etc.

**Table 3.8  
Main Occupation of the surveyed Population**

	Self Employed on the farm/ Cultivator		Self-employed in non-activities		Casual Labour		Govt. employee		Contractual/ Private employee		Household work/house wife		Transport, storage comm..		Children		Livestock/fishing/poultry/other		Students		Seeking work		Non-worker/ Retired		Total	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Dhuri	35	0	0	0	0	0	3	0	1	1	0	38	0	0	1	1	0	0	19	8	8	0	7	7	74	55
	47.30	0.00	0.00	0.00	0.00	0.00	4.05	0.00	1.35	1.82	0.00	69.09	0.00	0.00	1.35	1.82	0.00	0.00	25.68	14.55	10.81	0.00	9.46	12.73	100	100
Handiay a	14	0	1	0	1	0	1	0	0	0	0	20	3	0	1	0	0	0	10	8	4	0	6	5	41	33
	34.15	0.00	2.44	0.00	2.44	0.00	2.44	0.00	0.00	0.00	0.00	60.61	7.32	0.00	2.44	0.00	0.00	0.00	24.39	24.24	9.76	0.00	14.63	15.15	100	100
Tapa	21	0	0	0	0	0	0	0	1	0	0	19	1	0	0	0	0	0	8	6	0	0	4	3	35	28
	60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.86	0.00	0.00	67.86	2.86	0.00	0.00	0.00	0.00	0.00	22.86	21.43	0.00	0.00	11.43	10.71	100	100
Rampur a Phul	32	0	1	0	3	1	5	0	0	1	0	46	0	0	2	2	0	0	26	13	0	0	4	1	73	64
	43.84	0.00	1.37	0.00	4.11	1.56	6.85	0.00	0.00	1.56	0.00	71.88	0.00	0.00	2.74	3.13	0.00	0.00	35.62	20.31	0.00	0.00	5.48	1.56	100	100
Lehra Mohabat	4	0	0	0	2	0	2	0	3	0	0	13	0	0	0	1	0	1	4	5	1	0	3	6	19	26
	21.05	0.00	0.00	0.00	10.53	0.00	10.53	0.00	15.79	0.00	0.00	50.00	0.00	0.00	0.00	3.85	0.00	3.85	21.05	19.23	5.26	0.00	15.79	23.08	100	100
Bhucho	20	0	0	0	0	0	1	0	0	0	0	21	0	0	0	0	0	0	7	6	0	0	2	4	30	31
	66.67	0.00	0.00	0.00	0.00	0.00	3.33	0.00	0.00	0.00	0.00	67.74	0.00	0.00	0.00	0.00	0.00	0.00	23.33	19.35	0.00	0.00	6.67	12.90	100	100
Total	126	0	2	0	6	1	12	0	5	2	0	157	4	0	4	4	0	1	74	46	13	0	26	26	272	237
	46.32	0.00	0.74	0.00	2.21	0.42	4.41	0.00	1.84	0.84	0.00	66.24	1.47	0.00	1.47	1.69	0.00	0.42	27.21	19.41	4.78	0.00	9.56	10.97	100	100

### 3.12 Subsidiary Occupation

Table 3.9 shows that out of 509 persons covered in the survey, only 51 males and 5 females have subsidiary occupations. Out of 51 males, 39 males and all the 5 females have dairy as their subsidiary occupation. Farming as a subsidiary occupation has been reported only by about 15.7% of the males.

**Table 3.9**  
**Subsidiary Occupation of the surveyed Population**

	Self Employed on the farm/ Cultivator		Contractual/Other Private employee		Transport, storage communication		Livestock/fishing/poultry/ activities		Total	
	M	F	M	F	M	F	M	F	M	F
Dhuri	0	0	1	0	0	0	18	3	19	3
	0	0	5.26	0	0	0	94.74	100	100	100
Handiaya	1	0	0	0	1	0	4	2	6	2
	16.67	0	0	0	16.67	0	66.67	100	100	100
Tapa	0	0	1	0	1	0	6	0	8	0
	0	0	12.5	0	12.5	0	75	0	100	0
Rampura Phul	4	0	0	0	0	0	9	0	13	0
	30.77	0	0	0	0	0	69.23	0	100	0
Lehra Mohabat	3	0	0	0	0	0	0	0	3	0
	100	0	0	0	0	0	0	0	100	0
Bhucho	0	0	0	0	0	0	2	0	2	0
	0	0	0	0	0	0	100	0	100	0
Total	8	0	2	0	2	0	39	5	51	5
	15.69	0	3.92	0	3.92	0	76.47	100	100	100

### 3.13 MGNREGA Cards

Out of the 98 surveyed families only 5 families (2 each from Rampura Phul and Bhucho stations and 1 from Lehra Mohabat) have reported that they have MGNREGA Cards. The very few families having MGNREGA Card is largely due to the fact that most affected families are from land owning castes who may not be eligible for getting MGNREGA Cards. Moreover, most land owners may be unwilling to do manual work under MGNREGA.

### 3.14 Financial Inclusion

Table 3.10 shows that out of 98 surveyed households, only 6 households were such which are not having any bank account. By contrast in nearly 80 % of the household 2 or more family members were having bank accounts. About 10% of the households are having 5 or more bank accounts.

**Table 3.10**  
**Number of Family Members Having Bank Account**

	0	1	2	3	4	5	6	7	Total
Dhuri	3	3	6	8	6	0	0	0	26
	11.5%	11.5%	23.1%	30.8%	23.1%	0.0%	0.0%	0.0%	100.0%
Handiaya	0	2	0	3	2	4	0	1	12
	0.0%	16.7%	0.0%	25.0%	16.7%	33.3%	0.0%	8.3%	100.0%
Tapa	0	1	9	2	1	0	0	0	13
	0.0%	7.7%	69.2%	15.4%	7.7%	0.0%	0.0%	0.0%	100.0%
Rampura Phul	1	3	5	7	6	4	0	0	26
	3.8%	11.5%	19.2%	26.9%	23.1%	15.4%	0.0%	0.0%	100.0%
Lehra Mohabat	2	1	2	1	1	0	1	0	8
	25.0%	12.5%	25.0%	12.5%	12.5%	0.0%	12.5%	0.0%	100.0%
Bhucho	0	4	2	6	1	0	0	0	13
	0.0%	30.8%	15.4%	46.2%	7.7%	0.0%	0.0%	0.0%	100.0%
Total	6	14	24	27	17	8	1	1	98
	6.1%	14.3%	24.5%	27.6%	17.3%	8.2%	1.0%	1.0%	100.0%

### 3.15 Size of Land Notified for Acquisition

Table 3.11 shows that out of 98 surveyed households the size of land notified for acquisition in 18 (18.37%) cases is less than 1 Kanal. In 19 (19.39 %) other cases it is between 1-2.9 Kanals and in 29 (29.59%) cases it is between 3-4.9 Kanals. The highest numbers, 32 (32.65%) are recorded in 5 Kanals and above category. The table shows that there is a linear correlation between the size of the notified land and its frequency. However, at the station level there is no such correlation in the size of notified land and its frequency.

**Table 3.11**  
**Size of Notified land (in Kanals)**

Station	Less than One	1-2.9	3-4.9	5+	Total
Dhuri	0	9	10	7	26
	0.00	34.62	38.46	26.92	100.00
Handiaya	6	1	2	3	12
	50.00	8.33	16.67	25.00	100.00
Tapa	2	5	2	4	13
	15.38	38.46	15.38	30.77	100.00
Rampura Phul	9	4	2	11	26
	34.62	15.38	7.69	42.31	100.00
Lehra Mohabat	1	0	7	0	8
	12.50	0.00	87.50	0.00	100.00
Bhucho	0	0	6	7	13
	0.00	0.00	46.15	53.85	100.00
<b>Total</b>	18	19	629	32	98
	18.37	19.39	29.59	32.65	100.00

### 3.16 Land Holding Size of the Affected Farmers

Table 3.12 shows that out of 98 affected farmers 36 (36.73%) are marginal farmers (land holding upto 2.5 acres) and 20 (20.41%) small farmers (land holding between 2.5 to 5 acres). The number of farmers having land holding between 5 to 10 acres and more than 10 acres are 20 and 22 respectively. At the station level the highest frequency in Dhuri, Handiaya and Lehra Mohabat is in 0-2.5 acre size category. In case of Tapa, the highest frequency is in 2.5-5 acre category and in Bhucho it is in the 5-10 acre category. Only in case of Rampura Phul the highest frequency is in the more than 10 acre category.

**Table 3.12**  
**Land Holding Size of the affected farmers**

Station	Less than 2.5	2.5 to 5	5-10	10	Total
Dhuri	10	7	5	4	26
	38.46	26.92	19.23	15.38	100.00
Handiaya	7	2	2	1	12
	58.33	16.67	16.67	8.33	100.00
Tapa	3	4	3	3	13
	23.08	30.77	23.08	23.08	100.00
Rampura Phul	8	5	4	9	26
	30.77	19.23	15.38	34.62	100.00
Lehra Mohabat	6	0	0	2	8
	75.00	0.00	0.00	25.00	100.00
Bhucho	2	2	6	3	13
	15.38	15.38	46.15	23.08	100.00
<b>Total</b>	<b>36</b>	<b>20</b>	<b>20</b>	<b>22</b>	<b>98</b>
	36.73	20.41	20.41	22.45	100.00

### 3.17 Status of facilities at Home

#### a) Electricity and Toilet facility at Home

All surveyed households have electricity connections and toilet facilities at home. .

#### b) Source of Drinking Water

Table 3.13 shows that most households have either tube well or piped water supply or both as their source of drinking water. Only 5 households in Bhucho station (Lehra Khana village) use hand pump for drinking water. Majority of the households (57.1%) in the selected villages and towns use tube wells as their source of drinking water, while about one third of the total households have piped water supply system as their main source of drinking water. In Handiaya all the surveyed households use tube well water for drinking. Only 2 households each in Dhuri and Bhucho have access to piped water supply as well as to tube well water.



**Table 3.13**  
**Sources of Drinking Water**

Station	Piped Water and Tube well	Piped Water	Tube well	Hand Pump	Total
Dhuri	2	8	16	0	26
	7.7%	30.8%	61.5%	0.0%	100.0%
Handiaya	0	0	12	0	12
	0.0%	0.0%	100.0%	0.0%	100.0%
Tapa	0	9	4	0	13
	0.0%	69.2%	30.8%	0.0%	100.0%
Rampura Phul	0	11	15	0	26
	0.0%	42.3%	57.7%	0.0%	100.0%
Lehra Mohabat	0	3	5	0	8
	0.0%	37.5%	62.5%	0.0%	100.0%
Bhucho	2	2	4	5	13
	15.4%	15.4%	30.8%	38.5%	100.0%
<b>Total</b>	4	33	56	5	98
	4.1%	33.7%	57.1%	5.1%	100.0%

**c) Cooking fuel used in Kitchen**

Table 3.14 shows that more than 58% of the households use LPG in their kitchen along with other forms of cooking fuel. About 13% of the households are using biogas for cooking along with other forms of fuel. Wood and cow dung are the other most common forms of fuels which are used by about 56% of the households along with LPG or Biogas. There are only 4 households (3 in Bhucho and 1 in Lehra Mohabat) who use only wood and cow dung as kitchen fuel. No household is using Kerosene oil.

**Table 3.14**  
**Cooking Fuel used in Kitchen**

	1-5	1,2	1,2,5	1,2,5,6	1,2,6	1,4,5	1,5	2,5	5,6	5.	6.	Total
Dhuri	0	0	18	0	1	0	0	0	1	4	2	26
	0.0%	0.0%	69.2%	0.0%	3.8%	0.0%	0.0%	0.0%	3.8%	15.4%	7.7%	100.0%
Handiaya	0	0	4	1	0	0	0	0	2	5	0	12
	0.0%	0.0%	33.3%	8.3%	0.0%	0.0%	0.0%	0.0%	16.7%	41.7%	0.0%	100.0%
Tapa	0	0	10	0	1	0	0	0	0	2	0	13
	0.0%	0.0%	76.9%	0.0%	7.7%	0.0%	0.0%	0.0%	0.0%	15.4%	0.0%	100.0%
Rampura Phul	1	0	3	0	0	1	2	1	1	15	2	26
	3.8%	0.0%	11.5%	0.0%	0.0%	3.8%	7.7%	3.8%	3.8%	57.7%	7.7%	100.0%
Lehra Mohabat	0	1	4	0	0	0	0	1	0	2	0	8
	0.0%	12.5%	50.0%	0.0%	0.0%	0.0%	0.0%	12.5%	0.0%	25.0%	0.0%	100.0%
Bhucho	0	3	5	0	0	0	2	0	1	1	1	13
	0.0%	23.1%	38.5%	0.0%	0.0%	0.0%	15.4%	0.0%	7.7%	7.7%	7.7%	100.0%
<b>Total</b>	1	4	44	1	2	1	4	2	5	29	5	98
	1.0%	4.1%	44.9%	1.0%	2.0%	1.0%	4.1%	2.0%	5.1%	29.6%	5.1%	100.0%

**Note:** 1. Wood, 2. Cow dung, 3. Kerosene, 4. Coal, 5. LPG, 6. Bio-gas

## Animal Wealth

Dairy animals use to be indispensable part of rural economy. Every farming family use to have some dairy animals. But with the commercialization of farming, many farmers are no longer keeping dairy animals. However, keeping dairy animals for supplementing household income among small and marginal farmers is still surviving. Out of the 98 surveyed households, 76 (77.6%) are having one or more dairy animals. Buffalo and cow are the dairy animals of these households. In these 76 households there were 232 dairy animals at the time of survey, out of which 184 were buffaloes and 48 cows. Table 3.15 and 3.16 show that where as 71 households were having one or more buffalo, cow was present only in 32 houses. Table 3.15 also shows that most households were having one or two buffaloes. Similarly Table 3.17 also shows that out of 76 households which have dairy animals, about 15.5% have only one dairy animal. By contrast over 59% of the households are having 2 or 3 dairy animals. Keeping 2 or 3 dairy animals ensure regular supply of milk for home consumption as well as for sale throughout the year. Only about one fourth of the dairy farmers have more than 3 dairy animals. Only one farmer each have 8 and 9 milch animals.

**Table 3.15**  
**Number of Households having buffaloes**

S. No.	Stations	1	2	3	4	5	6	7	9	Total
1	Dhuri	5	6	6	1	2				20
2	Handiaya	3	3					1		7
3	Tapa	2	4		1	1		1	1	10
4	Rampura Phul	4	4	7	4		1			20
5	Lehra Mohabat	2	2							4
6	Bhucho	2	5	2		1				10
<b>Total Households</b>		<b>18</b>	<b>24</b>	<b>15</b>	<b>6</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>71</b>

**Table 3.16**  
**Number of Households having Cows**

Stations	Number of Cows				
	1	2	3	4	Total
Dhuri	4		1	1	6
Handiaya	4				4
Tapa	3	2			5
Rampura Phul	2	5			7
Lehra Mohabat	3	1	1		5
Bhucho	4	1			5
<b>Total</b>	<b>20</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>32</b>

**Table 3.17**  
**Number of Households having Dairy animals**

Stations	Number of animals									Total
	1	2	3	4	5	6	7	8	9	
Dhuri	5	4	7	1	2	2	-	-	-	21
Handiaya	2	4	1	-	-	-	1	-	-	8
Tapa	1	4		1	1		1	1	1	10
Rampura Phul	2	6	7	2	1	2	1	-	-	21
Lehra Mohabat	1	3	1	1	-	-	-	-	-	6
Bhucho	-	4	4	1	1	-	-	-	-	10
Total Households	11	25	20	6	5	4	3	1	1	76

### 3.19 Milk Production and Marketing

Out of the 98 surveyed households 75 (76.5%) were producing milk. The average dairy milk production of the households is around 923 litres per day, which comes to about 12.3 lts. per day per household. Table 3.18 shows that out of 75 milk producing households 22 (29.3%) produce upto 5 lts. of milk per day and 19 (25.3%) households between 5-10 lts. Another 18 (24.0%) households produce 10-15 lts of milk per day and 11 (14.7%) households 15-20 lts per day. Only 5 (6.7%) households produce more than 20 lts of milk per day. These 5 households produce 25, 30, 48, 52 and 80 lts of milk respectively per day. Infact these 5 households are contributing more than 25% of the total milk production. It looks a bit surprising that out of the 75 milk producing households only 36 (48.0%) households are selling milk. This shows that dairy farming is supplementing household income only in about one third of the surveyed households. This shows that the economic level of most of the surveyed households is fairly good. It also shows that self consumption of milk is quite high. Out of the total milk production, about 55 percent is consumed at home only. Only about 45 percent of the total produce is marketed. The average marketing quantity of the 36 households is about 11.5 lts. per day.

**Table 3.18**  
**Milk Production per Household (in liters) per day**

	2	3	4	5	6	7	8	9	10	12	13	14	15	16	17	18	20	25	30	48	52	80	Total
Dhuri		2	4	1	2		2		2	1	1		3	1			1			1			21
Handiaya		1		1	1				1				2	1			1						8
Tapa	1		2				2					1	1				1		1			1	10
Rampura Phul	1	1		2			1		4	4		1	1	1		2	1	1			1		21
Lehra Mohabat	1	1						1							1	1							5
Bhucho			3	1		1	1		1	2			1										10
Total	3	5	9	5	3	1	6	1	8	7	1	2	8	3	1	3	4	1	1	1	1	1	75

Table 3. 19 shows that out of the 36 households which are selling milk nearly half (17) of them are selling 1-5 lts., 10 (27.8%) households between 5-10 lts and

remaining 9 (25%) households, above 10 ltrs. per day. The minimum quantity sold per day is one litre and maximum quantity 65 litres. The five households which contribute over 25 % of the total milk production contribute more than 50 % of the total milk marketed per day.

**Table 3.19**  
**Milk sold per household per day (in liters)**

	1	2	4	5	7	8	10	12	14	23	35	42	44	65	Total
Dhuri		2		5		1	1	1	1				1		12
Handiaya			1				2	1							4
Tapa	1		1			1	1			1				1	6
Rampura Phul		1	3	1	1	1	1				1	1			10
Lehra Mohabat			1					1							2
Bhucho				1		1									2
Total	1	3	6	7	1	4	5	3	1	1	1	1	1	1	36

### Household Assets

Household assets with the family are a fairly reliable indicator of the socio-economic status of that family. During the household survey, the status of common household assets with the family was also mapped. Table 3.20 shows that TV was present in about 90% of the households, Refrigerator in about 97% of the households, ceiling fan in 99% of the households, Air Cooler in 84% of the households, AC in about 35% of the households, washing machine in about 67% of the households, two wheelers in about 89% of the households, four wheeler in over 46% of the households, tractor in about 56% of the households and computer/laptop in more than 21% of the households. This shows that most surveyed households have fairly good standard of living.

**Table 3.20**  
**Items owned by the Household**

	1. TV	2. Refrigerator	3. Two Wheeler	4. Four Wheeler	5. Tractor	6. Computer/ Laptop	7. Ceiling Fan	8. Air Cooler	9. Air Conditioner	10. Washing Machine	Total
Dhuri	20	26	25	11	12	5	26	22	7	14	26
	76.9%	100.0%	96.2%	44.0%	46.2%	19.2%	100.0%	84.6%	26.9%	53.8%	100.0%
Handiaya	11	12	10	9	7	3	12	10	6	11	12
	91.7%	100.0%	83.3%	75.0%	58.3%	25.0%	100.0%	83.3%	50.0%	91.7%	100.0%
Tapa	11	12	11	3	7	1	13	11	5	6	13
	84.6%	92.3%	84.6%	23.1%	53.8%	7.7%	100.0%	84.6%	38.5%	46.2%	100.0%
Rampura Phul	26	26	24	15	17	9	25	25	12	24	26
	100.0%	100.0%	92.3%	57.7%	65.4%	34.6%	96.2%	96.2%	46.2%	92.3%	100.0%
Lehra Mohabat	7	7	4	2	2	1	8	6	2	4	8
	87.5%	87.5%	50.0%	25.0%	25.0%	12.5%	100.0%	75.0%	25.0%	50.0%	100.0%
Bhucho	13	12	13	5	10	2	13	8	2	7	13
	100.0%	92.3%	100.0%	38.5%	76.9%	15.4%	100.0%	61.5%	15.4%	53.8%	100.0%
Total	88	95	87	45	55	21	97	82	34	66	98
	89.8%	96.9%	88.8%	46.4%	56.1%	21.4%	99.0%	83.7%	34.7%	67.3%	100.0%

### 3.21 Household Income

Table 3.21 shows that out of 98 households 27 (27.6%) are having average annual income more than Rs. 5 lakh. Out of these 27 households 4 have income above Rs. 10 lakh. Only 14 households have annual average income from all sources below Rs. 1 lakh, 21 households Rs. 1-2 lakh, another 21 households Rs. 2-3 lakh, 11 household Rs 3-4 lakh and 4 households Rs 4-5 lakh. This shows that out of 98 households 35 (35.7%) are having low income (below Rs. 2 lakh), 37 (37.7%) moderate income (Rs. 2-5 lakh), 23 (23.5%) fairly high (Rs 5-10 lakh) and 4 (4.1%) high income. However at the station level there are many variations in the distribution of households in different income groups. For example out of 13 households surveyed at Bhucho, 8 (61.5%) have income below Rs. 2 lakh. By contrast at Tapa, out of same number of surveyed households only 1 (7.7%) household has income below Rs. 2 lakh. Likewise no household in Tapa, Rampura Phul and Bhucho has income above Rs. 10 lakh.

**Table 3.21**  
**Annual Income of Households**

	<b>Upto 1 Lac</b>	<b>1-2</b>	<b>2-3 Lac</b>	<b>3-4 Lac</b>	<b>4-5 Lac</b>	<b>5-10 Lac</b>	<b>More than 10 Lac</b>	<b>Total</b>
Dhuri	5	3	7	3	1	5	2	26
	19.2%	11.5%	26.9%	11.5%	3.8%	19.2%	7.7%	100.0%
Handiaya	2	3	2	1	0	3	1	12
	16.7%	25.0%	16.7%	8.3%	0.0%	25.0%	8.3%	100.0%
Tapa	1	0	5	4	0	3	0	13
	7.7%	0.0%	38.5%	30.8%	0.0%	23.1%	0.0%	100.0%
Rampura Phul	3	7	4	2	2	8	0	26
	11.5%	26.9%	15.4%	7.7%	7.7%	30.8%	0.0%	100.0%
Lehra Mohabat	2	1	1	0	0	3	1	8
	25.0%	12.5%	12.5%	0.0%	0.0%	37.5%	12.5%	100.0%
Bhucho	1	7	2	1	1	1	0	13
	7.7%	53.8%	15.4%	7.7%	7.7%	7.7%	0.0%	100.0%
Total	14	21	21	11	4	23	4	98
	14.3%	21.4%	21.4%	11.2%	4.1%	23.5%	4.1%	100.0%

### 3.22 Sources of Income

Most households have more than one source of income. The most common sources of income are agriculture, milk selling, service / pension, business, house / shop rent, land lease, sale of animals, labour / MGNREGA, etc. Out 98 households 90 have income from agriculture and 34 from selling of milk. The number of households having income from sources other than agriculture, milk selling and service / pension is in single digit.

### 3.23 Debt Status of the Households

Although most surveyed households have reasonably good income, yet the incidence of debt among them is quite high. Out of the 98 surveyed household, 64 (65.3%) are under debt. Moreover the amount of debt in about 22% of the cases is above Rs. 10 lakh. In another 37.5% of the cases this debt amount is between Rs. 5-10 lakh. In nearly one third (31.25 %) of the cases the debt amount is between Rs 2-5 lakh. In the remaining 6 cases (9.4%) the debt amount is less than Rs. 2 lakh. The average loan amount per household (among the 64 households) is Rs. 7, 42,250. (See Table 3.22)

**Table 3.22**  
**Total Loan from All Sources (Frequency)**

Station	Upto 1 lac	1-2 lac	2-3 lac	3-4 lac	4-5 lac	5-10 lac	10+ lac	Total
Dhuri	2	1	2	6	0	8	3	22
Handiaya	0	0	0	1	0	3	2	6
Tapa	0	0	2	0	2	5	2	11
Rampura Phul	0	1	0	4	0	5	3	13
Lehra Mohabat	2	0	0	1	0	2	2	7
Bhucho	0	0	2	0	0	1	2	5
Total	4 (6.25)	2 (3.13)	6 (9.38)	12 (18.75)	2 (3.13)	24 (37.50)	14 (21.88)	64 (100.0)

### 3.24 Sources of Providing Loan

Nationalized Banks, Co-operative Banks and the Agri Co-operative Societies are the main institutional sources of providing loan. The most common source of providing non-institutional loan is the commission agent. The total outstanding loan amount of the surveyed households at the time of survey was Rs. 4,75,04,000, out of which Nationalized Banks contributed 57.7% Co-operative Banks 14.5%, Agri Co-operative Societies 6.7% and the remaining 21.1% by the commission agents. (See Table 3.23)

**Table 3.23**  
**Source of providing loan**

Station	Commission Agent	Agri Co-operative Society	Co-operative Bank	Nationalize Bank	Total
Amount	10022000	3177000	6900000	27405000	47504000
Percentage	21.10	6.69	14.53	57.69	100

### Conclusion

The above details lead to conclusion that the surveyed households have average family size of about 5 persons. All the households, including SC households, belong to APL economic category. The literacy rates of total population, male population and female population are less than the state averages for the corresponding categories. All household have power connection, and toilet facility. Except for 5

households which are using hand pump for drinking water; all other households have access to clean drinking water through water supply system or tube well or both. More than 58% of the households are using LPG for cooking. Infact about 52% of the households have access to LPG as well as Bio-gas. Most surveyed households have TV, Refrigerator, Washing Machine, Ceiling fan, Two Wheeler etc. Considerable number of households has even AC and Four Wheeler at home. This is largely due to the fact that more than one fourths of the surveyed households have average annual income above Rs. 5 lakh. The main source of income in most cases is agriculture. Some households have more than one source of income, like milk selling, service / pension, business, land lease, etc. No doubt many households have good income, but the magnitude of indebtedness is also very high. Nearly two thirds of the surveyed households are under debt and the amount of outstanding loan in about 60% of the cases is above Rs. 5 lakh. Infact in about 22% of the cases the outstanding loan amount is above Rs. 10 lakh. About 79% of the outstanding loan is institutional (Nationalized banks, Co-operative banks and Agricultural Co-operative societies) and about 21% non-institutional (Commission agent).

## STATUS OF INFRASTRUCTURAL FACILITIES

Effort has been made in this chapter to benchmark the status of infrastructural facilities in the settlements where land is being acquired for the said project. There are two main reasons for undertaking this exercise. First, to provide a base line for any post project social impact mitigation study and second to identify gap in the infrastructure, facilities and services for undertaking and social impact mitigation measures by the government or by any corporate under Corporate Social Responsibility (CSR). The key infrastructural facilities which have been evaluated in this chapter are:

1. Road and train connectivity
2. Drinking water facility
3. Toilet facility at home
4. LPG facility
5. Health facilities
6. Education facilities
7. Anganwadi centres
8. Streets and Drains
9. Market Centres

### 4.1 Road and Train Connectivity

Road and rail connectivity is one of the most important indicators of development of any area. The external; links of any settlement depend mainly on the road and rail links. The role played by the rural roads in the transformation of rural economy of Punjab is well known.

All the 9 settlements where survey of households was conducted have road connectivity. In fact many of these settlements are located on NH-7. The remaining are located on major roads or are linked with NH-7 (Patiala – Bathinda Highway) or other major roads through link roads. Handiaya, Tapa, Gill Kalan, Lehra Dhulkot and Lehra Mohabat are located on the NH-7. Dohla is located on Dhuri- Nabha road. Harchandpur is located at a distance of about 500 metres from this road on a link road. Village Khudi Kalan is linked with NH-7 as well as Barnala by-pass with good quality link roads. Its distance from NH-7 is about 1Km and from Barnala by-pass about 1.5 Km. Lehra Khana is located at a distance of about 2.5 Km from the NH-7 and has been provided a link road.

Unlike roads, accessibility to trains is measured from the railway station. Even if a village is located along the railway line, its accessibility is only from the nearest



railway station. The nearest railway station for Dohla and Harchandpur is Dhuri. Its distance from Dohla is about 2 Km and from Harchandpur is about 3 Km. Handiaya railway station is located near village settlement of Khudi Kalan. Its distance from Handiaya main settlement is about 1.5 Km. For Gill Kalan and Lehra Dhulkot the nearest railway station is Rampura Phul and its distance from both the villages is about 4 Kms. Tapa and Lehra Mohabat have railway station. Lehra Khana though is located along the rail track but it does not have a railway station. Railway stations at Bhucho Mandi and Lehra Mohabat are at a distance of about 4 -5 Kms.

#### **4.2 Drinking Water Facility**

All the surveyed villages / towns are covered by water supply system. In most villages 50% to 95% households are covered under water supply system. However in Gill Kalan only 5% of the households have been covered under piped water supply system. Drinking water needs of most of the households is met by tube wells. Hand pump is used in very few households.

#### **4.3 Toilet Facility at Home**

To check open defecation in the country, Central Government launched Swachh Bharat Abhiyan in 2014. Under this programme people, particularly in rural areas, are motivated to build toilet at home. Financial assistance is also provided to SC/ST households for this purpose. Field survey revealed that this facility at home is available in almost every household.

#### **4.4 LPG**

LPG is the most convenient and clean fuel for the kitchen. All the surveyed villages/ towns have this facility and most household in these villages/towns are using this facility. The survey of some households in these villages/towns revealed that out of 98 households 87 were having LPG in their kitchen. Out of the 11 households which were not having LPG, 7 were having Bio-gas in their kitchen.

#### **4.5 Health Facility**

Health Department of State Government provided basic health facilities to all residents through a network of sub-centres, PHCs, CHCs, etc. there were certain norms for the level of health facility to be provided in a settlement. Population size and distance are the two main factors for deciding the level of health facility to be provided in a settlement. Sometimes health facilities in certain situations are also provided through mobile vans. All the surveyed settlements in the project area, except village Dohla, have health facility. Tapa has a PHC while all other settlements have a Sub-Centre each. For higher level health facilities people generally go to nearby towns like Dhuri, Barnala, Rampura Phul and Bathinda.

#### **4.6 Educational facilities**

As per Right of Children to Free and Compulsory Education Act, 2009, every child in the age group of 6-14 years is to be provided compulsory free education upto elementary level at accessible distance. Punjab Government is providing Primary or Middle school in almost every / town. Sometimes even sub-settlements with a reasonable population are also provided Primary or Middle school. For example in Handiaya there is a small sub settlement near the railway station. This sub settlement too has been provided a Primary school. There is Senior Secondary School at Handiaya, Khudi Kalan, Tapa, Dhulkot and Lehra Mohabat. Gill Kalan has a High School and Lehra Khana a Middle School. Dohla and Harchandpur have primary schools. For college education and technical education students generally go to nearby towns like Dhuri, Sangrur, Barnala and Bathinda.

#### **4.7 Anganwadi Centres**

Anganwadi Centres provide integrated women and child development services. It also serves as Play School for pre-school going children in rural areas. Nutritious food is provided to the enrolled children to check the problem of malnutrition among them. Similarly pre-natal and post-natal services are provided to women at these centres. The numbers of Anganwadi centres are allocated as per the population size of the settlement. In the surveyed settlements the number of anganwadi centres varies from just 1 ( in Harchandpur) to 7 (in Tapa). Majority of the settlements have between 3 to 5 centres.

#### **4.8 Status of Streets and drains**

The condition of streets and drains has been rated as good by the residents of all the six village and three towns.

#### **4.9 Market Centres**

Accessibility to market centres is very important for the development of any area. All villages in the study area have surplus agricultural produce (mainly rice and wheat) and milk. Rice and Wheat has to be taken to the nearest grain procurement centres. Milk is generally taken either to milk collection centres of Verka or some other organisation or is taken to nearest urban centre for door to door marketing. For Dohla and Harchandpur, Dhuri is the nearest centre for selling agricultural produce and milk. Khudi Kalan has a grain market. For Handiaya grain market at Barnala is nearest centre. Tapa itself is a market centre. For Gill Kalan and Lehra Dhulkot, Rampura Phul is the nearest market centre. For Lehra Mohabat and Lehra Khana Bhucho is the nearest market centre. For purchase of agricultural inputs and other daily need good, people generally go to these very market centres.

## **Conclusion**

From the discussion above it can be said that all these settlements have fairly good level of infrastructural facilities. All the settlements have very good road and rail connectivity. All settlements have been provided clean drinking water through water supply system. The facility of toilet at home is available in every house in the settlement. With the exception of one village (Dohla), all settlements have Sub-Centre or higher level of health facility within the settlement. Similarly school educational facility too is available in every settlement. Infact out of 9 surveyed settlements 5 have educational facility upto Senior Secondary School level. One settlement has High School, one has Middle School and two have Primary Schools. Facility of Anganwadi is available in every settlement. Most households are using LPG or Bio-gas for cooking. All settlements are provided pucca streets and drains and these were found in fairly good condition in all the settlements.

## SOCIAL IMPACT ASSESSMENT

This chapter has been divided into two main parts. In the **First Part** effort has been made.

- To examine whether the proposed land acquisition serve the public purpose for which it is acquired.
- To estimate the number of affected families, magnitude of their land loss or loss of house, shop or other property.
- To estimate the number of families and shopkeepers likely to be displaced from their homes, lands, shops.
- To examine whether the extent of land proposed for acquisition is the bare minimum necessity for commissioning of the proposed project.
- To examine that the proposed site for creating separate facility of loading / unloading for goods trains at each station is the best choice than any other location.

In the **Second Part**, the social impact of doubling of rail line from Rajpura to Bathinda has been assessed on the affected land owners, other residents of the affected villages, vendors at the railway platforms and shopkeepers in the vicinity of railway stations. The social impact assessment has been made at three different stages of the project, that is

- At the land acquisition stage of the project.
- During the construction stage of the project.
- During operational stage of the project after its completion.

### Part-I

#### 5.1 Does land acquisition serve the public purpose?

The main purpose of land acquisition at six stations, namely, Dhuri, Handiaya, Tapa, Rampura Phul, Lehra Mohabat and Bhucho is to reduce congestion at these stations due to goods trains. The six selected stations are important food-grain loading points. At present the food grain loading platforms are located at the existing stations and for loading food grains, goods train remain in stationary position at the station for a number of days. Thus one track remain blocked for a number of days. As a result mobility of passenger trains is hindered on this route. As per the new plan the loading/unloading facility is now being created at new locations, away from the existing stations. Loading/unloading activity of the new locations will not hamper mobility of the passenger trains. Thus land acquisition will very much serve the public purpose.

## **5.2 Number of affected families and magnitude of their land loss**

As per the land acquisition notifications for this project, a total of approx 42.775 acres or 17.31 hectares of land is being acquired. This land is located at 6 different locations. The size of notified land at different stations ranges from minimum of approx 3.3875 acres at Lehra Mohabat to maximum of approx 8.9250 acres at Lehra Khana.

Because of multiple share holders in most Khasra numbers and repetition of name of many affected farmers in more than one Khasra numbers, it was not possible to assess the exact number of affected land owners. The CRRID team tried to assess the number of affected landowners through discussion with the identified affected farmers.

As per CRRID team estimates the total number of affected households may be between 120-150. In Gill Kalan and Lehra Mohabat, where the number of affected farmers is very small, CRRID team was able to identify all the affected farmers. For many other settlements CRRID team was able to identify and interview around 80% of the affected households. However CRRID team could identify only about half of the total affected farmers at Tapa.

The size of acquired land per household varied from less than one Kanal to over 5 Kanals. Table 5.1 shows that in over 18% of the cases the size of notified land is less than 1 Kanal. In about same percentage (19.4%) of cases the size of notified land is between 1 and 2.9 Kanals. In about 30 % of the cases this size is between 3 and 4.9 Kanals. The remaining about 32.7% of cases the size of notified land is over 5 Kanals.

## **5.3 Nature of notified land**

Land notified for the acquisition at Rampura Phul is Government / MC land while at other locations it is mostly private land. Most of the private land is irrigated land (chahi) used for cultivation of mainly wheat, rice, cotton and sugarcane. Some uncultivable land in the form of water courses, roads etc is also notified at some places.

## **5.4 Persons likely to be displaced from their shops and homes**

While selecting site for creating loading / unloading facility for the goods trains, railway authorities have taken every care that no person is uprooted from his home or shop. However at Lehra Mohabat 4 households, who have built their houses on the Panchayat land allotted to them for construction of houses long time back by the then village Panchayat, have to be uprooted.

### **5.5 Is the land proposed for acquisition is the bare minimum necessity for commissioning of the project?**

The land notified for acquisition at six sites is in a narrow strip form, parallel to the rail line and in most cases adjacent to railway land. The perusal of the drawings of these sites, prepared by the Northern Railway for developing platforms and other facilities at these sites, show that only that much land is earmarked for acquisition which is absolutely necessary. No extra land has been demarcated for acquisition at any of these sites.

### **5.6 Is the proposed site for creating separate facility of loading / unloading for goods trains at each station is the best choice than any other location?**

The project implementing authority has selected these sites after considering all other options available to them in each case. These six stations were selected for creating this facility because these are very important food grain loading points. While selecting site at each station, number of factors were taken into account, like distance from the railway station, road accessibility, free from built up structures, etc. The proposed sites are at a reasonable distance from the existing facility (mostly within 2 Km). All these sites have road connectivity and are free from built up structures. At certain locations appropriate adjustments were made in the ground plan to avoid certain built up structures.

## **Part – II**

### **Social Impact Assessment of the project at different stages**

The doubling of rail line from Rajpura to Bathinda project has three stages, that is:

- Land acquisition stage.
- Doubling of rail line and construction stage of facilities for goods trains at the six selected sites.
- Project operation stage after the completion of the project.

The social impact of the rail project at the above mentioned stages have been assessed on various categories of stakeholders such as land losers, daily wagers, skilled and semi-skilled workers, tractor- trolley owners, transporters, other residents of the affected villages, vendors on railway platforms, shopkeepers in the vicinity of the railway stations, students and other train users.

### **5.7 Social impact of the project at land acquisition stage**

This is the most difficult stage of any project and in many projects main cause of delay in the completion of the project. As per the Land Acquisition Act, 2013, taking

consent of 70 % of the land holders in case of public interest projects and 80 % of the land holders in case of private projects is a must for land acquisition. Till the time of field survey (September – October, 2019) no such exercise had been done in any village. Notifications for land acquisition though has been issued and published in news papers. Yet meetings between affected farmers and government officials are yet to be organised. Moreover, land acquisition rates are not yet decided. Discussions with the affected farmers reveal that they will be too happy to part with their lands if they get good rate. In fact many land owners are expecting about four times the prevailing marketing rate of land. This expectation of very high rate of compensation has created a new problem for those who have their land in the name of more than one person (Mushtarka Khata) in the revenue records.

In the rural areas the ancestral property is divided among the share holders through mutual consent. Generally each shareholder gets his share in a single parcel. For all practical purposes this division of land among the shareholders is final. However, the division of land among the share holders is not conveyed to the Revenue Department. Thus in the records of the Revenue Department the entire property remains as Mushtark Khata (joint ownership). Now, when such land will be acquired, it will go from the share of one person but the compensation amount will go to all the shareholders as per revenue records. This will lead to a lot of bad blood and sometimes even to litigation among the shareholders, who are generally real brothers or first cousins. During FGDs with the affected landowners, this matter was raised by many participants of FGDs and they want resolution of this issue before the land acquisition. When this matter was brought to the notice of the SDM Barnala, who is the Nodal Officer for this project, he clarified that since it is a judicial matter, he cannot take any decision on the matter on his own. Some farmers also suggested that the entire compensation amount should go to the person who has that land in his possession. However government cannot take any arbitrary decision on the matter. The above mentioned problem has emerged from the fact that every farmer believes that government is going to pay them a very high rate of compensation, though there is no basis for that. The CRRID team tried to know the reasons behind their expectations of high rate of compensation. During FGD with the affected farmers at Harchandpur, it was brought to the notice of the CRRID team that sometime back some land in the nearby village was acquired for a road project and farmers got very high rate of compensation for their lands. If the compensation amount for land acquisition is fixed below the expected rate it will disappoint the affected land owners who may refuse to part with their lands.

To speed up the land acquisition process so that project is not delayed, it is recommended that the compensation rate for land acquisition for each village /

town must be decided at the earliest and these rates must be conveyed to the farmers.

Many farmers also do not know how much land they are going to lose. This information is very essential. It will help each farmer to work out how much compensation he is going to receive for his notified land. This will also help him to plan how to utilise the compensation amount. Thus the concerned village Patwaris may be instructed that they should tell the affected farmers how much land each farmer is going to lose.

Land acquisition by the government for any project always pinches the farmers, particularly those who have small land holdings. Apart from permanent loss of income from that piece of land, the emotional attachment with land, especially if it is an ancestral land is very difficult to overcome and is painful. However adequate compensation for that land can reduce the pain of the landowner to a great extent. Conversation with farmers revealed that most of them plan to invest the compensation amount on the purchase of land. However each land owner has his own priorities. Many farmers plan to use this amount for multiple purposes like, education of children, marriage of children, construction or renovation of house, purchase of truck to start transport business, repayment of loan, setting up some petty business, etc.

It may be mentioned here that at the land acquisition stage, except for farmers no other stakeholder is impacted.

### **5.8 Social impact of the Project during doubling of the rail track and construction of loading / unloading facility for goods trains at new locations**

As mentioned in Chapter- 1, this project has two components. One is laying of a second track between Rajpura and Bathinda to enhance the capacity of this route and second is to create loading / unloading facility for goods trains at new locations away from the existing railway stations. The work for laying the second track is already under progress. The land which has been notified for acquisition is meant for creating loading / unloading facility for the goods trains. Construction activity at these locations will start after the acquisition of the land.

The construction activity will require skilled, semi-skilled and unskilled workers. Thus many local workers, especially unskilled, can expect to get work for many days or many months in the project.

Material needed for laying the tracks and for other construction activity, such as, earth, broken stones, sleepers, rails, bricks, sand, cement etc. have to be brought from outside the area. Thus those persons who are into transport business and



farmers who have tractor-trolley can expect to get work in the transportation of construction material.

Most contractors bring their own labour to the construction site from outside the area. In this project too some labour will come from outside the area. It will stay at the construction sites for fairly long period. This labour will require daily need goods, accommodation, food, health and many other kind of services. Thus a major portion of their earnings will be spent on these goods and facilities in the local area. These workers therefore will add to the income of local shopkeepers and service providers.

Movements of heavy vehicles loaded with construction material are likely to add to the wear and tear of the metalled and non-metalled roads. So the local road users will have to face many problems till the construction work is in progress. Similarly transportation of loose earth and sand in open trucks will add to the air pollution. Loading / unloading of construction material and movement of cranes, JBC machines and other machinery will create noise pollution near the construction sites. These are some of the problems which the local population have to face during the construction stage.

## **5.9 Social impact of the project at the operation stage**

Northern Railway, regular and occasional train users, land owners near the sites where land is being acquired, vendors at the railway platforms, shopkeepers near the railway stations and army cantonments are the main stakeholders of this project at the operation stage of this project. In addition to the life of the above mentioned stakeholders, this project is also going to impact the entire region along the rail route between Rajpura and Bathinda.

### **5.9.1 Impact on the Northern Railway**

As per the DPR, the project is likely to be completed in the year 2022. Doubling of the rail track will not only reduce the travel time of all trains between Rajpura and Bathinda, but also enhance the capacity of this route many fold. The greatest beneficiary of this project will be the Northern Railway itself. Reduction in travel time will attract more people to choose train rather than bus to travel between Bathinda and Rajpura and beyond these places. Due to enhanced capacity of the route, Northern Railway can plan to introduce more passenger and goods trains through this route. Creating of loading / unloading facility for goods trains at separate location will not only make loading of food grains far more convenient but will also free the main tracks for the movement of passenger trains. All these will add to the revenue of Northern Railway besides development of subject project.

### **5.9.2 Impact on the regular and occasional train users**

Many persons, including students, use train regularly for travelling from one station to another either for work or for studies. Others use trains to travel only occasionally. After doubling of the rail track all trains will take much less time for covering the distance between Rajpura and Bathinda. Thus regular and occasional users of trains between Rajpura and Bathinda will save a lot of time.

### **5.9.3 Impact on the vendors at the railway platforms**

Effort was made to assess the impact of this project on the vendors at the railway platforms. For that 12 vendors on the platforms of Dhuri railway station were interviewed. These vendors were selling tea, cold drinks, water bottles, biscuits and other packed snacks, or other eatables like pakoras, chole bhature, paranthas, etc. All vendors reported that their business will increase after the completion of the project. While two thirds of them believe that their business will increase very significantly, the remaining one third believes that their business will increase only marginally.

### **5.9.4 Impact on the shopkeepers near the railway stations**

Effort was also made to assess the impact of this project on the shopkeepers near the railway stations. For that, 10 shopkeepers each at Handiaya, Tapa and Bhucho Mandi, 7 at Lehra Mohabat and 6 at Rampura Phul were interviewed using pre-structured questionnaire. These shops included some tea shops, Pakora sellers, cold drinks sellers, Karyana shops, fruit and vegetable sellers, medical store, electrical goods shop, etc. Only those shopkeepers who are selling fruit or other eatables reported that their business will increase marginally, others reported no-change in their business.

### **5.9.5 Impact on land prices**

The sites which have been selected for creation of loading / unloading goods for the goods train are likely to emerge as important centres of economic activity. Transport companies will like to open their offices near these locations. Transport vehicle will need parking spaces, petrol / diesel pumps, repair shops, shops dealing in auto spare parts, tyres, etc. Workers engaged in loading / unloading activity, drivers and helpers, etc will attract tea shops, dhabas, sellers of other eatables, liquor shops. Infact small townships will emerge near these sites. Thus land prices near these facilities will increase very sharply.

### **5.9.6 Impact on the Army Cantonments**

The army cantonments at Patiala and Bathinda too are going to be big beneficiaries of this project. Doubling of rail track will facilitate quick movement of men, materials and equipments.

### **5.9.7 Impact on the region along the rail route between Rajpura and Bathinda**

Role of railways in the socio-economic development of an area needs no emphasis. Doubling of rail route between Rajpura and Bathinda is going to improve the connectivity of this region of Punjab with national capital and further to port cities of Bombay, Calcutta, and Chennai etc. in a big way. This is going to give a big boost to the economy of this region. The small industrial centres along this route like Dhuri, Handiaya, Tapa, Rampura Phul, etc. are going to benefit a lot from this project. Even the location where facility for goods trains is being planned can emerge as new industrial centres. Industries Department of State Government should plan industrial estates near these locations. The creation of loading of food grains facility at new location will speed up movement of surplus food grains from this region to other parts of the country. Travelling through this route to Amritsar, Pathankot, Ambala, Delhi, Chandigarh and many other places will become less time consuming. Thus this project is going to transform the economy of this region in a very significant manner. However, some people have to face certain inconveniences too here and there. After the completion of the project. Northern Railway will certainly introduce more passenger and goods trains through this route. Thus manned crossings will remain closed more frequently and may be for longer periods. However this inconvenience will be a very small price for the benefits which are going to accrue to the region.

### **Conclusion**

The following conclusions can be drawn from the discussion above:

- This project has been proposed in the larger public interest.
- The land notified for acquisition is bare minimum necessity for the commissioning of the proposed project and the choice of sites to construct loading / unloading facility for goods trains is the best then any other location.
- The total land which is to be acquired is only Approx 42.775 acres or Approx 17.31 hectares which is located in 201 Khasra numbers.
- There are many shareholders in many Khasra numbers and similarly many persons have share in multiple Khasra numbers. Thus it is very difficult to assess the exact number of affected households.

- The land acquisition rates have not been announced by the Punjab government so far. Expectations of the farmers are very high.
- The reaction of the farmers to the land acquisition rates will be known only after these rates are announced by the Punjab government.
- The project will provide work and business opportunities to the local population. Even the vendors on the railway platforms expect boost in their business.
- Except for 4 households at Lehra Mohabat, no one at any other location is going to be uprooted due to land acquisition for this project.
- The entire region along the railway route (Rajpura to Bathinda) is like to experience socio-economic transformation after the completion of this project.

## FINDINGS AND SUGGESTIONS

### Main Findings

- Rajpura- Bathinda rail line is a very important rail route of Southern Punjab. Many important towns of Malwa regions like Patiala, Nabha, Dhuri, Barnala, Rampura Phul and Bathinda falls on this route. The route also serves two important military cantonments at Patiala and Bathinda. Many important trains from town of Rajasthan, like Sri Ganaganagar, Bikaner, Barmer, etc to towns of Utrakhand like Haridwar, Rishikesh, etc. pass through this route.
- Being a single line track the capacity of this route has reached the saturation point.
- To enhance the capacity of this route Northern Railway has planned to double this track. The total length of this route from Rajpura to Bathinda is about 173 Kms.
- Apart from doubling the track, this project has another component, that is creation of enhanced loading and unloading facility for goods trains at 6 new locations away from the railway stations.
- Land is being acquired only for creation of above mentioned facility near Dhuri, Handiaya, Tapa, Rampura Phul, Lehra Mohabat and Bhucho stations. The total area of the land to be acquired is only Approx 42.775 acres or Approx 17.31 hectares and it is located in 6 villages and 4 towns.
- Most of the private land notified for acquisition is Chahi (Irrigated by tubewells) or Nehri (irrigated by canals).
- At present there is no opposition to land acquisition as the land owners believe that they are going to receive very high rate of compensation for their land as compare to the prevailing market rates.
- During its construction stage the project will provide employment opportunities to unskilled, semi-skilled and skilled labourers. It will also provide business opportunities to persons in transport business as well as to farmers who have tractor- trolley with them.
- After the completion of the project travel time between Rajpura and Bathinda will be reduced very significantly. This will benefit all the train users.
- The six locations where loading / unloading of goods facility for goods trains is being planned are likely to emerge as important centres of economic activity.
- The project after its completion is likely to trigger the process of socio-economic development in the region along the rail route.

## **Suggestions**

- The issue of joint ownership of notified land may be resolved, wherever possible, amicably before the land acquisition.
- Compensation rates for land acquisition may be announced at the earliest.
- Demands made by people of certain villages to provide passage to their lands or manned or unmanned level crossing at certain locations are considered sympathetically.
- Gaps in infrastructure services in affected villages / towns are filled by the Northern Railway out of its CSR fund.
- Department of Industries, Punjab Government should explore the possibility of setting up Industrial Estates near the six locations where the land is being acquired.