District Human Development Report

SANGRUR

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Authors

Abbreviations

A.D.	-	Anno Domini
ADC	-	Additional Deputy Commissioner
AIDS	-	Acquired Immune Deficiency Syndrome
APL	-	Above Poverty Line
BCG	-	Bacillus Chalmette Guerin
BPL	-	Below Poverty Line
CC	-	Contra Capture
CD	-	Community development
CHC	-	Community Health Centre
CMO	-	Chief Medical Officer
DPT	-	Dioheria Polio Tetanus
GDP	-	Gross Domestic Product
HDI	-	Human Development Index
HMIS	-	Health Management Information System
IDSP	-	Integrated Disease Surveillance Programme
IPD	-	Indoor Patients
IUP	-	Intra Uterus Devise
MPHC	-	Mini Primary Health Centre
MSLS	-	Measles
NGO	-	Non-Governmental Organizations
NLEP	-	National Leprosy Eradication Programme
NRHM	-	National Rural Health Mission
OP	-	Oral Pil
OPD	-	Outdoor Patients
OPV	-	Oral Polio Vaccine
ORT	-	Oral Re-hydration Therapy
PHC	-	Primary Health Centre
RNTCP	-	Revised National Tuberculosis Programme
SHC	-	Sub-health Centre
TB	-	Tuberculosis
TT Dose	-	Tetanus
UNDP	-	United Nations Development Programme
UNO	-	United Nations Organization
WHO	-	World Health Organization

Chapter-I
Introduction

Human development is about the people, about expanding their choices to live a full creative life with freedom and dignity. Fundamental to expanding human choices is building human capabilities: the range of that people can do. The most basic capabilities for human development are: having a long and healthy life, being educated, having a decent standard of living and enjoying political and civil freedoms to participate in the life of one's community.

Rationale

The 73rd and 74th Constitutional Amendment mandates the decentralization in development planning process involving people's representatives from Panchayati Raj Institutions (PRIs) and urban local bodies. Preparation of District Human Development Reports (DHDR) will help in preparing district plans with human development as the prime focus.

In fact, income measure ignores people and their needs, their aspirations and their capabilities. There should be no bias or discrimination based on class, gender, race, nationality, religion, community and generation. The concept of measuring development through human development addresses to all these issues.

To widen the choices not only between varieties of consumer goods but also between what people do and what capabilities they have. This includes capability to lead a long and healthy life and capability to be knowledgeable. Capability to have access to resources is needed for decent living. There are many more things needed by human beings that include political, social and cultural freedom, a sense of community, and opportunity for living a creative and productive life, safety, respect and human rights.

Human development is much more than just their capabilities. It is also process of pursuing them in a way that is equitable, participating, productive and sustainable. Choices and needs change over time but choices have to be combined with limits imposed on such rights with duties, options with bonds, development which is sustainable in terms of environment constraints of water, land, clean air etc.

Objective

The broad objective of DHDR is to make an in-depth study and analysis of quality of life of people as well as identify areas which need intervention for enhancing capabilities and address effectively to the grey areas. The prime focus is on the efficiency of delivery systems and financial allocations. In this context, the objective of the report is to: (a) analyze the existing system; (b) identify the obstacles and bottlenecks therein; and (c) propose the strategy as a way out to improve the system.

Essential Elements

A DHDR does not attempt to replace the existing district level planning, research or statistical documents; rather it has to be built on these. Its distinctive feature is its process of preparation, the contents and its dissemination. Following are the three elements of DHDR: (a) process; (b) contents; and (c) dissemination. *Process wise,* the DHDR is prepared in a participatory manner and involves the Panchayat, district administration, NGOs, academia, media and civil society members. Since it is cross sectional in nature, the involvement of line departments is essential. Logically the DHDR exercise begins by bringing together all the stakeholders and having brainstorming sessions to jot down the roadmap for preparation of the report. Once the analysis is done, the findings are discussed among the stakeholders. Once the DHDR is finalized, it is be released and widely disseminated by the sponsoring department. *Contents-wise* the DHDR analyzes the standard of living with regard to health, education,

livelihood, environment and gender issues. For each of the sectors the report elaborates on the following: (a) analysis of the status; (b) preparing a blue print for the future; and (c) strategizing. *Dissemination* part is generally handled by the funding agency for this project.

DHDR Report Process

The DHDR has been prepared in a participatory manner and it involved all the stakeholders: the district administration, NGOs, academia, and civil society members. In the opening meeting with district administration, the objectives, content and process of preparation of DHDR report was finalized. For this purpose ADC Sangrur had been appointed as a nodal officer to coordinate the efforts of research team and district administration. From time to time various rounds of meetings were held with departmental heads and staff. Circulating the specifically designed table-forms, data had been collected in the required format. The data was validated and verified with other sources. After the analysis being done, the findings were discussed with the stakeholders. Rough draft of the report had been submitted to the sponsoring department for feedback from the stakeholders and human development expert agencies. On getting the feedback, the final version of the DHDR Sangrur has been prepared. The broad structure of the District Human Development Report of Sangrur is as follows:

(a) Regional and Institutional Profile of the District
(b) Education
(c) Healthcare
(d) Standard of Living/Economic Livelihood Patterns
(e) Human Vulnerability
(f) The Way Ahead

After preparation the dissemination part of the report has to be done by the sponsoring agency, the Govt. of Punjab.

District Profile

The district Sangrur has been reorganized by making a new district Barnala out of it in the year 2006. From Administrative point of view, district Sangrur is divided into six tehsils**:** Sangrur; Sunam; Dhuri; Malerkotla; Lehra and Moonak. These tehsils have been further divided into nine blocks as: Sangrur; Bhawanigarh; Malerkotla-I; Malerkotla-II; Dhuri; Sherpur; Sunam; Lehragaga; and Andana. As per village directory, there are 571 villages in the district. There are 12 Municipal Committees in the district. According to the Deputy Economic and Statistical Advisor, the area of the Sangrur district is 3610 square kilometers.

Sangrur district has an estimated population of 14.73 Lakh which is 6.04 percent of the total population of Punjab State. The sex ratio according to census 2001 is 870 females per thousand males in district which is six less than observed in 1991 census, which were 876. Malerkotla block has the highest sex ratio (883) followed by Andana (879). The lowest sex ratio of 857 is in Sunam block followed by Malerkotla-II block (862) in order. Though, the rate of population growth is meager yet the density of population has increased. Social dynamics of the region is best displayed by the ratio of scheduled cast population to the total population in the region. The share of SC population is in the range of 28.07 percent to 33.46 percent of the total population in different blocks of Sangrur district. It is highest in Sangrur block and lowest in Malerkotla-II block.

Administrative Structure

The district is the basic unit of administration. The Deputy Commissioner, Sangrur, as head of the district administration, is a functionary of the state government. He has wide powers and manifold responsibilities. In many ways he is chief custodian of law and authority, the pivot on which runs the local administration. The main functions of the Deputy Commissioner may be broadly categorized as: co-ordination of development and public welfare activities as Deputy

Commissioner, revenue officer/court of the district as District Collector, and law and order functions as District Magistrate. Thus, he/she acts as Deputy Commissioner, District Collector and District Magistrate on different occasions. Under Deputy Commissioner, there is complete hierarchy of district officials as: Additional Deputy Commissioner, Sub divisional Officer (Civil), Tahsildars, Naib-Tahsildars, Kanungos, Patwaris, Lambardars and Chowkidars.

Location

The district of Sangrur takes its name from its headquarters town, Sangrur. Sangrur is one of the southern districts of the state and lies between 29^{o}-4$^{'}$ and 30^{o}-42$^{'}$ north latitude and 75^{o}-18$^{'}$ and 76^{o}-13$^{'}$ east longitude. It is bound by Ludhiana district in the north, by Barnala district in the west, by Patiala district in the east and by Jind district of Haryana state in the south. Sangrur, the headquarters of the district administration is directly linked by road and rail with state capital and all other major cities of the state.

Climate

The climate of the district is on the whole dry and is characterized by a short monsoon, a hot summer and a bracing cold winter. The year may be divided into four seasons. The cold season from November to March is followed by the hot season lasting up to the end of June. The period from July to mid-September constitutes the rainy season, of south-west monsoon, the second half of September and October may be termed the post-monsoon or transition period.

Historical Antecedents

Historical background has a strong bearing on the human development scenario of a region. A brief review of the history of the region will help one to understand the roots of economic development of the region, in general, and the human development, in particular. This section is based on “Administrative Report of Jind State (1881-

1924)". A brief history of the district is as follows. The present day district of Sangrur has evolved over the decades. Sangrur was formed as a district in 1948. It is said to have derived its name from its founder, one Sanghu, a Jat, about 400 years back. History of the district is complicated, although it is traceable through its various components. The Sangrur district as of today comprises parts of a few erstwhile distinct administrative units, the Phulkian states of Jind, Nabha and Patiala: the Mohammadan state of Malerkotla; and some parts of the district of Ludhiana. It is interesting to note that Sangrur itself was earlier a part of Nabha State.

Ancient Period: The excavations have been carried out by the Archeological Department, at the various places of Malerkotla tehsil of Sangrur district. An exciting discovery of a pre-Harappan settlement: a pre-cursor of 'the Indus Valley of Harappan civilization has been made at an ancient mound at Ruhira which has now emerged as the second important pre-Harappan site in India. It lies about six km from Mandi Ahmadgarh and is about thirteen kilometers from Malerkotla. It is situated along the line of depression which follows the ancient course of river Satluj. The other important sites so far excavated in the Malerkotla Tehsil are: Rohira; Mahorana; Bhudan; Bahwa; Bhasaur; Dhingri; Jandali; Malaud Rorian (Theh Loharan); and Mohammadpur. It is worthwhile to mention here that it was near Rohira that thousands of Sikhs were massacred by Ahmad Shah Abdali in a great holocaust known as Wada Ghallughara, in 1762.

Medieval Period: During the last quarter of 10th century, Raja Jaipal ruled over Punjab including the present area of Sangrur district. His capital was at Bathinda close to the present area of Sangrur district but Sunam was an important province during the Sultanate period. Balban's cousin of Sher Khan was incharge of the governorship of Sunam. He was very energetic governor who successfully repulsed many incursions of Mongols, king Jalal-ud-din was the first Sultan of the Khilji Dynasty. During the Sultanate period, Sunam had strategic position and it was on the main route to Delhi. During the times of Muhammad-bin-Tughluq, a rebellion took place in Sunam and the adjoining areas. The root cause of the rebellion was the refusal of the peasants to pay the land tax. They erected mandals (strongholds) and defied the authorities from their mandals. Muhammad-bin-Tughluq marched against them, captured the leaders, and brought them to Delhi where they were put to the sword.

British Period: In British period Raja Bhag Singh ruled the state. After the death of Raja Bhag Singh in 1819, the mismanagement and general inefficiency ruled the system. The then ruler, Raja Sangat Singh shifted the headquarters from Jind to Sangrur in 1827. Later, Raja Sarup Singh was formally installed in the presence of all the Phulkian Chiefs and the British Agent in April 1837. When the mutiny broke out in May 1857, Raja Sarup Singh's services were duly appreciated by the British. He was amply rewarded in territory and in this context; thirteen villages conveniently situated near Sangrur were also ceded to the Raja in perpetuity. Raja Sarup Singh died in 1863 and his son Raghbir Singh was in every way worthy of his father. He was a man of excellent judgment and honesty; he made Sangrur a beautiful town, constructing bazar on the lines of Jaipur with pucca shops, gardens, tanks, temples and other public religious buildings, as also a metalled road around the town. In 1887, Raja Raghbir Singh died. His only son Balbir Singh had died during his lifetime and his grandson Ranbir Singh who was born in 1879 was only a minor. He

was put up under regency and full powers were vested in him in 1898. He ruled the Jind State beyond independence, i.e., 31st March 1948.

Historical background of the district is indicative of the fact that the region has been marred by political upheavals, invasions, mutinies and calamities. This coupled with natural and geographic oddities has been historical cause of economic backwardness of the region, in general, and the human development, in particular.

Education

Literacy is the most generally used indicator of educational development in any region because it is considered a crucial measure of development of human capital. The education attainment of a region is function of the literacy rate of the region. Sangrur is educationally backward; the literacy rate is 59.88 percent as against 69.95 percent for the state. There is big gap between urban-rural and male-female literacy rates. Education infrastructure is unevenly distributed. A detailed analysis appears in one of the following chapters.

Health

Health is a major concern in a region because it is closely linked to the livelihood issue. The available data show that the public health expenditure in relation to total state government expenditure in Punjab is substantially low. The physical infrastructure of hospitals, PHCs and deployment of health care is substantially poor. The number of health ailments is on the rise. The worst affected are the rural and the poor masses. The present model of health followed in the state is not an inclusive and equitable one. A synoptic review of the health system of the Sangrur district is indicative of the fact that health services are not evenly distributed. Some the blocks have been altogether neglected as far as health services are concerned. A full chapter has been devoted to issues relating to health.

Economic and Livelihood Patterns

The density of population is 408 persons per square km. According to population density, Sangrur district was ranked 12th in the year 2001. It is worth noticing here that the work force participation rate has improved between the period 1991 and 2001 in the Sangrur district. The proportion of workers was 32.30 per cent and the proportion of non workers was 67.70 per cent in the year 1991. This proportion has increased to 39.23 per cent in the year 2001. Obviously, the non workers proportion in total population declined to 60.77 per cent. The proportion of main workers was very high, that is, 95.57 per cent in the year 1991. However, this proportion declined to 86.99 per cent in the year 2001. This shows that in the Sangrur district, the proportion of marginal workers increased substantially between the period 1991 and 2001.

The sectoral composition of rural workforce across blocks and municipalities shows that nearly 51 per cent of the workforce of Sangrur district is engaged in other than agriculture and household industrial activities. Agriculture alone provided occupation to 45.87 per cent of the workforce of Sangrur in the year 2001. Those who engaged themselves to earn their livelihood from agriculture as cultivators constituted 29.13 per cent of the total workforce. The proportion of agriculture labour was 16.74 per cent. The workforce engaged in household industry in Sangrur district is quite low. It is just 3.22 per cent of the total workforce in Sangrur district. Obviously, the household industry as an occupation is on the verge of extinction. Detailed analysis of livelihood patterns forms the content of an independent chapter in this report.

Above profile is indicative of the fact that district of Sangrur is in its early stages of development and analysis of human development dynamics is need of the time.

Chapter-II
Education

2.1 Introduction

Education as an investment in human resources plays an important role among the factors which contribute to economic growth (Kothari, 1966). Government of India has recognised the crucial and vital role of education in development. The Constitution of India (Article 45) states that 'the state shall endeavour to provide, within a period of ten years from the commencement of the constitution, for free and compulsory education for all children until they complete the age of fourteen years'. Several policies lay emphasis on the role and importance of education as a means of development and consider education sector for investment for the development of the country (Government of India, 1986). Educational policies and programmes lay stress on the promotion of mass education; comprising of universal primary and upper primary education and adult education. Equity in education by gender, caste and socio-economic groups and reduction in regional disparities in educational development remains the thrust of educational planning and policy in the country (Tilak, 2006). Generally, education is considered as a powerful means to reduce poverty and achieve economic growth. It increases individual earning potential and productivity of residents, enhances capacity to participate in development process, promotes a healthy population which is a major determinant of democracy and builds competitive economy (World Bank, 2006 UNESCO, 2007). Education also reduces the incidence of social problems (drug abuse, crime, etc.), all which can weigh heavily on the economy.

2.2. Literacy: Levels, Differences and Trends

Literacy is generally used indicator of educational development in any region because it is considered a crucial measure of development of human capital. Analysts and experts claim that literate people can be trained less expensively as compared to illiterate. Also literate people have a higher socio-economic status, better access to health and employment prospects.

An attempt has been made to analyse block-wise and municipality-wise male-female literacy rates, overall literacy rates and rural-urban gaps in literacy in Sangrur district of Punjab. Sangrur is educationally backward, because of low literacy rate of

59.88 per cent against 69.95 per cent of the state, high rural-urban gap of 14.35 per cent against 13.97 per cent of the state and high gender gaps in literacy and it also ranks second from the bottom as far as (HDI) human development index is concerned (Government of Punjab, 2004). Information regarding literacy rates and gender gap has been given in Table 2.1 and Chart 2.1.

Table 2.1: Population, Literacy Rates and Gender Gap in Sangrur (2001)

Sr. No.	Block	Male			Female			All			Gender gap
		Population	Literate	Literacy Rate	Population	Literate	Literacy Rate	Population 6 years & above	Literate	Literacy Rate	
1	Sangrur	59435	31605	53.18	51565	22340	43.32	96817	53945	55.72	9.85
2	Malerkotla 1	72762	45058	61.96	64249	32430	50.48	119943	77488	64.6	11.45
3	Malerkotla 2	69726	43838	62.87	60108	30355	50.5	112635	74193	65.87	12.37
4	Lehragaga	60168	25581	42.52	52161	16780	32.17	96686	42361	43.81	10.35
5	Dhuri	40673	23580	57.97	35384	16602	46.92	66176	40182	60.72	11.06
6	Andana	39096	18906	48.36	34356	11079	32.25	62102	29985	48.28	16.11
7	Sunam	115657	54074	46.75	99119	37440	37.77	185792	91514	49.26	8.98
8	Bhawanigarh	51037	27309	53.51	44314	18908	42.67	82577	46217	55.97	10.84
9	Sherpur	50119	27921	55.71	43547	20016	45.96	82166	47937	58.34	9.75
Rural: sub-total		558673	297872	53.32	484803	205950	42.48	904894	503822	55.68	10.84
Municipality											
10	Sangrur	41477	31604	76.2	36512	24742	67.76	69306	56346	81.3	8.43
11	Malerkotla	59760	35456	59.33	52763	25425	48.19	96639	60881	62.99	11.14
12	Ahemedgarh	14944	11098	74.26	13078	8660	66.22	24638	19758	80.19	8.05
13	Dhuri	26425	18864	71.39	22981	14278	62.13	43238	33142	76.65	9.26
14	Sunam	29994	19495	64.99	26257	14630	55.72	49289	34125	69.23	9.28
15	Lehragaga	10299	7075	68.7	9037	5150	56.99	16822	12225	72.67	11.71
16	Bhawanigarh	9400	6118	65.09	8392	4736	56.43	15564	10854	69.74	8.65
17	Longowal	11109	6187	55.69	9130	4235	46.38	17717	10422	58.82	9.31
18	Dirba	7058	3783	53.6	6021	2752	45.71	11329	6535	57.68	7.89
19	Khanauri	5791	3472	59.95	5169	2455	47.49	9176	5927	64.59	12.46
20	Moonak	7935	4555	57.4	6989	3144	44.98	12547	7699	61.36	12.42
21	Cheema	4930	2363	47.93	4315	1770	41.02	7936	4133	52.08	6.91
Urban: sub-total		229122	150070	65.5	200644	111977	55.81	374201	262047	70.03	9.69
Total Sangrur		787795	447942	56.86	685447	317927	46.38	1279095	765869	59.87	10.48

Source: ESO, Sangrur

Note: 1. ESO data is based on census data 2. Separate male and female population under 6 years age was not available.

2.2.1 Male Literacy

In Sangrur district overall rural male literacy was 53.32 per cent, urban male literacy was 65.5 per cent and rural-urban male literacy gap was 12.18 per cent. However, the highest rural-urban male literacy gap of 33.68 per cent has been found between Sangrur municipality (76.2 per cent) and Lehragaga block (42.52 per cent). Among the rural areas Malerkotla-2 block has the highest male literacy and lowest in Lehragaga block. In urban areas of Sangrur, lowest male literacy rate has been reported in Cheema municipality and highest in Sangrur municipality.

2.2.2 Female Literacy

Rural female literacy rate was highest in Malerkotla 2 block (50.5 per cent) and lowest in Lehragaga (32.17 per cent) and Andana (32.25 per cent) blocks. Overall rural female literacy of Sangrur was found to be 42.48 per cent. As far as the urban female literacy is concerned it was highest in Sangrur municipality (67.76 per cent) and lowest in Cheema (41.02 per cent). Highest gap in rural-urban female literacy was 35.69 per cent has been reported between Sangrur municipality and Lehragaga block and overall rural-urban female literacy gap of 13.33 per cent. Both these gaps of female literacy were greater than the male literacy gaps.

2.2.3 Overall Literacy

In Sangrur district the overall literacy rate was 59.88 per cent and it was 56.86 per cent for males and 46.38 per cent for females. Highest literacy was reported in Sangrur municipality (81.3 per cent) and lowest in Lehragaga block (43.81 per cent) a gap of 37.49 per cent. Overall rural-urban literacy gap has been worked out at 14.35 per cent.

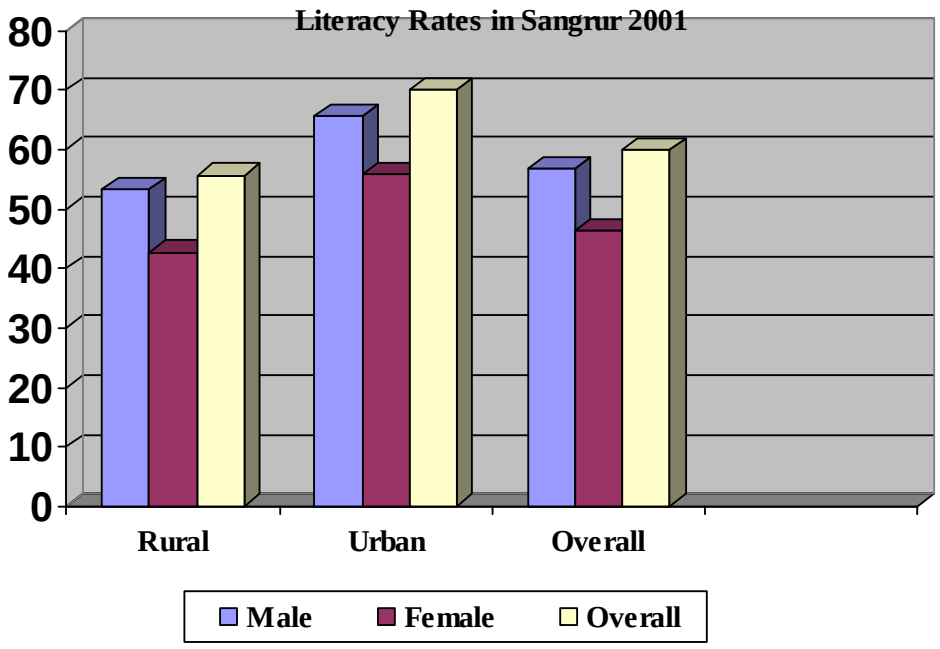
2.2.4 Gender Gaps

Almost same and high gender gap has been reported in rural as well as urban areas. However in rural Sangrur highest gender gap was in Andana block (16.11 per cent) and lowest in Sherpur block (9.75 per cent). Urban gender gap was lowest in Cheema municipality (6.91 per cent) and highest in Khanauri municipality (12.46 per cent).

Above analysis clearly points out the wide spread gaps in rural-urban literacy, male-female literacy and literacy within the rural areas and urban areas. All indicators of literacy have been below and behind the state averages. This state of affairs prevails because developed parts of the erstwhile Sangrur district has been carved out as a separate Barnala district after 2001. And presently major part of the Sangrur

district is comprised of backward areas adjoining Haryana on the right bank of Ghaggar River. So, to remove these gaps and for balanced and high human development, all the necessary physical and intellectual infrastructure should be in place, especially in rural areas. This requires immediate attention of the state. Some of the practices and facts related to literacy in Sangrur district have been presented in Box 1, Box 2 and Box 3.

Chart 2.1



2.3 Enrolment, School Dropouts and Out of School Children

Increasingly, a prepared and well qualified workforce equipped with higher level of education, knowledge and skills is essential for success, economic competitiveness and economic development. Therefore, high enrolment rates, absence of dropouts and zero out of school children are required for the above said purposes. But one out of every fourth i.e. 25 percent out-of-school children in the world resides in India, as fifty per cent of children dropout before completing primary education (Stockholm Challenges, 2008). Students drop out because their public school experiences are so poor that they learn very little even after enrolled for 4 to 5 years. Therefore, today, the issue is not a lack of demand but rather quality of supply.

2.3.1 Enrolment and Enrolment Rates

The block-wise and municipality-wise situation with regard to gross enrolments and gross enrolment rates, gender-wise and school level-wise dropouts and age-wise out of school children in Sangrur district has been presented in Table

2.2, Table 2.3, Table 2.4 and Table 2.5 respectively. As far as the gross enrolments and gross enrolment rates are concerned, high gross enrolment rates are evidently clear from Table 2.2 in rural as well as urban areas of Sangrur. No wide gaps with regard to rural-urban and gender was visible but slightly low gross enrolment rates in some municipalities are due to existence of slum areas with migrants. Especially, Muslim dominated Malerkotla and backward municipalites recorded low gross enrolments. The phenomenon demands deeper investigation to trace the causes. Thus, for 100 per cent enrolment more efforts should be made in rural as well as urban Sangrur as early as possible.

Table 2.2: Block-wise and Municipality-wise Primary School Level Gross Enrolment Rates in Sangrur 2006-07

Sr. No.	Block	Enrolment (Number)			Enrolment Rates(%ages)		
		male	female	total	male	female	total
1	Sangrur	5898	5771	11669	97.4	98.2	97.8
2	Malerkotla 1	7192	6394	13586	97.5	97.9	97.7
3	Malerkotla 2	5482	4846	10328	97.4	95.9	96.7
4	Lehragaga	3935	3388	7323	90.4	91.8	91.1
5	Dhuri	2739	2962	5701	94.5	96.2	95.4
6	Andana	3339	2608	5947	92.3	88.6	90.6
7	Sunam	9223	7082	16305	94.5	93.5	94.1
8	Bhawanigarh	4304	3694	7998	96.0	97.0	96.5
9	Sherpur	4040	3380	7420	96.7	96.8	96.7
Rural Total		46152	40125	86277	95.5	95.4	95.4
Municipality							
10	Sangrur	1981	2052	4033	95.7	95.5	95.6
11	Malerkotla	2334	2156	4490	85.0	89.5	87.1
12	Ahemedgarh	1518	2838	4356	96.0	97.8	97.2
13	Dhuri	1612	1796	3408	96.3	96.8	96.6
14	Sunam	1426	1747	3173	88.4	91.0	89.8
15	Lehragaga	741	737	1478	91.7	92.2	92.0
16	Bhawanigarh	733	802	1535	98.3	99.5	98.9
17	Longowal	716	567	1283	92.9	91.7	92.4
18	Dirba	462	249	711	86.8	84.7	86.1
19	Khanauri	406	370	776	82.4	86.0	84.1
20	Moonak	777	608	1385	93.7	91.8	92.9
21	Cheema	531	157	688	88.8	84.0	87.6
Urban Total		13237	14079	27316	91.5	93.7	92.6
Total Sangrur		59389	54204	113593	94.6	95.0	94.8

Source: Offices of DEO, Primary & DEO, Sec., Sangrur

2.3.2 Dropouts:

Out of total school dropouts of Sangrur district, highest school dropouts were reported from rural areas i.e. 81.5 per cent and low school dropouts from urban areas i.e. 19.5 per cent. Dropout male students outnumbered the female students in both rural and urban Sangrur (Table 2.3 and Chart 2.2). As the class level increases number

BOX 1: TOP TEN AND BOTTOM TEN

Literacy is also not evenly distributed in the district. Disaggregated village level data is indicative of the fact that literacy in the district ranges from 20 percent to 78 percent. There are 73 villages in the district that have a literacy rate higher than 60. Majority of the "very high literacy" rate villages are in the Malerkotla-I and Malerkotla-II blocks of the district. These high literacy villages are: Hajoorgarh, Gajan Majra, Dialgarh Channa, Salar and Slampur of Malerkotla-I Block; Valaitpura, Akbarpur Channa, Jitwal Kalan, Nathu Majra, Amargarh, Flourkalan, Kasampur and Shekhupur of Malerkotla-II; and Harkishanpura of Bhawanigarh Block. Out of these high literacy rate villages, Akbarpur Channa and Jitwal Kalan of Malerkotla-II are large sized villages with total population of 1794 and 2586 persons respectively. A detailed study of these two villages (given in Box 2 and Box 3) can serve as a replicable best practice of the region.

Top Ten

Village	Block	Village	Population	No. of Literates	Literacy Rate
13	Malerkotla-	HAJOORGARH	7	6	85.71
24	Malerkotla-	GAJAN MAJRA	508	396	77.95
91	Malerkotla-	VALAITPURA	620	471	75.97
5	Malerkotla-	AKBARPUR CHHANNA	2501	1794	71.73
36	Malerkotla-	JITWAL KALAN	3682	2586	70.23
8	Bhawanigar	HARKISHANPURA	989	687	69.46
51	Malerkotla-	NATHU MAJRA	1295	896	69.19
46	Malerkotla-	DAIALGARH CHHANNA	168	116	69.05
13	Malerkotla-	AMAMGARH	1032	701	67.93
10	Malerkotla-	SALAR	1110	749	67.48

Source: Village Directory, Sangrur, 2007.

There are large number of villages in Sangrur where illiteracy rules. There are 30 such villages where the literacy rate is even less than 35 percent. The low literacy villages are found mostly in Lehragaga, Andana at Moonak, Sunam and Sangrur blocks. Kalia, Sekhuwas, Gurne, Bukhora Khurd, Chotian, Alisher and Dehla in Lehragaga block; Dudian in Andana Block; Loha Khera and Togawal in Sangrur are the villages where literacy is around 30 percent. Dehlij Lalan of Malerkotla-II and Bjaini Kamboan also fall in the same category. All the low literacy villages are relatively big villages. Dehla Sian is the villages where Punjabi University Patiala has done a unique experiment to take the professional education to the door steps of rural masses at an affordable price.

Bottom Ten

Village Code	Block	Village	Total Population	No. of Literates	Literacy Rate
28	Lehragaga	DEHLA	1713	560	32.69
2	Lehragaga	ALISHER	1421	463	32.58
22	Lehragaga	CHOTIAN	2960	959	32.40
30	Lehragaga	BAKHORA KHURD	1133	364	32.13
28	Sangrur	TOGAWAL	2396	766	31.97
19	Lehragaga	GURNE	1400	445	31.79
45	Malerkotla-II	DEHLEJ KALAN	2943	924	31.40
4	Lehragaga	SEKHUWAS	2459	768	31.23
57	Sangrur	LOHA KHERA	2781	843	30.31
20	Andana at Moonak	DUDIAN	2944	872	29.62
11	Lehragaga	KALIA	1734	505	29.12
9	Sunam	SANSARPURA	23	3	13.04

Source: Village Directory, Sangrur, 2007.

BOX 2: GOOD PRACTICE CASE 1

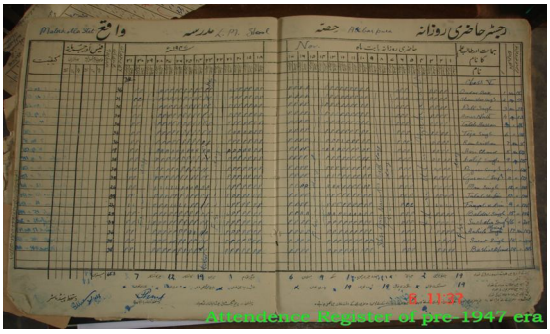
Akbarpur Channa

Akbarpur Channa, situated at six kilometer from Ahemdgarh on Malerkotla side, is relatively a large village. Nearest railway station is Mandi Ahmedgarh. It has an age old school that caters to the requirements of a cluster of four villages: Falewal Khurd, Dilawergarh, Akbarpur Channa and Rohira. School has the office records as old as year 1937. Initially it started as a primary school; then upgraded to middle; and then to a high school. Presently there are 390 students and 14 teachers. There is a good computer laboratory-cum-classroom. Student dropout rate is negligible and results are relatively better. Parent-teacher meeting is a regular phenomenon. Still the school is short of class rooms and furniture for the students. Some renowned personalities are alumni of this school. Another big private school of town Ahmegarh is also easily accessible.

Almost all the houses are pacca houses and the village is on the Ludhiana-Malerkotla highway. There are seventeen small and medium factories around the village. Some of the people do daily commuting to Ludhiana for employment purposes. About 25 persons of the villages have migrated to other countries and they have their family members back in the village. Such non-resident Indians have helped the school in building the infrastructure by donating liberally. To construct facilities or donate equipment on the eve of death or some happy occasion has become a tradition. In this tradition, school has received many rooms, fans, toilets, computer laboratory, water-cooler and an electricity generator. Some local factory owners have also helped the school to create infrastructure. Computer course in the school is being taught with the help of self generated funds of the school. Most of the non-farming communities are employed in the factories locally or the nearby town and city.

Hence the factors for higher literacy of the village are: (a) age old school in the village; (b) development of industrial units around the village; (c) the raised income level of NRI families and its percolation effect; (d) social response to build school infrastructure; and (e) nearness to a town or a city. But above all active social response is the only outstanding factor.

Govt High School at Akbarpur Channa


Attendence Register of pre-1947 era


Computer Laboratory in the School

BOX 3: GOOD PRACTICE CASE 2

Jitwal Kalan

Jitwal Kalan is situated on the western side of village Kup Kalan on the Malerkotal Ludhiana highway and is relatively a large village. It has a forty year old school that caters the requirements of nearby villages. Initially it started as a primary school but now it is a secondary school. It is offering arts, mathematics and economics at plus-two class as options. There are 309 students and 11 teachers. There is a good computer laboratory-cum-classroom and a computer teacher appointed on the basis of local effort. Student dropout rate is negligible and results are relatively better. Parent teacher meeting is a regular phenomenon. The oldest school, in nearby village Kup Kalan, worked as a catalyst in improving the literacy in the region. School building, furniture and other infrastructure is up to the mark. About 15 families have migrated abroad and are sending the income back to their family members. There are four big factories around the village.

Like any other village, earlier it had an average literacy level. There is religious headquarter of one saint that has been instrumental in changing the education scenario of the village. A long back saint collected the community and appealed them to donate liberally for the school. People donated land and money. Those who couldn't, they donated labour to construct the school. Active societal participation generated the school infrastructure in few days. Now the school has almost all the facilities. Historically, the political differences at village level have been kept away from the school. All political parties are unanimous and positive on the school issues and do help in generating the funds. Another facilitator in the education development is upcoming new private schools in the region. Pollution from a nearby pure carbon manufacturing unit is posing a serious health problem to the villagers and school.

The factors for higher literacy of the village are: (a) an age old education facilities in and around the village; (b) the raised income level of NRI families and its percolation effect; (c) religious response to build school infrastructure; and (d) nearness to an old education centre. Here also the active social response has been unparallel in taking the education to the door steps of masses.


Secondary school at Jitwal Kalan


Visual of classroom at Jitwal Kalan


Computer Laboratory-cum-classroom at Jitwal Kalan

of dropouts also increases because highest number of dropouts were reported from higher secondary schools, followed by high schools and primary schools in both rural schools and urban schools of the district. Wide and significant rural-urban dropouts gaps have been reported (Table 2.4) and it decreases as class level increases. Keeping in view the sizeable and considerable number of school dropouts in rural Sangrur and at all school levels, serious efforts should be made in rural areas to minimise the school dropouts. To increase the retention education should student friendly and more facilities should be provided and other required efforts should be made. Urban areas should also be looked upon to solve this problem.

2.3.3 Out of School Children

Information and data regarding out of school children in Sangrur district suggests that three-fourth of the out of school children belonged to rural areas and the remaining one-fourth to urban (Table 2.5). Again, boys outnumbered the girls in this regard in both rural and urban Sangrur. This problem was more prone to the age group of 8-14 years than the age group of 6-8 years as recently this age group has been targeted for 100 per cent enrolment. It was also observed and pointed out during field visits of the district and discussions with the district officials concerned that the state government recently conducted a comprehensive survey and it has also been reported that state would enrol all the out of school children as early as possible, which is seriously required.

Chart 2.2

Rural-Urban and School Level-wise Dropout (percentages) in Sangrur, 2006-07

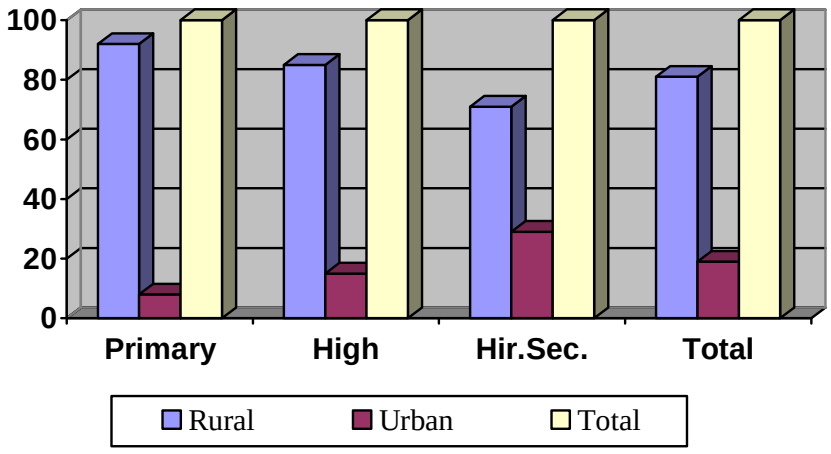


Table 2.3: Block-wise and Municipality-wise School Dropouts in Sangrur 2006-07

Sr. No.	Block	School-wise Number of Dropouts											
		Primary			Secondary			Higher Secondary			Total		
		M	F	Total	M	F	Total	M	F	Total	M	F	Total
1	Sangrur	30	21	51	33	22	55	79	60	139	142	103	245
2	Malerkotla-1	36	24	60	70	37	107	65	45	110	171	106	277
3	Malerkotla-2	32	23	55	53	38	91	46	22	68	131	83	214
4	Lehragaga	27	15	42	66	40	106	45	29	74	138	84	222
5	Dhuri	25	11	36	52	24	76	11	17	28	88	52	140
6	Andana	18	10	28	43	40	83	44	11	55	105	61	166
7	Sunam	66	22	88	120	51	171	102	48	150	288	121	409
8	Bhawanigarh	31	16	47	46	21	67	46	30	76	123	67	190
9	Sherpur	36	18	54	56	38	94	25	12	37	117	68	185
Rural Total		301	160	461	539	311	850	463	274	737	1303	745	2048
Municipality													
10	Sangrur	3	2	2	6	4	10	15	17	32	24	25	49
11	Malerkotla	9	4	4	32	10	42	0	11	11	41	25	66
12	Ahmedgarh	0	0	0	10	30	40	18	19	37	28	49	77
13	Dhuri	4	2	2	8	5	13	32	20	52	44	27	71
14	Sunam	8	5	13	6	18	24	12	11	23	26	34	60
15	Lehragaga	0	0	0	0	0	0	15	11	26	15	11	26
16	Bhawanigarh	0	0	0	0	0	0	10	24	34	10	24	34
17	Longowal	1	2	3	0	0	0	14	12	26	15	14	29
18	Dirba	0	0	0	0	0	0	7	9	16	7	9	16
19	Khanauri	0	0	0	0	11	11	9	1	10	20	1	21
20	Moonak	0	0	0	0	13	13	19	2	21	19	15	34
21	Cheema	0	0	0	0	0	0	10	4	14	10	4	14
Urban Total		25	15	40	62	91	153	161	141	302	248	247	495
Sangrur Total		326	175	501	601	402	1003	624	415	1039	1551	992	2543

Source: Offices of DEO, Primary & DEO, Sec., Sangrur

Table 2.4: Rural-Urban and Gender Gaps in Dropouts in Sangrur 2006-07

School Level	Gender	Dropouts (Number)			Dropouts (%ages)			
		Rural	Urban	Total	Rural	Urban	Total	R-U Gaps
Primary	Male	301	25	326	92.3	7.7	100	84.7
	Female	160	15	175	91.4	8.6	100	82.9
	Total	461	40	501	92.0	8.0	100	84.0
High School	Male	539	62	601	89.7	10.3	100	79.4
	Female	311	91	402	77.4	22.6	100	54.7
	Total	850	153	1003	84.7	15.3	100	69.5
Higher Secondary	Male	463	161	624	74.2	25.8	100	48.4
	Female	274	141	415	66.0	34.0	100	32.0
	Total	737	302	1039	70.9	29.1	100	41.9
Total	Male	1303	248	1551	84.0	16.0	100	68.0
	Female	745	247	992	75.1	24.9	100	50.2
	Total	2048	495	2543	80.5	19.5	100	61.1

Source: Compiled from Table 2.3

Table 2.5: Block-wise and Municipality-wise Out of School Children in Sangrur 2008

Sr. No.	Block	Number of Out of School Children								
		(6-8) Age Group			(8-14) Age Group			(6-14) Age Group		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
1	Sangrur	47	38	85	116	103	219	163	141	304
2	Malerkotla-1	192	166	358	535	338	873	727	504	1231
3	Malerkotla-2	49	34	83	139	129	268	188	163	351
4	Lehragaga	125	91	216	359	272	631	484	363	847
5	Dhuri	52	50	102	165	125	290	217	175	392
6	Andana	160	115	275	256	337	593	416	452	868
7	Sunam	336	259	595	831	639	1470	1167	898	2065
8	Bhawanigarh	34	23	57	157	94	251	191	117	308
9	Sherpur	19	12	31	121	101	222	140	113	253
Rural Total		1014	788	1802	2679	2138	4817	3693	2926	6619
Municipality										
10	Sangrur	34	32	66	56	65	121	90	97	187
11	Malerkotla	131	117	248	278	136	414	409	253	662
12	Ahemedgarh	27	26	53	38	39	77	65	65	130
13	Dhuri	12	5	17	33	30	63	45	35	80
14	Sunam	86	80	166	171	138	309	257	218	475
15	Lehragaga	22	19	41	45	43	88	67	62	129
16	Bhawanigarh	1	2	3	4	0	4	5	2	7
17	Longowal	1	1	2	8	9	17	9	10	19
18	Dirba	31	14	45	39	31	70	70	45	115
19	Khanauri	46	28	74	39	34	73	85	62	147
20	Moonak	23	12	35	29	42	71	52	54	106
21	Cheema	8	9	17	23	16	39	31	25	56
Urban Total		422	345	767	763	583	1346	1185	928	2113
Sangrur		1436	1133	2569	3442	2721	6163	4878	3854	8732

Source: Offices of DEO, Primary, Sangrur

2.4 Pattern and System Load of Basic Education

The current operational status of school education and institutional infrastructure in terms of number of schools, number of teachers and number of students reveals the basic pattern and system load of school education. Pattern and system load of basic education in Sangrur district has been shown in Table 2.6 and Table 2.7. Basic pattern of school education of Sangrur was composed of primary, middle, high, and higher secondary schools. Out of total 673 governments and government aided primary schools, 597 fall in rural areas and 74 in urban areas. Similarly, out of 348 secondary schools of the district, 322 were located in rural and 26 in urban areas. As far as number of primary teachers was concerned, it was 1552 in rural areas and 168 in urban schools. Out of 76815 total primary students in Sangrur 68057 were in rural schools and 8178 in urban schools. Basic pattern of government primary schooling was evidently dominated by rural areas in Sangrur. Almost same basic pattern in government secondary schooling prevailed.

2.4.1 Ratio Analysis

Ratio analysis of system load of basic education in Sangrur has been similar with regard to per school students and per school teachers in government primary schools in rural and urban areas. However, the student teacher ratio (40:1 stipulated) in government primary schools ranges 28:1 to 332:1 and 45:1 on an average, but 44:1 in rural schools and 52:1 in urban schools. These ratios with regard to government secondary schools (60:1 stipulated) range 17:1 to 185:1 and 26:1 on an average but 23:1 in rural schools and 59:1 in urban schools. Average students per school were 268 in rural areas and 1051 in urban areas and it ranges from 222 to 1344 students. Ratio of per school teachers ranges 1 to 4 for primary schools and 9 to 35 for secondary schools, but it has been 12 for rural schools and 18 for urban schools. Ratio analysis of system load of basic school education demands some rationalisation so that stipulated ratios are achieved. Further, for the improvement in school education and school environment stipulated teacher student ratio should be brought down to around 1: 20 or 1:25.

Table 2.6: Pattern of Basic School Education in Sangrur, 2006-07

Sr.No.	Block	Primary Schools			Secondary Schools		
		No. of	No. of	No. of	No. of	No. of	No. of
1	Sangrur	58	201	5704	36	578	11669
2	Malerkotla 1	105	223	11779	54	738	13586
3	Malerkotla 2	86	208	7071	35	419	10328
4	Lehragaga	47	159	7298	33	309	7323
5	Dhuri	45	116	4404	23	329	5701
6	Andana	41	104	5123	25	218	5956
7	Sunam	99	254	13019	55	622	16305
8	Bhawanigarh	66	149	6393	35	360	7998
9	Sherpur	50	138	7266	26	257	7420
Rural: sub-total		597	1552	68057	322	3830	86286
Municipality							
10	Sangrur	15	44	989	3	104	4033
11	Malerkotla	10	24	1573	4	92	4490
12	Ahemedgarh	5	2	275	0	54	4356
13	Dhuri	10	22	867	3	66	3408
14	Sunam	11	13	715	3	34	3172
15	Lehragaga	6	19	755	2	8	1478
16	Bhawanigarh	4	15	678	2	18	1535
17	Longowal	5	12	763	3	17	1283
18	Dirba	2	6	580	1	6	711
19	Khanauri	3	2	664	2	12	776
20	Moonak	3	11	611	2	40	1385
21	Cheema	2	4	288	1	11	688
Urban: sub-total		74	168	8178	26	462	27315
Total Sangrur		673	1726	76815	348	4292	113601

Source: Offices of DEO, Primary & DEO, Sec., Sangrur

Table 2.7: Ratio Analysis of System Load of Basic Education in Sangrur, 2006-07

Sr. No.	Block	Primary Schools			Secondary Schools		
		Per School Students	Per School Teachers	Student Teacher Ratio	Per School Students	Per School Teachers	Student Teacher Ratio
1	Sangrur	98	3	28	324	16	20
2	Malerkotla 1	112	2	53	252	14	18
3	Malerkotla 2	82	2	34	295	12	25
4	Lehragaga	155	3	46	222	9	24
5	Dhuri	98	3	38	248	14	17
6	Andana	125	3	49	238	9	27
7	Sunam	132	3	51	296	11	26
8	Bhawanigarh	97	2	43	229	10	22
9	Sherpur	145	3	53	285	10	29
Rural: sub-total		114	3	44	268	12	23
Municipality							
10	Sangrur	66	3	22	1344	35	39
11	Malerkotla	157	2	66	1123	23	49
12	Ahemedgarh	55	2	138	-	-	-
13	Dhuri	87	2	39	1136	22	52
14	Sunam	65	1	55	1057	11	93
15	Lehragaga	126	3	40	739	4	185
16	Bhawanigarh	170	4	45	768	9	85
17	Longowal	153	2	64	428	6	75
18	Dirba	290	3	97	711	6	119
19	Khanauri	221	1	332	388	6	65
20	Moonak	204	4	56	693	20	35
21	Cheema	144	2	72	688	11	63
Urban: sub-total		115	2	52	1051	18	59
Total Sangrur		114	3	45	326	12	26

Source: Offices of DEO, Primary & DEO, Sec., Sangrur

2.5 Educational Infrastructure

Just as the soundness of the economy depends on the quality of underlying infrastructure, so the soundness of educational system depends on its physical and intellectual infrastructure. The infrastructure that supports school education is composed of wide range of physical assets like school building, furniture, blackboards, drinking water and sanitation, playing grounds, labs, etc. and intellectual infrastructure such as number of teachers, trained teacher, teacher-pupil ratio, sanctioned and filled posts of teachers and schools with and without permanent headmasters/principals.

2.5.1 Basic Intellectual School Infrastructure

(i) Number of Villages and Municipal Wards and Schools:

In total there were 673 primary schools and 348 high/higher secondary schools in Sangrur district (Table 2.8). All the villages of Sangrur district have a school either primary school or high/higher secondary school. Some big villages have more than one primary school as the total number of villages was 571 and total number of primary schools was 597. However, some municipal wards were without schools especially in Malerkotla, Ahemedgarh, Lehragaga, Bhawanigarh, Dirba, Khanuri, Moonak and Cheema. As far as the issue of number of schools was concerned it seems that there was sufficient and adequate number of schools in Sangrur district. This suggests not opening new schools but at the same it has been observed that some schools in rural areas demands up-gradation from primary to middle and from middle to high/higher secondary levels.

Table 2.8: Total number of villages and wards and number of schools in Sangrur, 2006-07

Sr.No.	Block	Villages	primary	middle	High	Hir. Sec.	Total
1	Sangrur	57	58	18	9	9	94
2	Malerkotla 1	108	105	25	16	13	159
3	Malerkotla 2	91	86	15	14	6	121
4	Lehragaga	44	47	14	14	5	80
5	Dhuri	42	45	11	8	4	68
6	Andana	40	41	10	10	5	66
7	Sunam	82	99	20	21	14	153
8	Bhawanigarh	68	66	20	7	8	101
9	Sherpur	39	50	14	9	3	76
Rural: sub-total		571	597	147	108	67	919
Municipality Wards							
10	Sangrur	21	15	1	2	2	20
11	Malerkotla	27	10	1	--	1	12
12	Ahemedgarh	15	5	--	--	--	5
13	Dhuri	17	10	2	--	1	13
14	Sunam	20	11	1	--	2	14
15	Lehragaga	13	6	--	--	2	8
16	Bhawanigarh	13	4	--	--	2	6
17	Longowal	15	5	1	--	2	8
18	Dirba	13	2	--	--	1	3
19	Khanauri	11	3	--	1	1	5
20	Moonak	13	3	--	1	1	5
21	Cheema	11	2	--	--	1	3
Urban: sub-total		189	76	6	4	16	102
Total Sangrur		760	673	153	112	83	1021

Source: Offices of DEO, Primary & DEO, Sec., Sangrur

(ii) Posts of Teachers: Sanctioned and Filled

Most important component of school education and improvement of school environment refer to sufficient and adequate provision of teachers in schools. A school without a teacher is not a school; and schools with insufficient number of teachers cannot meaningfully serve the purpose (Tilak, 2006). It has been found that in Sangrur 74 primary schools have single teacher. Among these 60 primary schools are in rural areas and 14 are in urban areas (Table 2.13). Further information regarding teacher's posts and vacant posts has been shown in Table 2.9 and Chart 2.3.

Over all in Sangrur district there were 2473 sanctioned post of government primary school teachers and out of this 1726 were filled and 747 were vacant i.e. 30 per cent. Almost similar situation was observed regarding percentage of vacant posts of primary school teachers in rural and urban areas of Sangrur. However, some variations were seen as in rural areas. For instance, Sherpur, Bhawanigarh and Sunam block have high percentages of vacant post. Similarly Khanuri, Ahemgarh, Sunam and Malerkotla municipalities have highest vacant posts of primary teachers. In all there were 4932 sanctioned posts of secondary school teachers in Sangrur and 13 per cent were vacant. It has been reported as compared to rural secondary school teachers of the district much more posts are vacant (21.6 per cent) in urban secondary school of Sangrur. This may be due to some local causes as big municipalities having high percentage of vacant posts.

As far as the issue of vacant posts is concerned it has been observed that situation was bad in primary schools as compared to secondary schools. In the light of this evidence, for the improvement in school education and school environment, the need of the hour is to fill all the sanctioned posts on regular basis of both primary and secondary teachers as early as possible. Further, it is recommended that all part time/contract basis/adhoc teachers be replaced with permanent regular teachers.

Chart 2.3
Status of Vacant Posts of Teachers (%age) in Sangrur, 2006-07

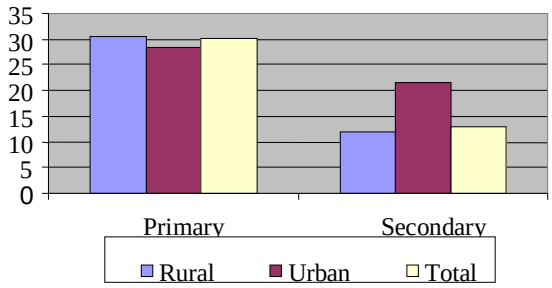


Table 2.9: Posts of Teachers Sanctioned, Filled, Vacant and Percentage of Vacant Posts in Sangrur, 2006-07

Sr. No.	Block	Primary Schools				Secondary Schools			
		Sanc-tioned	Filled	Vacant	Percentage Of vacant	Sanc-tioned	Filled	Vacant	Percentage Of vacant
1	Sangrur	263	201	62	23.6	599	578	21	3.5
2	Malerkotla 1	318	223	95	29.9	832	738	94	11.3
3	Malerkotla 2	273	208	65	23.8	529	419	110	20.8
4	Lehragaga	213	159	54	25.4	369	309	60	16.3
5	Dhuri	168	116	52	31.0	368	329	39	10.6
6	Andana	140	104	36	25.7	278	218	60	21.6
7	Sunam	378	254	124	32.8	645	622	23	3.6
8	Bhawanigarh	232	149	83	35.8	416	360	56	13.5
9	Sherpur	245	138	107	43.7	307	257	50	16.3
Rural: sub-total		2230	1552	678	30.4	4343	3830	513	11.8
Municipality									
10	Sangrur	49	44	5	10.2	125	104	21	16.8
11	Malerkotla	40	24	16	40.0	105	92	13	12.4
12	Ahemedgarh	9	2	7	77.8	85	54	31	36.5
13	Dhuri	24	22	2	8.3	105	66	39	37.1
14	Sunam	25	13	12	48.0	57	34	23	40.4
15	Lehragaga	22	19	3	13.6	8	8	0	0.0
16	Bhawanigarh	19	15	4	21.1	18	18	0	0.0
17	Longowal	17	12	5	29.4	17	17	0	0.0
18	Dirba	10	6	4	40.0	6	6	0	0.0
19	Khanauri	11	2	9	81.8	12	12	0	0.0
20	Moonak	13	11	2	15.4	40	40	0	0.0
21	Cheema	4	4	0	0.0	11	11	0	0.0
Urban: sub-total		243	174	69	28.4	589	462	127	21.6
Total Sangrur		2473	1726	747	30.2	4932	4292	640	13

Source: Offices of DEO, Primary & DEO, Sec., Sangrur

(iii) Number of Teachers and Trained Teachers

The quality of a teacher is equally important aspect of school education. There are many indicators of quality of teachers but training is most important of them. Normally, it is expected that trained school teachers perform better than untrained school teachers. All primary and secondary school teachers were of good quality as in both the cases all the teachers were trained teachers. Similarly no rural-urban differences were reported regarding the quality of teachers. Sex-wise distribution of teachers suggests that female primary teachers dominated the urban areas as their share was 79 per cent and they also outnumbered the male primary teachers in villages. Distribution of secondary school teachers was almost balanced in Sangrur but it was in favour of females in urban areas and in rural areas it was in favour of

male teachers. This was partly due to posting preferences of female teachers as they preferred urban areas for posting and also they were more in number.

(iv) Schools without Permanent Heads

To achieve the objectives of promotion of a safe learning environment; to ensure a school culture that encourages continuous improvements for teachers and students, to develop a congenial environment that encourages open communication with colleagues, students, management and the community and also to mentor educators in the creation and implementation of class instructions, lesson plans, and student assessment requires a dedicated leader in the form of school headmaster/principal. As of now there is a consensus among researchers and educational experts that school headmasters/principals are the natural leaders of school education. Therefore resourceful, professional and regular and permanent headmasters/principals in schools are of paramount importance for the attainment of above said objectives and for excellent performance of schools. The present study attempts to study the issue of regular and permanent school headmasters/principals in Sangrur district. Information regarding primary and secondary schools without regular and permanent heads has been presented in Table 2.10.

In Sangrur district almost 50 per cent high and secondary schools and 35 per cent primary schools were found to be without regular and permanent heads. When we look at the rural urban variation in this regard an interesting and striking feature has been noticed that more that 97 per cent primary schools and more than 65 per cent high/secondary schools in urban areas were without heads. In rural areas backward blocks of Lehragaga and Andana have more schools without heads as compared to other blocks. This is a serious situation and should be resolved immediately by the concerned so that quality education is provided. During the meetings with district education and block level education officers, it is observed that multiple organisation/institutes are managing the schools e.g. education department, municipal committees, Zila Prisad etc. This creates confusion and problems in school administration. So, it is strongly recommend that all the schools should be shifted under education department of the State.

Table 2.10: Block-wise and Municipality-wise Schools without Permanent/ Regular Heads in Sangrur, 2008

Sr. No.	Block	Primary Schools			Secondary Schools		
		Total Schools	Without Heads	%age	Total Schools	Without Heads	%age
1	Sangrur	58	15	25.86	36	16	44.44
2	Malerkotla 1	105	22	20.95	54	23	42.59
3	Malerkotla 2	86	24	27.91	35	22	62.86
4	Lehragaga	47	15	31.91	33	20	60.61
5	Dhuri	45	12	26.67	23	12	52.17
6	Andana	41	16	39.02	25	10	40.00
7	Sunam	99	26	26.26	55	26	47.27
8	Bhawanigarh	66	18	27.27	35	13	37.14
9	Sherpur	50	12	24.00	26	10	38.46
Rural: sub-total		597	160	26.80	322	154	47.83
Municipality							
10	Sangrur	15	15	100	3	2	67
11	Malerkotla	10	10	100	4	2	50
12	Ahemedgarh	5	5	100	-	-	-
13	Dhuri	10	10	100	3	1	33
14	Sunam	11	11	100	3	1	33
15	Lehragaga	6	6	100	2	2	100
16	Bhawanigarh	4	4	100	2	1	50
17	Longowal	5	5	100	3	2	67
18	Dirba	2	0	00	1	1	100
19	Khanauri	3	3	100	2	2	100
20	Moonak	3	3	100	2	2	100
21	Cheema	2	2	100	1	1	100
Urban: sub-total		76	74	97.37	26	17	65.38
Total Sangrur		673	234	34.77	348	171	49.14

Source: Offices of DEO, Primary & DEO, Sec., Sangrur

(v) Results: Teacher Performance

Quality, performance and effectiveness and achievement of a teacher reflect in student achievement mainly through examination results and both are closely and positively related. Performance of students in board examinations is considered one of the leading indicators of the performance of school teachers. Studies and research conducted in the field concluded and strongly suggests that high performance and achievement of a teacher do stimulate more effort on the part of both teacher and student, consequently resulted in increased student achievement/examination results (Gersten, Wlaker and Darch, 1988). The present study attempts to judge the performance of school teachers of Sangrur district on the basis of result of examination of matriculation. Information regarding this for the years 2006-07 and 2007-08 and has been presented in Table 2.11, Pie Figures 1 and Pie Figures 2.

Table reveals that there is no improvement of results of matriculation over 2006-07 and 2007-08 in overall Sangrur district as well as in rural areas and urban areas as pass percentage, percentage of failed and percentage of placed under reappear remained almost 61, 20 and 19 respectively. Further, poor pass percentages, higher percentages of students failed and placed under compartment as compared to Punjab for the same years (see last row of Table 2.11) put the question mark on the quality, performance and effectiveness and achievements of teachers of Sangrur district. Except few variations in matriculation result, as an indicator of performance, it has been found almost same in rural, urban and overall Sangrur district. During the field visit and discussion with teachers and district education officials it has been observed that some other factors were also responsible for the present state of affairs. A large number of vacant posts of teachers, performance of non-academic work by teachers, absenteeism due to lack of enforcement which is again due to political intervention and no/lethargic role by civil society were recognised as contributing factors to teachers performance. All the teachers immediately relieved from the non-teaching work. Hence, there is urgent need to look upon this issue to address it as early as possible.

Table 2.11: Block-wise and Municipality-wise Details of Matriculation Regular Results in Sangrur and Punjab

(Sessions 2006-07 and 2007-08)

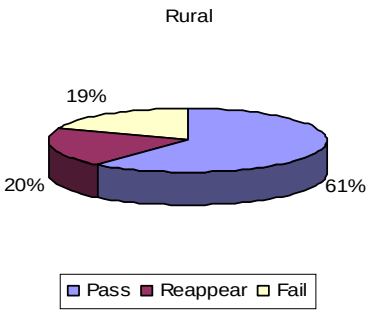
Sr. No.	Block	Session 2006-07				Session 2007-08			
		Pass	Reappear	Fail	Total	Pass	Reappear	Fail	Total
1	Sangrur	527 (64)	168 (20)	128 (16)	823 (100)	503 (57)	200 (23)	182 (20)	885 (100)
2	Malerkotla 1	885 (61)	304 (21)	257 (18)	1446 (100)	782 (62)	283 (23)	190 (15)	1255 (100)
3	Malerkotla 2	906 (68)	224 (17)	204 (15)	1334 (100)	676 (60)	237 (21)	208 (19)	1121 (100)
4	Lehragaga	484 (66)	136 (19)	115 (15)	735 (100)	343 (64)	94 (17)	103 (19)	540 (100)
5	Dhuri	437 (62)	123 (17)	149 (21)	709 (100)	375 (63)	158 (26)	65 (11)	598 (100)
6	Andana	239 (60)	99 (25)	61 (15)	399 (100)	232 (62)	55 (15)	87 (23)	374 (100)
7	Sunam	805 (52)	332 (22)	398 (26)	1535 (100)	666 (56)	245 (20)	290 (24)	1201 (100)
8	Bhawanigarh	349 (52)	195 (29)	127 (19)	671 (100)	417 (61)	201 (29)	67 (10)	685 (100)
9	Sherpur	547 (64)	145 (17)	161 (19)	853 (100)	435 (62)	154 (22)	108 (16)	697 (100)
Rural: sub-total		5179 (61)	1726 (20)	1600 (19)	8505 (100)	4429 (60)	1627 (22)	1300 (18)	7356 (100)
Municipality									
10	Sangrur	84 (40)	53 (25)	74 (35)	211 (100)	166 (74)	41 (18)	17 (8)	224 (100)
11	Malerkotla	150 (67)	41 (18)	34 (15)	225 (100)	204 (74)	54 (20)	17 (6)	275 (100)
12	Ahemedgarh	-	-	-	-	-	-	-	-
13	Dhuri	94 (88)	12 (11)	1 (1)	107 (100)	45 (45)	15 (15)	41 (40)	101 (100)
14	Sunam	100 (46)	36 (17)	82 (37)	218 (100)	90 (44)	37 (18)	77 (38)	204 (100)
15	Lehragaga	216 (62)	55 (16)	76 (22)	347 (100)	145 (70)	34 (17)	27 (13)	206 (100)
16	Bhawanigarh	128 (66)	52 (27)	13 (7)	193 (100)	97 (64)	39 (26)	16 (10)	152 (100)
17	Longowal	121 (67)	44 (24)	16 (9)	181 (100)	60 (44)	28 (21)	47 (35)	135 (100)
18	Dirba	56 (70)	16 (20)	8 (10)	80 (100)	46 (64)	18 (25)	8 (11)	72 (100)
19	Khanauri	70 (86)	7 (9)	4 (5)	81 (100)	67 (54)	13 (11)	44 (35)	124 (100)
20	Moonak	72 (46)	31 (20)	54 (34)	157 (100)	65 (51)	23 (18)	40 (31)	128 (100)
21	Cheema	22 (23)	14 (14)	61 (63)	97 (100)	6 (12)	13 (25)	33 (63)	52 (100)
Urban: sub-total		1113 (59)	361 (19)	423 (22)	1897 (100)	991 (59)	315 (19)	367 (22)	1673 (100)
Total Sangrur		6292 (61)	2087 (20)	2023 (19)	10402 (100)	5420 (60)	1942 (22)	1667 (18)	9029 (100)
Punjab		179058 (65.1)	45442 (16.5)	50558 (18.4)	275120 (100)	202228 (75.3)	38517 (14.3)	27975 (10.4)	268720 (100)

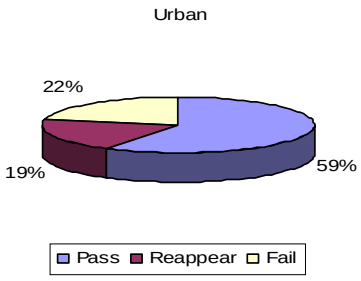
Source: Office of DEO, Secondary, Sangrur and Punjab School Education Board, Mohali.

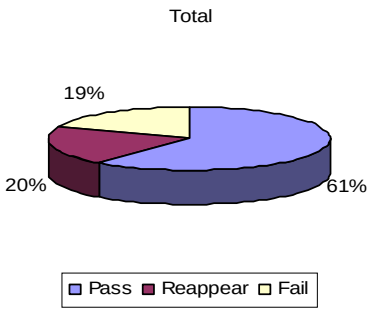
Note**:** Figures in parentheses are percentages

Pie Figures 1

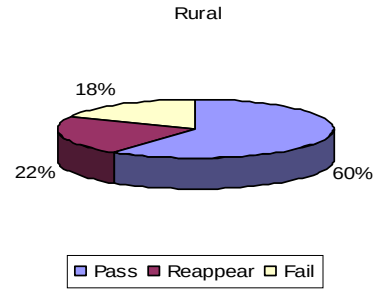
Matriculation Results of Sangrur District Session 2006-2007

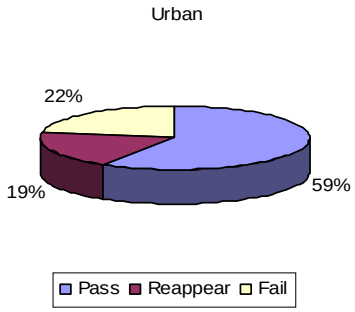


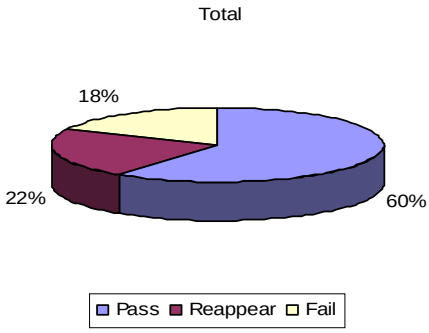




Matriculation Results of Sangrur District Session 2007-2008

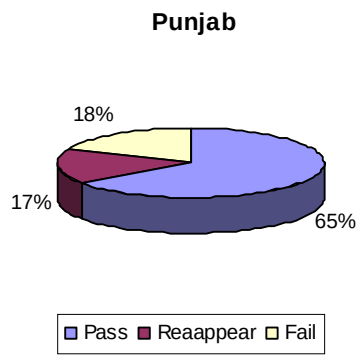




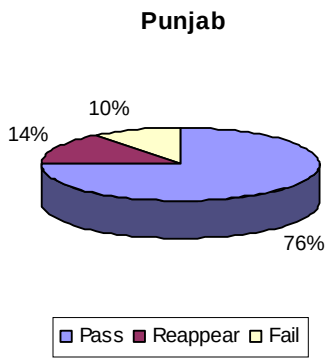


Pie Figures 2

Matriculation Results of Punjab Session 2006-2007



Matriculation Results of Punjab Session 2007-2008



2.5.2 Basic Physical School Infrastructure

The infrastructure that supports school education is composed of wide range of physical assets like school building, labs, playing grounds, furniture, blackboards, drinking water and sanitation, etc. Theses assets contribute a lot in improving school education and school environment. Data and information relating to this has been shown in Table 2.12.

(i) Primary Schools

It has been reported that all the primary schools in Sangrur have *pucca* buildings of their own. In rural areas 4 schools in Lehragaga block, 3 in Andana and one in Sunam have poor condition of school buildings. Eleven primary schools out 19 primary schools in urban areas have also reportedly old, poor and unsafe school buildings. Eighteen per cent primary schools of the district lack the proper play grounds. A large number of primary schools in Sangrur and Bhawanigarh blocks and all municipalities has one or two schools without play grounds. A large number of primary schools of Andana, Lehragaga, Dhuri and Sunam blocks are short of blackboards and some urban primary schools are also facing this problem. A majority of 56 per cent primary schools of the district have no furniture at all or old inadequate furniture. No major rural-urban differences were reported with regard to furniture as similar situation prevailed in rural and urban areas. As far as the facility of toilets is concerned situation in rural primary schools is better than primary schools of urban areas as only one rural primary school and 11 urban primary schools are without

toilets. Similar conditions have also been reported in case of the drinking water facility in the Sangrur district. Surprisingly, it has been reported that authorities never attempted to test the samples of drinking water even in a single primary school of the district. More importantly, 74 primary schools of the district, 60 in rural areas and 14 in urban areas, have single teacher for all classes.

(ii) Secondary Schools

An attempt has been made to analyse the basic school infrastructure of secondary schools of the Sangrur district. It has been reported that no secondary school of the district, rural and urban, is with single or without teachers. Nearly 28 per cent secondary schools of the district, 25 per cent of rural and 79 per cent of urban, have insufficient/inadequate/unsafe or shortage of buildings and labs. In this regard, almost rural and urban secondary schools of the district are evenly distributed among the blocks and municipalities. It has been found that all the secondary schools of the district, rural and urban, have proper playgrounds. Similar trend has been reported in case of blackboards in secondary schools of rural and urban areas. Sixteen per cent secondary schools of the district, 13 per cent of rural and 50 per cent of urban, have no furniture at all or old inadequate furniture. All the secondary schools of the district, rural and urban, have drinking water and toilets facilities. Again, it is matter of serious concern that all the secondary school of the district failed to provide tested clean and safe drinking to the students.

The above analysis reveals some important issues of basic physical infrastructure of primary and secondary school system of Sangrur district. Therefore it is urgently warranted to fill the gaps of physical infrastructure, especially of buildings, separate toilets for boys and girls and provisions of clean and safe drinking water, so that improved education and school environment be provided in district.

Table 2.12: Number of Schools without Basic Physical Infrastructure in Sangrur

S. No.	Block	Primary Schools	Drinking Water	Toilets	Furniture	Blackboards	Playgrounds	Building	One Teacher	Secondary Schools	Drinking Water	Toilets	Insufficient Furniture	Insufficient Blackboard	Playgrounds	Insufficient Building/Labs	No Teacher/One Teacher
1	Sangrur	58	0	0	40	0	25	0	8	36	0	0	5	0	0	6	0
2	Malerkotla-1	105	0	0	2	0	0	0	0	54	0	0	2	0	0	9	0
3	Malerkotla-2	86	0	0	5	0	0	0	9	35	0	0	3	0	0	10	0
4	Lehragaga	47	0	0	43	12	0	4	4	33	0	0	8	0	0	10	0
5	Dhuri	45	0	0	35	0	6	0	1	23	0	0	4	0	0	9	0
6	Andana	41	0	0	41	17	0	3	8	25	0	0	6	0	0	11	0
7	Sunam	99	0	0	58	25	16	1	15	55	0	0	1	0	0	11	0
8	Bhawanigarh	66	0	0	65	14	43	0	15	35	0	0	7	0	0	6	0
9	Sherpur	50	1	1	50	0	3	0	0	26	0	0	5	0	0	9	0
Rural Total		597	1	1	339	68	93	8	60	322	0	0	41	0	0	81	0
Municipality																	
10	Sangrur	15	0	0	6	0	6	1	1	3	0	0	1	0	0	1	0
11	Malerkotla	10	0	0	3	0	2	0	1	4	0	0	1	0	0	3	0
12	Ahemedgarh	5	0	2	3	0	1	2	2	0	0	0	0	0	0	0	0
13	Dhuri	10	0	0	3	0	3	1	1	3	0	0	1	0	0	3	0
14	Sunam	11	4	3	4	0	3	1	2	3	0	0	2	0	0	2	0
15	Lehragaga	6	1	1	6	2	2	1	1	2	0	0	2	0	0	2	0
16	Bhawanigarh	4	0	0	3	0	3	1	1	2	0	0	2	0	0	2	0
17	Longowal	5	1	1	2	0	2	1	1	3	0	0	1	0	0	2	0
18	Dirba	2	0	1	2	1	1	0	1	1	0	0	0	0	0	0	0
19	Khanauri	3	1	1	3	1	1	1	1	2	0	0	1	0	0	1	0
20	Moonak	3	0	1	3	1	1	1	1	2	0	0	1	0	0	2	0
21	Cheema	2	0	1	2	0	1	1	1	1	0	0	1	0	0	0	0
Urban Total		76	7	11	40	5	26	11	14	26	0	0	13	0	0	18	0
Sangrur		673	8	12	379	73	119	19	74	348	0	0	54	0	0	99	0

Source: Offices of DEO, Primary & DEO, Sec., Sangrur

2.6 State Efforts: Policies, Programmes and Prospects

It must be ensured that the policies and programmes initiated and implemented by the state to eradicate illiteracy and to improve educational standards of the people should be meaningful. The strategies and policies of the state in this regard should be aimed at enhancing access to education, quality of education and equity in education and more recently elementary education (Tilak, 2006). The performance and success of efforts, policies and programmes implemented by education department of the state government in Sangrur district has been analysed below.

2.6.1 Educational Expenditures

Expenditure on education is an investment that can help foster economic development, enhance productivity, and contribute to social and personal development. Further, expenditure on education and per student expenditure are the leading and most single important criterion to judge the educational levels of the community because the countries which invest greater share of their gross domestic product on education have been educationally and humanly more advanced (UIS, 2007). Information of expenditure on education from 1997-98 to 2006-007 and per student expenditure during 2006-07 has been presented in Table 2.13 and Chart 2.4.

The total expenditure on school education in rural Sangrur suggests that it has been declined during period 1997-98 to2003-04. After that expenditure on education registered increase in all blocks except two backward blocks of Andana and Sunam. The increase ranges 148 per cent to 10 per cent during 2005-06 and 2006-07 and declined in said blocks by 85 per cent during the same period. The expenditure on education in urban areas registered high increase of 190 per cent as compared to rural areas of 10 per cent during period 1997-98 to 2006-07. Increase registered in expenditure on education in urban areas ranges 24 per cent in Sunam municipality, 650 per in Dirba and 714 per cent in Khanuri.

Another important dimension of expenditure on education was per student annual expenditure. Overall per student annual expenditure has been worked out to be rupees 1984 in Sangrur district, rupees 1051 in rural areas and rupees 5976 in urban areas, during year 2006-07. In rural Sangrur per student annual expenditure ranges lowest of rupees 77 in Sunam block to highest of rupees 1560 in Bhawanigarh block and its uneven distribution is clearly visible from Table 2.13. In urban Sangrur per student annual expenditure ranges lowest of rupees 2390 in Sangrur municipality to highest of rupees 13999 in Ahemedgarh municipality and is also unevenly distributed.

Analysis of total expenditure on education and per student annual expenditure in Sangrur district clearly demonstrates an urban bias. Equally it reveals uneven distribution among different blocks and municipalities over the period of study. This may be partly due to preferences of policy makers and partly due to the distribution of grants to different blocks and municipalities in different years, as per student annual expenditure relates to 2006-07 year only. But it was quite clear that expenditure on education has been continuously declined during 1997-98 to 2001-02 and

continuously increasing during 2002-03 and 2006-07 in Sangrur district (see last row of Table 2.13).

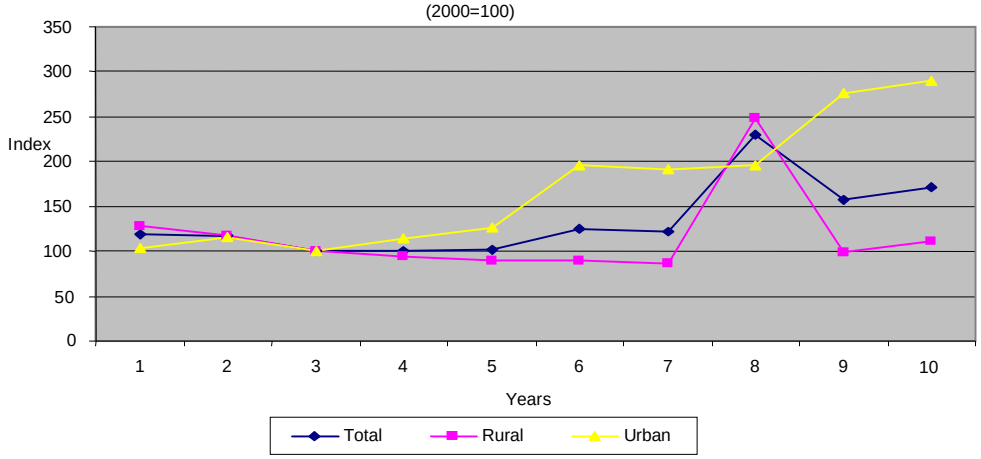
Table 2.13: Block-wise and Municipality-wise Index Numbers of Expenditure on School Education in Sangrur

(1999-2000=100)

S. No.	Block	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	Per Student Expenditure 2006-07
1	Sangrur	128	117	100	93	90	89	86	843	101	135	1292
2	Malerkotla-1	127	117	100	93	90	89	87	272	125	146	944
3	Malerkotla-2	128	117	100	93	90	89	88	157	107	139	1306
4	Lehragaga	127	117	100	93	90	89	86	156	105	138	1545
5	Dhuri	128	117	100	93	90	89	87	150	90	133	2141
6	Andana	127	117	100	93	90	89	89	156	72	15	224
7	Sunam	128	117	100	93	90	89	87	172	97	14	77
8	Bhawanigarh	128	117	100	93	90	89	87	156	97	138	1560
9	Sherpur	128	117	100	93	88	86	83	151	91	134	1473
Rural Total		128	117	100	93	90	89	87	248	98	110	1051
Municipality												
10	Sangrur	20	117	100	92	88	87	85	86	111	76	2390
11	Malerkotla	129	117	100	93	90	132	128	149	196	225	3968
12	Ahemedgarh	116	112	100	95	94	95	94	92	539	545	13999
13	Dhuri	129	117	100	22	90	134	131	122	140	129	3184
14	Sunam	130	117	100	94	137	136	132	140	170	124	3274
15	Lehragaga	127	116	100	412	397	596	580	610	741	540	5699
16	Bhawanigarh	127	118	100	435	418	632	614	652	792	577	5751
17	Longowal	126	116	100	454	437	662	642	689	84	610	6220
18	Dirba	129	117	100	94	91	399	389	359	357	750	13449
19	Khanauri	127	117	100	93	90	424	412	401	381	814	12310
20	Moonak	125	115	100	93	88	434	423	421	390	373	3871
21	Cheema	127	117	100	94	90	468	455	439	436	389	7544
Urban Total		103	116	100	114	125	196	191	195	275	290	5976
Sangrur		119	117	100	100	102	125	122	230	158	171	1984

Source: Offices of DEO, Primary & DEO, Sec., Sangrur

Chart 2.4: Index of Rural, Urban and Total Expenditure on Education in Sangrur, 1998-2007
(2000=100)



2.6.2 Access to Schools: by Distance

Access to education is essential to ensure that children are given the opportunity to develop their full potential. The location of a child's school in relation to his or her home can pose a barrier to accessing education and has been reportedly a cause of dropout/out of school children. Over the years, the Centre and the States have made considerable investments in promoting elementary education. The Fifth All India Educational Survey (1992) reflects that 94.06 per cent of the rural population was served with primary schools within a walking distance of one kilometre and 85.39 per cent of them were served with middle school within a distance of three kilometres. Block-wise and Municipality-wise access to primary, middle and high/higher secondary schools of Sangrur district by distance in kilometres has been presented in Table 2.14.

All the rural and urban primary schools of the district draw their students within walkable distance of less than 2 kilometres. Maximum middle schools were also accessed easily within 3 kilometres and majority of the high/higher secondary schools draw their students within 5 kilometres and a very few schools were accessed beyond 5 kilometres in the district. Access to primary and middle schools in rural and urban areas has been found satisfactory and no rural-urban differences were observed. However, rural-urban differences regarding access to high/higher secondary schools have been noticed and this suggests that access to secondary schools in rural areas is little difficult as some schools draw their students more than 5 kilometres away.

Table 2.14: Block-wise and Municipality-wise Access to Schools in Sangrur, 2006-07

Sr. No.	Block	Primary		Middle			High/Hir.Sec.			
		No	<2km	No	<3 Km	> 3 Km<4	No		< 5 Km	> 5 Km
1	Sangrur	57	58	18	10	8	18	9	4	5
2	Malerkotla-1	108	105	25	20	5	29	16	6	7
3	Malerkotla-2	91	86	15	11	4	20	14	3	3
4	Lehragaga	44	47	14	6	8	19	14	3	2
5	Dhuri	42	45	11	7	4	12	8	2	2
6	Andana	40	41	10	8	2	15	10	2	3
7	Sunam	82	99	20	17	3	35	21	6	8
8	Bhawanigarh	68	66	20	14	6	15	7	3	5
9	Sherpur	39	50	14	10	4	12	9	1	2
Municipality		571	597	147	103	44	175	108	30	37
10	Sangrur	21	15	1	1	--	2		2	--
11	Malerkotla	27	10	1	1	--	3	2	1	--
12	Ahmedgarh	15	5	--	--	--	0		--	--
13	Dhuri	17	10	2	1	1	1		1	--
14	Sunam	20	11	1	1	--	2		2	--
15	Lehragaga	13	6	--	--	--	2		2	--
16	Bhawanigarh	13	4	--	--	--	2		2	--
17	Longowal	15	5	1	1	--	2		2	--
18	Dirba	13	2	--	--	--	1		1	--
19	Khanauri	11	3	--	--	--	2	1	1	--
20	Moonak	13	3	--	--	--	2	1	1	--
21	Cheema	11	2	--	--	--	1		1	--
Urban Total		189	76	6	5	1	20	4	16	
Total Sangrur		760	673	153	108	45	195	112	46	37

Source: Offices of DEO, Primary & DEO, Sec., Sangrur

2.6.3 Non-formal and Adult Education

Malwa region's five districts including Sangrur have maximum number of out of school children in the age group of 6-14 years in the state. Sangrur district is having higher average ratio than the state's demands for specific non-formal educational programmes to cater the educational needs of this section of the child population. Every society has used adult/non-formal education programmes to continue the development of a particular category of citizens. Thus the mission and objective of adult/non-formal education is two-fold, to provide the opportunity for educating adults and for the improvement of skills that empower them to be more productive and efficient. Unfortunately, literacy and adult literacy programmes has been poorly planned and implemented by providing quite unsatisfactory resources (Naik, 1965). The programmes for adult literacy should be redesigned and

reintroduced on new need basis as district has very low education index and also a large number of adult illiterates reside in Sangrur district.

The adult literacy programme was being run under 100 per cent centrally sponsored Rural Functional Literacy Programme and Social Education Scheme till nineties in Sangrur district. After the abolition of these schemes in 1991 adult education remained neglected and the new scheme of Total Literacy/Post Literacy Programme was started during 1994-95 to impart functional literacy to illiterates of the age group of 15-35 and this scheme was implemented in Sangrur district by the Deputy Commissioner through the Zila Sakhrata Samiti. Presently all the schemes of formal and non-formal education merged with Sarv Shiksha Abhiyan Programme. Thus, it is of paramount importance to analyse this programme from different dimensions.

2.6.4 Sarv Shiksha Abhiyan Programme

Sarva Shiksha Abhiyan (SSA) is an effort to universalize elementary education by community-ownership of the school system. It is a response to the demand for quality basic education all over the country. Thus SSA program is also an attempt to provide an opportunity for improving human capabilities of all children, through provision of community-owned quality education in a mission mode. Main targets of SSA are that all children complete five years of primary schooling by 2007 and eight years of elementary schooling by 2010. The focus is on elementary education of satisfactory quality. The SSA aims at bridging all gender and social category gaps at primary stage by 2007 and at elementary education level by 2010 and universal retention by 2010. Under Sarv Shiksha Abhiyan Programme grants for the creation of physical infrastructure (building/labs etc.) and developing intellectual infrastructure i.e. training of teachers through refresher courses and seminars etc., were provided to primary and middle schools of Sangrur district. Information related to these two dimensions has been presented in table 2.15.

During the financial year 2006-07 and 2007-08, out of total grants disbursed to primary schools nearly 83 per cent and 63 per cent went to the rural schools and remaining 17 per and 37 per cent to the urban schools respectively. Educationally and economically backward blocks of Lehragaga and Andana remained neglected in this regard as during last two years they were not able to receive a penny from the grants. During year 2006-07 and 2007-08 all the funds in the case of middle schools were disbursed in rural areas of the district. As far as the expenditure on seminars and

refresher courses, it again remained in favour of rural school teachers of the district during years 2006-07 and 2007-08. Here one important point must be noted that though the absolute amounts and percentages of expenditure through grants and seminars/refresher courses reveals rural bias but this was not true when we study this issue from proportional division of funds angle as around 90 per cent primary and middle schools, students and teachers belonged to rural areas of the district.

2.6.5 Mid-day Meal Programme

In order to improve enrolment, retention and reduce drop out of students in primary classes and to improve the nutritional status of primary students, the Government of India, launched 'National Programme of Nutritional Support to Primary Education' (Mid Day Meal Scheme) in 1995 country wide. In the present case mid-day meal scheme was launched in January 2001 in all government primary schools of the district. Initially per student per month 3 kg wheat was distributed. In September 2002 two backward blocks Andana and Lehragaga were selected for cooked food scheme at the rate of rupees 3.50 per student per day and remaining schools of the district continued under the old scheme of wheat. Whole of the district was covered under cooked food mid-day meal scheme during November-December 2004 and all the students were provided 100 grams of cooked rice/wheat per day and rupees 1.70 per student were disbursed for the purpose and from December 2005 the amount was revised to rupees 2.00. District coordinator of mid-day meal scheme coordinates all the work regarding the scheme and at the village level 9 members *Pendu Shikhia Vikas Committee* has been constituted and this committee with help of mothers self help groups (MSHGs) composed the mothers of beneficiary students and cooks food without wages on voluntary basis.

Table 2.15: Different Dimensions of Sarv Shiksha Abhiyan in Sangrur

(Figures Rupees)

Sr. No.	Block	Grants				Seminar & Refresher Course			
		2006-07		2007-08		2006-07		2007-08	
		Primary	Middle	Primary	Middle	Total Teacher	Total Expenditure	Total Teacher	Total Expenditure
1	Sangrur	2167825	2220447	1446600	1658000	80	51275	121	50848
2	Malerkotla-1	680000	1360000						
3	Malerkotla-2	2070000	3160000	770000		53	43089	95	50600
4	Lehragaga								
5	Dhuri	4760000	510000	1990000		114	2562	112	434
6	Andana								
7	Sunam	3357500	2041848	5745566	2590800	86	86662	139	78959
8	Bhawanigarh	2286000	2454800	2673000	932500	110	83658	161	79625
9	Sherpur	2210000	1190000	1990000	1870000	98	60561	24	12584
Rural Total		17531325	12937095	14615166	7051300	541	327807	652	273050
Municipality									
10	Sangrur			3700000		37	23707	27	11360
11	Malerkotla								
12	Ahemedgarh					2	1631	2	1067
13	Dhuri			170000		18	11254	19	12365
14	Sunam			200000		10	6540	10	4520
15	Lehragaga								
16	Bhawanigarh								
17	Longowal	466250		228625	51600				
18	Dirba								
19	Khanauri								
20	Moonak								
21	Cheema	3182950		4328903	12600				
Urban Total		3649200		8627528	64200	67	43132	58	29312
Sangrur		21180525	12937095	23242694	7115500	608	359685	710	302362

Source: Offices of DEO, Sangrur

Information of mid-day meal scheme has been presented in Table 2.16. Per month per student expenditure varied during years 2003 and 2004 because during this period fixed amount was provided for the scheme in the district and after that this expenditure remained the same and fixed. It has also been reported by district coordinator of mid-day meal scheme and also by the large majority of block education officers during meetings and discussions that this scheme remained a problem in many of the schools mainly because per student low monetary provision, cooking, material and management problems. To make mid-day meal scheme meaningful monetary support should be increased and for better implementation permanent trained cooks and employees should be appointed. Therefore, it is urgently required

that problems of the mid-day meal be immediately looked upon and local need based scheme should be implemented.

Table 2.16: Block-wise and Municipality-wise details of Mid-day Meal Scheme in Sangrur

Sr. No.	Block	2003*		2004		2005		2006		2007	
		I	II	I	II	I	II	I	II	I	II
1	Sangrur	18.30	18233	3.96	290930	2.35	394880	2.65	648873	2.75	609756
2	Malerkotla-1	18.30	24749	5.04	259591	2.35	518865	2.65	1043319	2.75	1137920
3	Malerkotla-2	18.30	18565	4.94	194621	2.35	376330	2.65	753188	2.75	909930
4	Lehragaga	3.50	415514	5.37	465368	2.35	471723	2.65	893186	2.75	836100
5	Dhuri	18.30	14325	4.11	209574	2.35	309455	2.65	648885	2.75	170760
6	Andana	3.50	387011	4.87	401028	2.35	298670	2.65	789655	2.75	638293
7	Sunam	9.76	103497	5.39	437451	2.35	963580	2.65	2016967	2.75	3023591
8	Bhawanigarh	18.30	15997	4.28	222927	2.35	343576	2.65	1092115	2.75	597932
9	Sherpur	18.30	26261	4.74	278276	2.35	502695	2.65	1111234	2.75	737376
Rural Total		5.84	1024152	4.84	2759766	2.35	4179774	2.65	8997422	2.75	8661658
Municipality											
10	Sangrur	16.67	2817	4.00	24581	2.38	76512	2.63	219628	2.78	172667
11	Malerkotla	16.65	2298	5.00	30590	2.38	45051	2.63	102779	2.78	10250
12	Ahemedgarh	16.49	1104	4.76	9492	2.38	13114	2.75	27082	2.76	17450
13	Dhuri	16.66	1962	3.76	18643	2.38	70251	2.75	98881	2.75	13506
14	Sunam	16.61	6972	5.00	47228	2.38	48552	2.75	105376	2.75	103518
15	Lehragaga	3.46	55282	5.00	23852	2.41	30447	2.75	66500	2.75	61482
16	Bhawanigarh	16.17	2089	4.99	18980	2.38	21311	2.75	55436	2.75	33168
17	Longowal	16.63	2928	4.75	17811	2.38	37624	2.75	97866	2.75	215198
18	Dirba	16.67	2527	5.00	7046	2.38	32819	2.75	23032	2.75	13386
19	Khanauri	3.70	48330	4.93	28545	2.38	16514	2.75	55236	2.75	50509
20	Moonak	3.83	32896	5.00	13454	2.38	19232	2.75	55827	2.75	52945
21	Cheema	16.67	2167	5.01	6807	2.38	18552	2.75	54534	2.75	93105
Urban Total		5.63	161372	4.77	247029	2.38	429979	2.71	962177	2.76	837184
Sangrur		5.81	1185524	4.84	3006795	2.35	4609753	2.66	9959599	2.75	9498842

Source: Offices of DEO, Primary, Sangrur
Note: I-Rupees per day per student II- Number of beneficiary students per annum
*Rupees per student per month

2.6.6 Teacher Development Programmes*:* On the Job Training and Seminars

The need to enhance the relevance and quality of in-service teacher development has long been recognised. District Institutes of Education and Training were setup to enhance systemically teacher development challenges. It is argued that training must shift its focus from skills to an engagement with the pressing question of teachers' will to adopt training messages in the current contexts. Teacher development programmes through refresher courses, seminars and other methods have been organised by the education department in the district and information of this has been shown in Table 2.17.

Teacher development programme concentrates mainly on refresher courses and seminars in the district. Other methods such as lab experiment and workshops for

science teachers, language labs for language teachers, etc. have remained almost neglected. It is important to note that during interaction with block education officers of the district it was reported that even refresher courses and seminars lacks seriousness and were of poor standards. Thus the need of the hour is to thoroughly change the present system of teacher development programmes as it was observed that it was sheer wastage of resources. A state level teacher development institute should be established for intensive subject refresher courses/workshops/seminars for teachers and each teacher would be require attending a course of minimum of two to three weeks every three years.

Table 2.17: Teacher Development Programmes and Number of Teacher Benefited in Sangrur

Sr. No.	Block	2005			2006			2007		
		Refresher Courses	Semi-nars	Others	Refresher Courses	Semi-nars	Others	Refresher Courses	Semi-nars	Others
1	Sangrur	49	169	10	33	90	8	0	161	10
2	Malerkotla-1	40	195	0	44	186	0	42	243	0
3	Malerkotla-2	5	55	0	5	95	0	5	185	0
4	Lehragaga	0	72	0	0	69	0	0	141	0
5	Dhuri	3	9	0	4	118	0	2	122	0
6	Andana	0	53	0	0	47	0	0	75	0
7	Sunam	0	123	21	65	183	18	100	254	20
8	Bhawanigarh	2	105	0	1	80	0	0	132	0
9	Sherpur	4	87	0	4	100	0	2	94	0
Rural Total		103	868	31	156	968	26	151	1407	30
Municipality										
10	Sangrur	9	46	0	6	31	0	0	27	0
11	Malerkotla	1	9	0	1	11	0	6	16	0
12	Ahemedgarh	0	0	0	0	2	0	0	2	0
13	Dhuri	0	0	0	0	18	0	0	19	0
14	Sunam	0	13	0	0	7	0	0	7	0
15	Lehragaga	0	10	0	0	6	0	0	15	0
16	Bhawanigarh	0	11	0	0	10	0	0	15	0
17	Longowal	0	12	3	0	11	3	0	18	4
18	Dirba	0	0	0	0	0	0	0	6	0
19	Khanauri	0	9	0	0	3	0	0	2	0
20	Moonak	0	3	0	0	7	0	0	5	0
21	Cheema	0	4	1	0	4	1	0	5	2
Urban Total		10	117	4	7	110	4	6	137	6
Sangrur		113	985	35	163	1078	30	157	1544	36

Source: Offices of DEO, Primary & DEO, Sec., Sangrur.

2.7 Education of Disabled

Universal elementary education can be truly attained only when all disabled children are brought to attend school. The National Policy on Education 1986 advocate integrated education in general schools for the locomotor impaired and mildly disabled children and special education for the severely handicapped children. A number of laws and schemes exist to promote the education of disabled children at various levels (Central, State and local bodies). Free education is to be provided to all the disabled children under the age of 18. The Persons with Disabilities Act 1995 (PWD Act-Equal Opportunities, Protection of Rights and Full Participation) also promotes the integration of disabled children into normal schools.

The Centrally sponsored scheme of Integrated Education for Disabled Children (IEDC) launched in 1974 was last revised in 1992. The scheme provides educational opportunities for disabled children in common schools to facilitate their integration and ultimate retention in the general school system. The scheme is being implemented through the education departments of state governments and UT administrations as well as through non-governmental organisations. The IEDC scheme provides 100 per cent assistance under various components for education of children suffering from mild to moderate disabilities in common schools. The components include educational aids, assistive equipment, salaries for special teachers and facilities for children with disability (Table 2.20).

Information regarding disabled students, disabled children out of school and IDEC expenditure has been presented in Table 2.18, Table 2.19 and Table 2.20 respectively.

It is found that out of 2300 identified disabled children of the Sangrur district 1050 have already been enrolled in the schools. It was reported that assessment camps were continuously being organised to enrol the remaining disabled children of the district. Information suggests that maximum enrolment took place at primary level in the rural areas and concentrated on boys. Disability-wise distribution of out of school children suggests that 85 per cent belonged to rural areas and highest numbers of disabled children were in Malerkotla-2 and Sunam educational blocks. Disability-wise division of out of school children reveals that 44 per cent were orthopaedic impaired, 29 per cent mentally retarded, 20 percent hearing impaired and 7 per cent visual impaired Table 2.19). Under Integrated Education for Disabled Children (IEDC) Aids and appliances were distributed, games, tours and assessment camps were

organised throughout the district. Total expenditure on this count stood at Rupees 274668 during 2006-07 and Rupees 660410 during 2007-08 and total number of beneficiaries stood at 2533 and 2424 during the same years respectively.

Table 2.18: Block-wise and Municipality-wise Disabled Students in Sangrur, 2006-07

Block	Primary		Upper Primary		High		Secondary		Over All	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Sangrur	52	35	0	0	0	0	0	0	52	35
Malerkotla-1	27	7	0	0	0	0	0	0	27	7
Malerkotla-2	135	76	13	5	3	1	0	0	151	82
Lehragaga	100	15	0	0	0	0	0	0	100	15
Dhuri	29	12	0	0	0	0	0	0	29	12
Andana	18	14	0	0	0	0	0	0	18	14
Sunam	54	27	11	4	0	0	0	0	65	31
Bhawanigarh	75	40	31	14	1	2	8	2	115	58
Sherpur	58	37	0	0	0	0	0	0	58	37
Rural Total	549	263	55	23	4	3	8	2	615	291
Municipality										
Sangrur	11	17	0	0	0	0	0	0	11	17
Malerkotla	6	6	0	0	0	0	0	0	6	6
Ahemedgarh	0	0	0	0	0	0	0	0	0	0
Dhuri	3	3	0	0	0	0	0	0	3	3
Sunam	7	4	0	0	0	0	0	0	7	4
Lehragaga	4	2	0	0	0	0	0	0	4	2
Bhawanigarh	15	9	8	2	0	0	4	2	27	13
Longowal	1	0	0	0	0	0	0	0	1	0
Dirba	0	0	1	0	0	0	0	0	1	0
Khanauri	23	7	0	0	0	0	0	0	23	7
Moonak	4	0	0	0	0	0	0	0	4	0
Cheema	3	1	0	0	0	0	0	0	3	1
Urban Total	77	49	9	2	0	0	4	2	90	53
Sangrur	626	312	64	25	4	3	12	4	706	344

Source: Offices of DEO, Primary & DEO, Sec., Sangrur.

As far as the issue of education of disabled children and disabled out of school children is concerned in Sangrur district it has been observed that though some gains and achievements has been noticed but at the same time much more needed to address the issue properly. The remaining disabled out of school children of the district should be enrolled as early as possible. The blocks and municipalities with high number of disabled children of the district should be targeted immediately.

Table 2.19: Block-wise and Municipality-wise Disabled Children Out of School in Sangrur 2008

S. No.	Block	Orthopaedic Impaired	Visual Impaired	Hearing Impaired	Mental Retired	Total
1	Sangrur	17	3	12	26	58
2	Malerkotla-1	17	3	13	38	71
3	Malerkotla-2	139	14	22	50	225
4	Lehragaga	18	10	75	12	115
5	Dhuri	18	5	6	18	47
6	Andana	11	0	7	14	32
7	Sunam	170	28	58	53	309
8	Bhawanigarh	29	4	5	22	60
9	Sherpur	67	9	18	41	135
Rural Total		486	76	216	274	1052 (84)
Municipality						
10	Sangrur	8	2	7	27	44
11	Malerkotla	5	2	7	10	24
12	Ahemedgarh	0	0	0	0	0
13	Dhuri	11	2	5	12	30
14	Sunam	7	2	4	11	24
15	Lehragaga	0	2	2	2	6
16	Bhawanigarh	12	0	1	5	18
17	Longowal	1	0	3	4	8
18	Dirba	1	0	0	0	1
19	Khanauri	11	5	1	13	30
20	Moonak	0	1	3	0	4
21	Cheema	3	1	0	5	9
Urban Total		59	17	33	89	198 (16)
Sangrur		545 (44.00)	93 (7.00)	249 (20.00)	363 (29.00)	1250 (100)

Source: Offices of DEO, Primary & DEO, Sec., Sangrur
Note: figures in parenthesis are percentages

2.8 Higher Education

Higher education creates a pool of qualified people with the knowledge and skills, who can contribute significantly to the economic development, develop science and technology and deliver basic services. An attempt has been made look upon the current status of higher educational institutions and students in Sangrur district.

Table 2.20: Education Block-wise IEDC* Expenditure in Rupees through Sarv Shiksha Abhiyan in Sangrur

Sr.No.	Block Name	2006- 07		2007- 08	
		Total Expenses	Total Beneficiaries	Total Expenses	Total Beneficiaries
1	Ahmedgarh	2050	105	14763	86
2	Cheema	9378	345	55849	329
3	Dhuri	21030	178	42055	178
4	Lehragaga	4780	423	576	423
5	Malerkotla-1	10115	263	22087	247
6	Malerkotla-2	0	200	42651	151
7	Sangrur-1	3285	194	53505	194
8	Sangrur-2	14651	277	42502	277
9	Sherpur	1600	120	16179	200
10	Sunam-1	8390	199	57437	129
11	Sunam-2	7529	229	44457	210
Sub Total		82808	2533	392061	2424
District Level Expenses		191860	-	268349	-
Total		274668	-	660410	-

Source: Offices of DEO, Primary, Sangrur

Note: *Integrated Education for Disabled Children (IEDC) Grant includes Salary of Integrated Education Resource Teachers (11 IERTs), funds for Resource Rooms (11 RRs), Games, Aids & Appliances, Tours and Assessment Camps held at District level.

2.8.1 Institutions

Block-wise and municipality-wise and institute-wise information of the Sangrur district has been presented in Table 2.21.

It is evidently clear that higher educational institutions concentrate in urban areas. However, recently opened educational colleges, due to the high costs of land in urban areas, are located in rural areas. It is worth mentioning that engineering institute of national repute i.e. Sant Longowal Institue of Engineering and Technology, is located at Longowal in the district. In total there were 50 institutes imparting higher education in liberal arts, engineering, medical, industrial training, nursing and education. Analysis of higher education institutions clearly suggests that Sherpur, Andana and Malerkotla-2 blocks and Cheema, Khanuri and Dirba municipalities should also be brought on map of higher education of the district by opening new institutions in these areas.

2.8.2 Students

Block-wise and Municipality-wise, sex-wise and educational category-wise information of the students in higher education in Sangrur district during 2008 has been given in Table 2.22.

In total there were 26360 students in higher education comprised of 11775 girls and 14585 boys during 2008. Out of total 62 per cent in urban areas and 38 per cent in rural areas and dominated by degree courses as 47 per cent of the students opted for these courses. This is followed by engineering, polytechnic, B. Ed and ITIs. Except engineering, polytechnic and it is all the branches of higher education have been dominated by female students in Sangrur district. Backward blocks and recently formed municipalities (small mandies) lagged behind others regarding the number of students in higher education as these were lacking higher educational institutions (for more details see Table 2.21 & 2.22).In the light of above discussion it suggested that efforts should be concentrated to open more higher educational institutions especially in the areas of educationally backward blocks and municipalities. More students should be encouraged to go for higher studies in professional courses as well as liberal arts. New higher educational institutions of quality should be opened so that more students are prepared for the present day needs of the society and industry.

2.9 Education Index

Education index is one of the important of the three indices on which human development index (HDI) is built. In the present study it has been developed on the basis of UNDP recommendations. Due to the limitations of the data regarding adult literacy (above 15 years), literacy rates has been used in place of adult literacy rate for 2001, and gross enrolment rate for 6-14 years of ages. Block-wise and municipality-wise information regarding education index of Sangrur district has been presented in Table 2.23 and Chart 2.5.

Table 2.21: Block-wise and Municipality-wise Institutes of Higher Studies in Sangrur, 2008

Sr. No.	Block	Degree	Engg.	Medical	ITIs	Polytechnic	Nursing	B.ED.	Others	Total
1	Sangrur	2	1	2	-	-	-	1	3	9
2	Malerkotla-1	1	-	-		-	-	2	1	4
3	Malerkotla-2	2	-	-		-	-	-	-	2
4	Lehragaga	2	-	1	1	1	-	4	-	9
5	Dhuri	1	-	-		1	-	1	-	3
6	Andana		-	-	1	-	-	1	-	2
7	Sunam	1	-	1		-	1	3	-	6
8	Bhawanigarh		-	1		-	-	1	1	3
9	Sherpur		-	-		-	-	-	-	
Rural Total		9	1	5	2	2	1	13	5	38
Municipality										
10	Sangrur	2	4	3		-	1	-	-	10
11	Malerkotla	2	-	-	1	-	-	1	-	4
12	Ahemedgarh	2	-	-	1	-	-	-	1	4
13	Dhuri	3	-	-	2	1	-	-	1	7
14	Sunam	3	-	-	3	-	-	-	2	8
15	Lehragaga	1	1	-		1	-	-	1	4
16	Bhawanigarh	2	-	-	-	-	-	1	3	6
17	Longowal	1	1	-	-	-	-	-	-	2
18	Dirba	1	-	-	-	-	-	-	-	1
19	Khanauri	-	-	-	-	-	-	-	-	
20	Moonak	1	-	-	1	-	-	-	2	4
21	Cheema	-	-	-	-	-	-	-	-	
Urban Total		18	6	3	8	2	1	2	10	50
Sangrur		27	7	8	10	4	2	15	15	88

Source: ESO, Sangrur.

Low literacy rates, low education index and higher ranking in education index points out the deprivation in literacy of the concerned block and municipality of the Sangrur district. Cheema, Dirba and Logowal municipalities and Lehragaga, Andana and Sunam blocks have been more deprived in literacy compared to other blocks and municipalities as they ranked higher in education index. Hence, to reduce deprivation in literacy the areas with higher education index ranking must be targeted.

Table 2.22: Block-wise and Municipality-wise students in Higher Studies in Sangrur, 2008

Sr.No.	Block	Degree		Engineering		Medical		ITIs		Polytechnic		Nursing		B.ED.		Others		Total		
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	T
1	Sangrur	465	246	1308	352	205	76	-	-	-	-	37	88	19	81	334	65	2368	908	3276
2	Malerkotla-1	102	257	-	-	-	-	-	-	-	-	-	-	45	161	36	28	183	446	629
3	Malerkotla-2	155	567	-	-	-	-	-	-	-	-	-	-	-	-	-	-	155	567	722
4	Lehragaga	391	247	-	-	-	-	32	21	156	46	-	155	174	286	-	-	753	755	1508
5	Dhuri	501	324	-	-	-	-	-	-	881	44	-	-	19	81	-	-	1401	449	1850
6	Andana	-	-	-	-	-	-	104	16	-	-	-	-	27	73	-	-	131	89	220
7	Sunam	-	168	-	-	99	294	-	-	-	-	26	87	65	577	-	-	190	1126	1316
8	Bhawanigarh	-	-	-	-	102	16	-	-	-	-	-	-	19	81	160	53	281	150	431
9	Sherpur	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rural Total		1614	1809	1308	352	406	386	136	37	1037	90	63	330	368	1340	530	146	5462	4490	9952
Municipality																				
10	Sangrur	1264	1553	-		53	69	-	26	-	-	-	330	-	-	55	101	1372	2079	3451
11	Malerkotla	1512	1304	-		-	-	77	9	-	-	-	-	26	71	-	-	1615	1384	2999
12	Ahemedgarh	150	350	-		-	-	-	13	-	-	-	-	-	-	150	105	300	468	768
13	Dhuri	-	580	-		-	-	53	33	150	13	-	-	-	-	158	68	361	696	1055
14	Sunam	690	555	-		-	-	446	99	-	-	-	-	-	-	74	155	1210	809	2019
15	Lehragaga	-	70	530	339	-	-	-	-	570	107	-	-	-	-	144	116	1244	632	1876
16	Bhawanigarh	121	139	-		-	-	-	-	-	-	-	-	-	100	340	59	461	298	759
17	Longowal	-	183	2110	405	-	-	-	-	-	-	-	-	-	-	-	-	2110	588	2698
18	Dirba	-	156	-		-	-	-	-	-	-	-	-	-	-	-	-	-	156	156
19	Khanauri	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Moonak	306	75	-	-	-	-	17	69	-	-	-	-	-	-	127	33	450	177	627
21	Cheema	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Urban Total		4043	4965	2640	744	53	69	593	249	720	120	-	330	26	171	1048	637	9123	7285	16408
Sangrur		5657	6774	3948	1096	459	455	729	286	1757	210	63	660	394	1511	1578	783	14585	11775	26360

Source: ESO, Sangrur

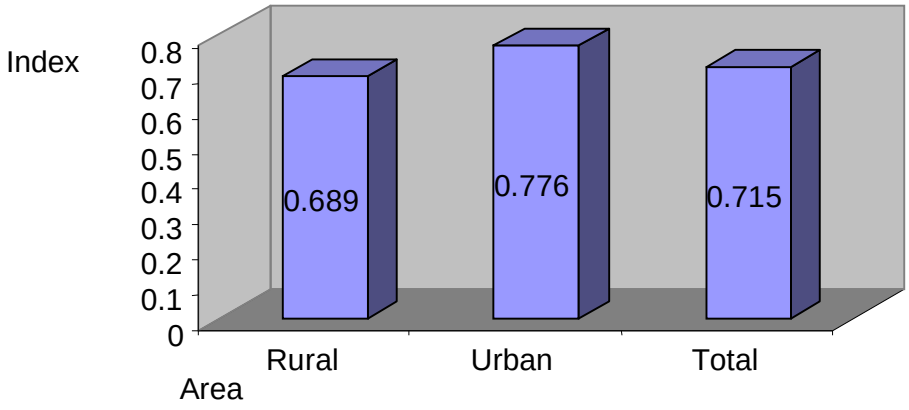
Note: M-Male, F-Female and T-Total

Table 2.23: Block-wise and Municipality-wise Education Index and Rural-Urban Ranking

S. No.	Block	Population	Population Below 6	Population Above 6	Literate Persons	Literacy Rate	Gross Enrolment. Rates	Education Index	Rank
1	Sangrur	111000	14183	96817	53945	55.72	97.8	0.697	5
2	Malerkotla-1	137011	17068	119943	77488	64.6	97.7	0.756	2
3	Malerkotla-2	129834	17199	112635	74193	65.87	96.7	0.761	1
4	Lehragaga	112329	15643	96686	42361	43.81	91.1	0.596	9
5	Dhuri	76057	9881	66176	40182	60.72	95.4	0.723	3
6	Andana	73452	11350	62102	29985	48.28	90.6	0.624	8
7	Sunam	214776	28984	185792	91514	49.26	94.1	0.642	7
8	Bhawanigarh	95351	12774	82577	46217	55.97	96.5	0.695	6
9	Sherpur	93666	11500	82166	47937	58.34	96.7	0.711	4
Rural Total		1043476	138582	904894	503822	55.68	95.4	0.689	
Municipality									
10	Sangrur	77989	8683	69306	56346	81.3	95.6	0.861	1
11	Malerkotla	112523	15884	96639	60881	62.99	87.1	0.710	9
12	Ahemedgarh	28022	3384	24638	19758	80.19	97.2	0.859	2
13	Dhuri	49406	6168	43238	33142	76.65	96.6	0.833	3
14	Sunam	56251	6962	49289	34125	69.23	89.8	0.761	6
15	Lehragaga	19336	2514	16822	12225	72.67	92.0	0.791	5
16	Bhawanigarh	17792	2228	15564	10854	69.74	98.9	0.795	4
17	Longowal	20239	2522	17717	10422	58.82	92.4	0.700	10
18	Dirba	13079	1750	11329	6535	57.68	86.1	0.672	11
19	Khanauri	10960	1784	9176	5927	64.59	84.1	0.711	8
20	Moonak	14924	2377	12547	7699	61.36	92.9	0.719	7
21	Cheema	9245	1309	7936	4133	52.08	87.6	0.639	12
Urban Total		429766	55565	374201	262047	70.03	92.6	0.776	
Sangrur		1473242	194147	1279095	765869	59.87	94.8	0.715	

Source: ESO, Sangrur, DEO, Primary and DEO, Secondary, Sangrur.

Chart 2.5: Education Index of Sangrur District



2.10 Future Scenario

It would be appropriate to present a broad picture of school education in Sangrur district, which might yield some insights into future policy planning of the district as well as of Punjab. A look at the current situation of education in Sangrur

district with regard to the achievements of universal elementary education, education for disabled children, free and compulsory education up to 14 years, eradication of dropout from the schools, and equity in education on all basis reveals that the progress and achievements so far have been behind the targets. Uneven development of education on many counts among different blocks and municipalities of the district demonstrates that a large number of goals of national education polices of different periods have not been achieved so far as all the indicators of literacy and education of Sangrur district remained below the state average. However, over the period of time the increasing number of schools and teachers, increasing enrolments, literacy rates and levels of education and decreasing dropout rates and out of school children suggest that some achievements, improvements and gains have been attained though short of targets. Thus some areas of concern in education must be looked upon so that short comings in fulfilling targets may be overcome as early as possible.

2.10.1 Gains and Achievements

The overall literacy rate of the district has increased as well as male-female literacy rates and gender and rural-urban gaps have been converging. Increasing and high enrolment rates are evidently clear and no wide gaps with regard to rural-urban and gender were visible as for as these variables are concerned. Decreased dropout rates and out of school children are positive achievements. The state recently conducted a comprehensive survey and it has been reported that state would enrol all the out of school children as early as possible. Basic pattern of school education of Sangrur has been composed of primary, middle, high and higher secondary schools and primary schooling has evidently been dominated by rural areas and almost same basic pattern in government secondary schooling has prevailed. As far as the issue of number of schools, it seems that there is sufficient number of schools in Sangrur district. All the teachers of primary and secondary schools are trained and gender equity is also there. Basic physical infrastructure has been found to be satisfactory in secondary schools except labs. No secondary school has been found without teacher or with single teacher. Recently increase in expenditure in the district on education is a positive and welcome step. Access to primary and middle schools in rural and urban areas has been found satisfactory and no rural-urban differences have been observed. Absence of non-formal/adult literacy programmes has been observed. Mid-day meal scheme has been operative in all primary schools of the district. Efforts for education for disabled students and out of school disabled have been started bearing fruits.

Chapter-III
Healthcare

3.1: Introduction

Health is fundamental to development. In terms of resources for economic development, nothing can be considered of higher importance than the health of the people. It is a measure of their energy and capacity as well as of the potential of man-hours for productive work in relation to the total number of persons maintained by the nation. For the efficiency of industry and agriculture the health of a worker is an essential consideration (Government of India, First Five Year Plan, 1951). Health is a state of complete physical, mental and social well being and not merely an absence of disease and infirmity. The WHO definition of health projects three different dimensions of health: physical, mental and social. Health involves primarily the application of medical science for the benefit of the individual and of society. Health ensures effective productive work and has a positive role in human development.

After independence, India has made considerable progress in economic and social development. India has invested huge sums of money in the development of extensive health care system which caters to a population of 1120 million residing in 6,00,000 villages. India, compared to other developing nations spends slightly higher amount in the health sector. It spends 6 per cent of the GDP of $13 per capita in the health sector. However, many of the key health indicators are very low, communicable diseases continue to be a major problem; maternal mortality is high; and morbidity especially among the poor exacts a high toll. Even these indicators vary from region to region, significantly.

Ministry of health and family welfare is the apex executive organization dealing with the issues of health and family welfare. Health is the state subject in India and the Ministry of Health and

Family Welfare acts as a Coordinator between the State Health Departments, Planning Commission, and Central Council of Health etc. besides implementing various national programs and items under unions list and concurrent list. In the process, it is aided by the Directorate General of Health Services.

Table 3.1: Indian health sector – few facts

Total Population	112 crore
Number of villages	6 Lakh
Life expectancy at birth	62.4
Birth rate	27.2
Death rate	8.9
IMR	71.0
MMR	4.37
Couple protection rate	45.4
TFR	3.5
State and Union territories	26, 6
Total public health budgets	5000 $ million
Primary health centers	22991
Hospital beds government and private	0.704 million

Health administration at the apex level of the Government of India consists of a Secretary for Health and Secretary for Family Welfare supported by Additional, Joint secretaries who are drawn from the Indian Civil Service. The rest of the organization is mostly program / project based. Ad-hoc project structures such as TB project or Malaria project etc. are created as and when necessary. Since state governments implement the projects and deliver the regular health services they have fairly well demarcated systems. Separate directorates or head officers usually exist at the state capital for primary, secondary and tertiary health care which includes medical college and medical education. Many states have separate structure for family welfare operations since population control through family planning is given great importance. An average Indian state will have 10 to 25 districts where from most of the revenue and civil administration is governed. District health administration consists of number of officers and doctors who on an average handle 10 to 15

hospitals, 30 to 60 primary health centers and 300 to 400 sub centers. The entire complex arrangement results in a number of vertical channels of information, multiplicity of agencies and dual reporting systems.

Fig. 3.1: Health System in India

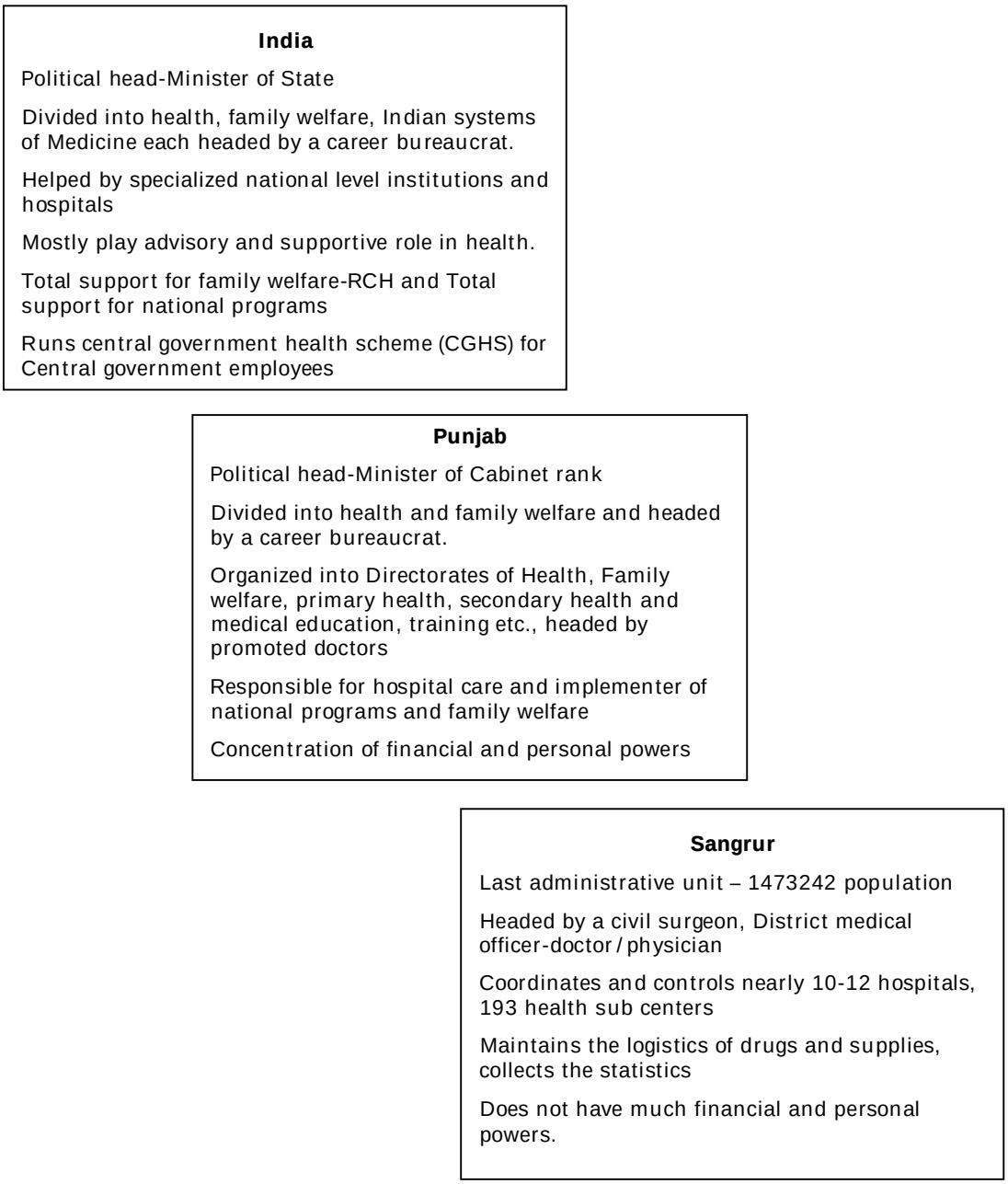


Table 3.2 gives a synoptic view of demand for and supply level of the health system in Sangrur district. The district is dominated by rural population but the development of the health system is biased in favour of the urban one. This kind of skewed distribution is really a matter of concern.

Table 3.2: Health System of District Sangrur, 2007

Total Population	1473242
Rural Population	1043476
Urban Population	429766
Number of sub-division	6 (Sangrur, Malerkotla, Sunam, Dhuri, Moonak and Lehragaga)
Number of community development blocks	09 (Sangrur, Sunam, Bhawanigarh, Lehragaga, Malerkotla-1, Malerkotla-II, Sherpur, Anadana and Dhuri)
Number of PHCs	03 (Moonak, Sherpur and Panjigerian)
Number of CHCs	06 (Amargarh, Kauhrian, Bhawanigarh, Ahmedgarh, Lehragaga and Longowal)
100 bedded Hospital	02
50 bedded Hospital	02
Mini PHCs	25
Sub-Centers	193

Source: Statistical Abstract of Punjab, 2007.

3.2: Birth and Death Rates

The health status is generally measured in terms of life expectancy at birth, infant mortality rate, fertility rate, crude birth rate and crude death rate. The indicators of health status, the birth and death rates are more reflective of the demographic changes taking place in the country. The life expectancy rate and the infant mortality rates are better indicators of health status of the population. A look at the relationship among these four indicators is useful to confirm that these indicators are interdependent over time.

Birth Rate

In demography, the birth rate of a population is the number of child births per 1000 persons per year. It is: CBR = N/Px100, where N is the number of child births in that year and P is the current population.

Table 3.3 shows male birth rate, female birth rate and crude birth rate per thousand. There is a wide difference between the rural and the urban area as far as the birth rate is concerned. Rural area depicts a birth rate of only 15.02 per thousand as against the same of 38.77 per thousand for the urban area. Out of the 9 blocks of rural area, Lehragagga block has the highest birth rate 19.34, followed by Andana at Moonak block (18.12) and Sunam block (16.21) in order. In the rural region of Sangrur district lowest birth rate is in Dhuri block; it is 8.77 per thousand. Sangrur (9.48) and Malerkotla-1 (10.03) follow the Malerkotla-II (11.65) in order.

All urban areas of Sangrur district are characterized by a higher birth rate. It is highest in Bhawanigarh (61.15) followed by Sangrur (60.07), Cheema (41.64) and Sunam (40.28) in order. Gender wise breakup of the data is indicative of the fact that male birth rate and the female one followed the same pattern as different blocks are concerned but the male birth is slightly better than the female one.

Table 3.3: Block-wise and Municipality wise Birth Rate of Sangrur District, 2007

Sr. No.	Block / Municipalities	Male birth	Male Population	Male Birth Rate	Female birth	Female Population	Female Birth Rate	Total Birth	Total Population	Crude Birth Rate
1.	Sangrur	580	59435	9.76	472	51565	9.15	1052	111000	9.48
2.	Malerkotla 1	776	72762	10.66	599	64249	9.32	1375	137011	10.03
3.	Malerkotla 2	791	69726	11.34	721	60108	11.36	1512	129834	11.65
4.	Lehragaga	1229	60168	20.43	943	52161	18.08	2172	112329	19.34
5.	Dhuri	358	40673	8.800	309	35384	8.73	667	76057	8.77
6.	Andana at Moonak	740	39096	18.93	591	34356	17.2	1331	73452	18.12
7.	Sunam	1918	115657	16.58	1503	99119	15.16	3481	214776	16.21
8.	Bhawanigarh	703	51037	13.77	550	44314	12.41	1253	95351	13.14
9.	Sherpur	700	50119	13.97	525	43547	12.06	1468	93666	15.02
Rural Total		7855	558673	14.06	5308	484803	12.18	26911	1043476	25.79
10.	Sangrur	2623	41477	63.24	2062	36512	56.47	4685	77989	60.07
11.	Longowal	200	11109	18.00	177	9130	19.39	377	20239	18.63
12.	Bhawanigarh	605	9400	64.36	483	8392	57.55	1088	17792	61.15
13.	Malerkotla	2233	59760	37.37	1987	52763	39.55	4220	112523	38.36
14.	Ahemadgarh	542	14944	36.27	408	13078	31.20	950	28022	33.90
15.	Dhuri	689	26425	26.07	536	22981	23.32	1225	49406	24.79
16.	Sunam	1433	29994	47.78	1233	26257	46.96	2266	56251	40.28
17.	Lehragaga	191	10299	18.55	139	9037	15.38	330	19336	17.07
18.	Dirba	311	7058	44.06	215	6021	35.71	526	13079	40.22
19.	Moonak	199	7935	25.08	153	6989	21.89	352	14924	23.59
20.	Khanauri	124	5791	21.41	132	5169	25.54	256	10960	23.36
21.	Cheema	197	4930	39.96	188	4315	43.57	385	9245	41.64
Urban Total		9347	229122	40.79	7713	200644	38.44	16660	429766	38.77

Source: CMO Office, Sangrur.

Death Rate

Death rates and crude death rates by sex and place of residence of the district Sangrur are given in table 3.4. Generally, it is found that male death rates are higher than female death rates at nearly all ages. It reflects the level of socio-economic development, quality of life and medical facilities given by district health system. Death rates represent the number of people per thousand persons from the entire population or an age group who are likely to die within a given year. It represents a very basic indicator of health and in the absence of indicators of morbidity, affliction of deadly diseases and the impact of curative systems; death rate is an important true indicator. In all the nine blocks and 12 municipalities' male death rate ranges from 6.12 per thousand to 10.51 per thousand but the average death rate is 8.17 per thousand. Similarly, female death rate ranges from 2.32 per thousand to 7.78 per thousand and the average death rate is 5.42 per thousand. If we compare overall crude death rate, there is a marginal change in all the blocks and municipalities. It shows the death rate is almost uniform across the district which is indicative of the better effects of health facilities and medical care in the Sangrur district.

Birth and death rates at the disaggregation level may give an idea about the dynamics of the phenomenon but due to non availability of required data such an exercise could not be done. However appendix tables 1 and 2 give an idea about fairly wide variations in the number of births and deaths across different religions in the region.

Table 3.4: Block-wise and Municipality-wise Death Rate of Sangrur District, 2007

Sr. No.	Block / Municipalities	Male Deaths	Male Population	Male Death Rate	Female Deaths	Female Population	Female Death Rate	Total Deaths	Total Population	Crude Death Rate
1.	Sangrur	490	59435	8.24	268	51565	5.20	758	111000	6.83
2.	Malerkotla 1	584	72762	8.03	403	64249	6.27	987	137011	7.20
3.	Malerkotla 2	539	69726	7.73	386	60108	6.42	925	129834	7.12
4.	Lehragaga	503	60168	8.35	284	52161	5.44	787	112329	7.00
5.	Dhuri	320	40673	7.87	198	35384	5.60	518	76057	6.81
6.	Andana at Moonak	291	39096	7.44	174	34356	5.06	445	73452	6.06
7.	Sunam	886	118657	7.47	520	101133	5.14	1406	214776	6.55
8.	Bhawanigarh	389	51037	7.62	276	44314	6.23	665	95351	6.97
9.	Sherpur	406	50119	78.10	291	43547	6.68	697	93666	7.44
Rural Total		4388	558673	7.85	2800	484803	5.77	7188	1043476	6.89
10.	Sangrur	436	41477	10.51	284	36512	7.78	720	77989	9.23
11.	Longowal	85	11109	7.65	37	9130	4.05	112	20239	5.53
12.	Bhawanigarh	81	9400	8.62	55	8392	6.55	136	17792	7.64
13.	Malerkotla	471	59760	7.88	259	50242	5.16	730	112523	6.49
14.	Ahemadgarh	131	14944	8.77	97	13078	7.42	228	28022	8.14
15.	Dhuri	200	26425	7.57	119	22981	5.18	319	49406	6.46
16.	Sunam	218	29994	7.27	123	26257	4.68	341	56251	6.06
17.	Lehragaga	63	10299	6.12	36	9037	3.98	99	19336	5.12
18.	Dirba	51	7058	7.23	17	6021	2.82	68	13079	5.20
19.	Moonak	55	7935	6.93	28	6989	5.42	83	14924	5.56
20.	Kanauri	47	5791	8.12	12	5169	2.32	59	10960	5.38
21.	Cheema	34	4930	6.90	21	4315	4.87	55	9245	5.95
Urban Total		1872	229122	8.17	1088	200644	5.42	2960	429766	6.89

Source: CMO Office, Sangrur.

3.3: Maternal Health Service in Sangrur District

Maternal and child health services in rural areas of Sangrur are delivered mainly by government–run PHCs and health sub-centers. In urban areas, such services are mainly delivered through government or municipal hospitals or urban health centers, hospitals and nursing homes operated by non-governmental organizations, and private nursing homes and maternity homes. Recently, efforts to improve maternal and child health have been enhanced by activities of the "Family Welfare Programme" and by the introduction of “Child Survival and Safe Motherhood Programme” (Ministry of Health and Family Welfare, 2002). The Ministry of Health and Family Welfare has also sponsored special projects under the “Maternal and Child Health Programme” including the “Oral Re-hydration Therapy (ORT) Programme”, the establishment of “Regional Institutes of Maternal and Child Health” at district level where infant mortality rates are high and the universal immunization programme etc.

Out of all the issues connected with maternal health institutional deliveries are rated as single largest contributor to well being of pregnant women as well as survival of the neonates. Table 3.5 shows the issues connected with maternal health and institutional deliveries. It is found that percentage share of government institutional delivery is the lowest is in Andana at Moonak, i.e., 1.16 per cent. The highest per cent of institutional deliveries took at CHC Sangrur (33 percent); next followed by Malerkotla Municipality (19.65 percent); and Bhawanigarh (10.25 percent) in order. Rest of the PHCs/CHCs, this mark is at 10 per cent or less. The block, Malerkotla-1, depicts less than one per cent institutional delivery.

Table 3.5: Maternal Health Service in Sangrur District, 2006-07

Sr. No.	Name of the PHC/CHC	Govt. Institutional Delivery	Percentage
1.	PHC Longowal	502	9.62
2.	PHC Malerkotla-2 (Fatehgarhpanj)	280	5.36
3.	PHC Sherpur	330	6.32
4.	PHC Malerkotla-1	40	0.77
5.	PHC Bhawanigarh	535	10.25
6.	PHC Sunam (Kulurian)	170	3.26
7.	PHC Andana at Moonak	80	1.53
8.	CH Sangrur	1723	33.01
9.	Dhuri	267	5.11
10.	Malerkotla Municipality	1026	19.65
11.	Sunam Municipality	268	5.13
	Total	5221	

Source: CMO Office, Sangrur.

Infant and Child Mortality: Infant mortality rates (IMR) and child mortality rate reflect a country's level of socioeconomic development and quality of life and are used for monitoring and evaluating population and health programmes and policies. NFHS-2 asked all ever-married women of age 15-49 to provide a complete history of their births including, for each live birth, the sex, month and year of birth, survival status, and age at the time of the survey or age at death. Age at death was recorded in days for children dying in the first month of life, in months for other children dying before their second birthday, and in years for children dying at later ages. IMR is the number of newborns dying under a year of age divided the number of live births during the year. The IMR is also called infant mortality rate. It can be reported as number of live newborns dying under a year of age per one thousand live births. In case of the Sangrur

district, proper data source of IMR is not available either block-wise or municipality-wise.

3.4: Disease Pattern of Sangrur District

The quantum of disease level in region is best indicated by number of health ailment per thousand of population (table 3.6). For whole of district Sangrur, the number of health ailments per thousand is 858; it is 1587 for urban areas and almost one third of it in rural areas. Such a higher reporting of health ailments in urban area is an alarming figure.

Table 3.6: Number of Health Ailments (OPD) Per Thousand in Sangrur District, 2007-08

Area	No. of health ailments	Ailments per thousand population
Rural	582597	558
Urban	682068	1587
Total	1264665	858

Source: CMO Office, Sangrur.

As per the health system of Punjab, there are 218 most commonly found diseases. These diseases have been reclassified to give synoptic view of disease pattern of the region. Disease pattern of OPD is given in table 3.7. The main diseases amongst OPD patients show that the diseases of respiratory system, digestive system, skin, eyes and oral cavity are more prominent. Diseases of respiratory, digestive and eyes are more prevalent in the rural as compared to the urban area. On the other hand diabetes and hypertension have registered a higher mark in urban area as compared to the rural area.

HIV incidence is very high in district Sangrur. At ART Centre of Govt. Rajindra Hospital, Patiala, HIV patients come for treatment from Malwa region and other nearby cities of Punjab and Haryana. Since the inception of ART Centre in May 2008, till October 2009, total number of cases reported for treatment is 1384 patients. Out of this total 382 cases belong to Sangrur district. In terms of proportion, it comes out to be 28.32 percent which is an alarmingly high figure.

Table 3.7: Disease pattern in OPD in Sangrur, 2007-08

Disease Relating	Rural		Urban	
	Number	Percent	Number	Percent
Respiratory	148075	17.20	81566	15.66
Digestive	110671	12.86	50720	9.74
Skin	95144	11.05	46933	9.01
Blood	59559	6.92	31625	6.07
Eyes	72530	8.43	53572	10.28
ENT	49903	5.80	40500	7.77
Oral Cavity	45618	5.30	52316	10.04
Diabetes	6031	0.70	12785	2.45
Hypertension	24722	2.87	18053	3.47
Others	248619	28.88	132837	25.50
Total	860872	100.00	520907	100.00

Source: CMO Office, Sangrur.

As indicated by most of the NGOs and workgroups, quality drinking water is also a problem in the entire Malwa belt, of which Sangrur is a part. Latest study available on the district pertains to the old undivided Sangrur that includes the Barnala also, hence of no practical use. However a recent report of water samples supplied by the health department (appendix table 3) shows that very small percentage of samples prove to be faulty.

3.5: Status of various Programmes

Utilization of various special health and family welfare services like family planning programmes, TT dosing of pregnant women, and immunization also underscores the status of maternal health care to some extent (table 3.8). Across the blocks these special family welfare services are oddly distributed. The rural areas need to be focused more in this regard. Awareness campaigns and incentive schemes need to be innovated to make the services to reach the rural and poor masses.

Table 3.8: PHC/CHCs wise Percentage Maternal and Child Health Situation in Sangrur, 2007

Sr. No	Name of the PHC/CHC	Pregnant women received double TT Dose		Eligible couples adopting modern vasectomy and tubectomy		Number of children completing immunization	
		Number	Percent	Number	Percent	Number	Percent
1	Sangrur (Longowal)	3316	12.44	513	13.6	2773	11.79
2	Malerkotla 11	3675	13.79	525	13.92	2849	12.11
3	Sherpur	1892	7.1	333	8.83	1751	7.44
4	Malerkotla 1	1973	7.4	217	5.75	1949	8.28
5	Bhawanigarh	2233	8.38	425	11.27	1927	8.19
6	Sunam	3156	11.44	571	15.14	3239	13.77
7	Moonak	4360	16.36	312	8.27	3664	15.57
8	Sangrur	1383	5.9	309	8.19	1155	4.91
9	Dhuri	775	2.19	134	3.55	877	3.73
10	Malerkotla Municipality	2703	10.14	255	6.76	2328	9.90
11	Sunam Municipality	1184	4.44	178	4.72	1014	4.31
	Total	26650	100.00	3772	100	23526	100.00

Source: CMO Office, Sangrur.

Programme-wise expenditure and unspent amount of funds from various agencies is given in table 3.9. The table is indicative of the fact that in majority of the programmes, huge grant is going unspent every year. Range of this unspent grant is very vast; it is from zero to cent percent. Most of such programmes need local matching financial support, innovativeness in use and initiative at operative level by the stakeholders. A great deal of effort is called for to utilize these innovative schemes.

Table 3.9: Programme-wise Expenditure and Unspent Amount in Sangrur, 2007-08

Sr. No.	Name of the Programs	Expenditure Amount	Expenditure (percent)	Unspent Amount	Unspent Amount (percent)
1.	Compensation	1813865	88.94	225478	11.06
2.	JSY	907455	89.91	101845	10.09
3.	Maternal health/Installation of Telephone	7697	47.01	8676	52.99
4.	United Funds Sub Centers	1186961	62.47	713039	37.53
5.	Health Services for SC Weaker Section	18000	10.32	156500	89.68
6.	Logistic Management POL	40050	89.40	4750	10.60
7.	NSV Camps	0	0.00	73100	100.00
8.	Sterilization Camps	19925	10.89	163075	89.11
9.	NSV Acceptors	44920	55.25	36380	44.75
10.	Mobilization Team of Children 100 per	135750	80.16	33604	19.84
11.	Vaccine Delivery 100/- Per SC	124750	74.89	41829	25.11
12.	POL Support 2200/-Per PHC	95232	68.83	43127	31.17
13.	Mobilization Statures	9605	40.02	14395	59.98
14.	Health Education Camps	36000	35.64	65000	64.36
15.	CD/ Cartridge	25579	78.18	7137	21.82
16.	Internet Connection	11533	63.19	6717	36.81
17.	Intensive to link workers	22800	10.75	189200	89.25
18.	United Funds for PHCs/ Mini PHCs	1445354	55.06	1179646	44.94
19.	I.E.C/B.C.C	15675	3.31	457508	96.69
20.	Logistic Management POL HQ	31591	96.23	1237	3.77
21.	Scova Stationary	28710	71.86	11245	28.14
22.	Scova Office Operational Cost	59851	96.48	2183	3.52
23.	Infrastructure Sport	1700	0.34	498300	99.66
24.	RCH Training	415170	40.50	609858	59.50
25.	Health Melas	629577	78.70	170423	21.30
26.	Salary Computer Assistant for DIO	82133	97.78	1867	2.22
27.	Salary of Paediatian Doctor	241500	87.50	34500	12.50
28.	Practice of Sex Selection Awareness Creation	0	0.00	500000	100.00
29.	IUD Insertion Cases	0	0.00	100319	100.00
30.	POL Support to DIO	32584	77.58	9416	22.42
31.	POL Support to Civil Surgeon	5597	31.09	12403	68.91
32.	Cold Chain Maintenance	5560	55.60	4440	44.40
33.	Cold Chain Maintenance PHC/ Mini PHC	12699	84.66	2301	15.34
34.	Salary Computer Operater	295935	60.06	196807	39.94
35.	Salary MPW (M) (F)	330038	72.93	122475	27.07
36.	Population Sterilization Cash Incentive to Surgeon and OT (Tub and Vas)	4000	1.67	235390	98.33
37.	ASHA Funds	129825	23.52	422175	76.48
38.	VSHC	0	0.00	5670000	100.00
39.	World Population Day	24000	100.00	0	0.00
40.	Salary of Staff Nurses PHC/CHC	495108	64.30	274892	35.70
41.	ARHS Programme Funds	0	0.00	115500	100.00
42.	Infrastructure POL	121937	68.84	55196	31.16
43.	Training IMNCI	0	0.00	0	0.00
44.	PNDT De Addiction and Eradication of Female Feticide	28000	28.00	72000	72.00
45.	45.NVBCP IEC/BCC	0	0.00	50400	100.00
46.	46. Mother NGO	100000	100.00	0	0.00
47.	NSV Training	9424	34.90	17576	65.10
48.	ARSH Training	0	0.00	160347	100.00

Source: CMO Office, Sangrur

District gets funds from various agencies under different programmes. Expenditure and unspent balance of funds under various programmes in Sangrur district is given in table 3.10. For the district as a whole, 69.53 percent of the funds received under various programmes go unspent. On an average the amount of unspent funds in all the health centers stands at a mark of more than fifty percent. In order of unspent funds CHC Dhuri with 97.36 percent is at the top and it is followed by PHC Moonak (87.73 percent), PHC Sherpur (74.96 percent) and PHC Sunam (74.21 percent) in order. On the lower range CHC Malerkotla and CHC Sangrur registered this mark of unspent amount at 43.59 percent and 50.92 percent respectively. Further disaggregated analysis of the funds is presented in table 3.11. One important inference that emerges from this analysis is that such a higher level of unspent amount of funds at a particular point of time needs an elaborate empirical prognostication.

Table 3.10: PHC/CHC wise Expenditure and Unspent Balance in Sangrur District, 2007-08

Sr. No	Name of Institution	Amount of Expenditure	Amount Unspent	Unspent (Percent)
1	CHC Sangrur	130005	134903	50.92
2	CHC Malerkotla	147844	114261	43.59
3	CHC Sunam	124518	133982	51.83
4	CHC Dhuri	3200	117800	97.36
5	PHC Amargarh (Malerkotla-I)	559991	1303918	69.96
6	PHC Bhawanigarh	562156	991466	63.82
7	PHC F. Panjgrian (Malerkotla-II)	428635	1172771	73.23
8	PHC Sunam	417758	1202100	74.21
9	PHC Longowal (Sangrur)	466603	807051	63.37
10	PHC Moonak	223922	1600510	87.73
11	PHC Sherpur	355134	1063402	74.96
12	District Sangrur	1692346	3024554	64.12
	Total	5112112	11666718	69.53

Source: CMO Office, Sangrur.

Table 3.11: Percentage Expenditure by the State and Central Government for Special Programmes Funded through Societies, 2007

Sr. No.	Name of Institution	State Plan expenditure	Non-Plan Expenditure	Total Expenditure by the State	Plan/Centre Expenditure	AIDS
1	CHC Sangrur	22.15	49.46	23.17	14.17	52.16
2	CHC Dhuri	4.92	0.00	4.73	0.00	0.00
3	CHC Malerkotla	12.03	2.54	11.68	0.00	45.46
4	CHC Sunam	6.25	0.00	6.02	0.00	1.19
5	PHC Amargarh (Malerkotla-I)	6.66	5.03	6.60	8.22	0.00
6	PHC Fatehgarhpanj (Malerkotla-II)	9.31	6.17	9.20	15.05	1.19
7	PHC Sherpur	6.66	6.08	6.64	15.71	0.00
8	PHC Longowal	8.79	9.44	8.81	17.38	0.00
9	PHC Kaurian (Sunam)	6.23	5.38	6.20	15.56	0.00
10	PHC Moonak	10.12	5.84	9.96	8.66	0.00
11	PHC Bhawanigarh	6.88	10.08	6.99	5.26	0.00

Source: Health and Family Planning Department, Sangrur.

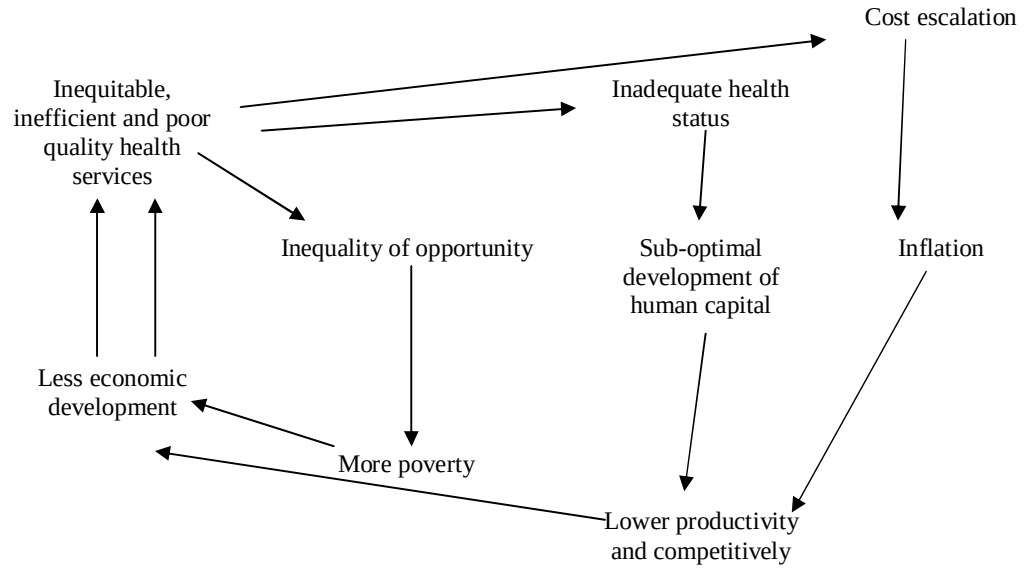
3.6: Government Expenditure on Health Care System

The government expenditure on health care system is very low. For higher human development, social sector should be given better opportunities by allocation of more resources to health. Empirical evidence represents that most of the PHCs in rural areas are not providing quality health facilities. Shortage of staff, poor quality maintenance, and perpetual budgetary problems, large distance of coverage of hospital are some of the main reasons for poor health care system in Sangrur district. Hence, the state should take care of these problems to improve the quality of health care. We know that the importance of health is a main determinant of human development which is well known fact. "Health must better", should be main agenda of government and the people of Sangrur district; both must do efforts for more investment in health system so that health status of the people improves. Spiraling costs and rising demand are putting a severe strain on the health system, whether it is government funded or a private one or both.

Public health expenditure: Health care absorbs a very large quantity of investments from the government and individuals and yet leave millions of people, especially the poor who suffer from a high disease burden, inadequately covered (Figure 3.4).

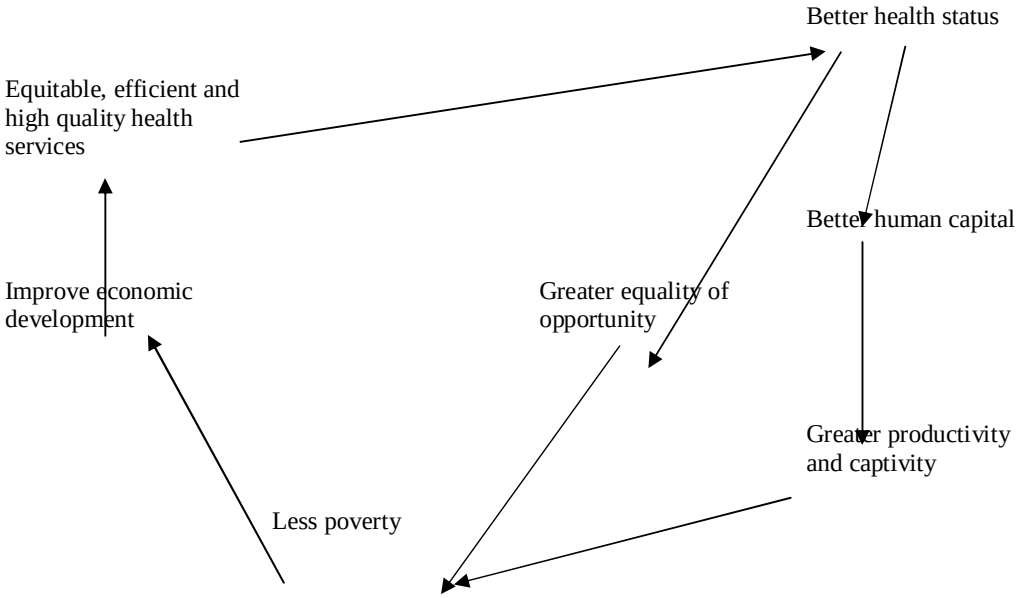
It is essential that policies and strategies are developed to promote equitable access to preventive and curative services so that there is an improvement in health indicators (Figure 4.5).

Fig. 3.4: Unproductive Investment in Health: A Vicious Cycle



Source: Foundation Maxicana ParaLa Salud, 1995.

Fig. 3.5: Productive Investment in Health: A Virtuous Cycle



Source: Foundation Maxicana ParaLa Salud, 1995.

3.7: Health Services and Infrastructure

Health services are provided by public health centers and hospitals as well as by private doctors, clinics, nursing homes. The role of the state and local CMO, at district focuses almost on various

PHCs/CHCs and health sub-centers. Block-wise health facilities are based on nationally accepted norms based on the recommendations of the Bhore Committee Report and modified norms from time to time. At district level, health facilities are based on a four-tier system with sub-health centers (SHCs) which provides basic health services. Above every six SHCs there is a primary health centre (PHC) which covers a population of 20000 to 40000 people. Over the PHCs, next is served by Community Health Centers (CHCs), usually covering a population of one lakh or so. At the district level, civil hospitals or district hospitals are available. The current spread and reach of health infrastructure is clear from the following health characteristics.

Primary Health Care: Primary Health care services in the rural area are provided through a network of Medical institutions comprising of sub centers, SHC, PHCs and CHCs. The various National and State Health Programmes to provide Primary Health Care including a crusade against Malaria, Tuberculosis, Blindness, Drug-de addiction, Leprosy and AIDS are launched through these institutions.

Secondary Level Health Care System: While the CHCs established in the rural area serve as the first level of referral services, the hospitals at Sub-divisional level and District hospitals serve as secondary level of health care system and give support to the services being provided in the Primary Health Care System. Since CHCs in a same way also provide specialist services, these can be considered as a part of the secondary level health care system. Hospital services at the secondary level play a vital and complementary role to the Primary Health Care System and together form a comprehensive district based health care system. A health system based on PHC cannot exist without a network of hospitals with responsibilities for supporting primary care and hospital care. Both are essential part of a well integrated health care system.

Tertiary Level Health Care System: Tertiary level health care services are provided in the State by the specialized hospitals and hospitals

attached to State Medical Colleges. These institutions besides providing support to the secondary level care systems are expected to carry out research and manpower development for the health services of the state.

3.8: Delivery of Family Planning Services

Number of medical institutions per unit of population gives an idea of coverage of the health system (appendix table 4 and 5). Population coverage-wise, Sangrur, in relation to other districts of Punjab, comes at a 14th rank. It is important to that Nawan Shehar, Barnala and Hishirpur are at the top and Ludhiana, Faridkot and Amritsar districts being at the tail end in terms of population coverage by the institutions. In terms of number of beds per unit of population Sangrur comes at the tail end and Amritsar, Faridkot and Patiala at the top of list (appendix table 6). It is because the three big age old hospitals of the state are in these districts only.

In order to provide Family Planning Services in the urban areas, Urban Family Planning Centers, Urban Revamping Centers and Post Partum Units are functioning in the State. Table 3.13 shows the efforts of state government at different levels to improve people's health status. The five principal blocks within the Sangrur district have population of even more than 1 lakh and Sunam is only one block which has the population more than 2 lakh. Rest of the seven blocks has very low population of 10 to 21 thousand only. The physical infrastructure of hospitals, PHCs and HSCs, and deployment of health care in Khanauri block is substantially poor, i.e., having poor resources as compared to requirement. Even the other blocks which have more population in rural are deprived in terms of healthcare service delivery system. Many of the blocks do not have health sub systems. If we compare institutional structure and staffing patterns of healthcare facilities in each block and the present population need to be served by it shows that there is lack of even PHCs.

Table 3.12: Salient Characteristics of Public Health Institutions in Punjab for all districts

Institution	Type of Care	Catchments Population	Bed Strength	Staff Norms
Sub-Centre	Basic guidance in preventive, (immunization, MCH, FP, Basic Sanitation, etc.) and curative (controlling communicable diseases, minor ailments, etc.) in nature	3000-5000 people	Nil	Health Workers-2 (One male and other female)
SHCs	Provides Curative and Preventive services, basically outpatient treatment and very limited/short term inpatient care	20,000-30,000	2-4	One Doctor, One Pharmacist, One ANM, Two Class IV Employees
PHCs	More extensive outpatient services and some inpatient services that require limited/short run observation and treatment	20,000-30,000	4-10	Doctor–2, Pharmacist-2, ANM/CHV and Allied-2 and other employees
RHs	Mostly outpatient care and inpatient care along with a limited range of specialist care	One lakh	25-30	Medical Officer-2, Nursing Since Exchange-1, Pharmacist-3, Staff Nurses-4, Lab Technicians-1, Radiographer-2, Other Staff-15 members
CHCs	Mostly outpatient care and inpatient care along with a limited range of specialist care	One lakh	25-30	Medical Officer-4, Nursing Since Exchange-1, Pharmacist-3, Staff Nurses-4, Lab Technicians-1, Radiographer-2, Other Staff-15 members
Tehsil Hospital	All basic inpatient services and outpatient services	Not Fixed by the authorities	40-50	Consists of several specialists i.e. gynecologist general surgeon, ophthalmologist, ENT specialists, etc. and much more paramedical staff.
District Hospital	All hospitalized and outpatient services along with a wide range of specialist care	Not Fixed by the authorities	80-100	Consists of a wide range of experts/specialists and paramedical staff

Note: One MCH covers 6 sub-centres and one CHC covers 4 PHCs.
Source: Department of Planning, Plan Documents (Various Issues), Government of Punjab.
Department of Planning, Draft Eight Five Year Plan 1992-97 and Annual Plan

Table 3.13: PHC and CHC Wise Healthcare Infrastructure and Coverage in Sangrur District, 2007-08

Sr. No.	Name of Health Block	PHC	MPHC	SC	CHC	RH	SHC	Total Beds	Pharmacists		Lab Staff		Medical Officers		Govt. Nurses		Female Health Assistants	
									Sanction	In position	Sanction	In position	Sanction	In position	Sanction	In position	Sanction	In position
1	PHC Longowal	-	3	24	1	1	11	107	3	3	7	6	10	4	13	10	5	4
2	PHC Fathegarh Panj.	1	2	31	1	2	9	124	4	4	7	1	13	10	12	8	6	2
3	PHC Kauhrain	-	5	25	1	-	8	82	2	1	9	4	10	5	10	-	7	-
4	PHC Moonak	1	6	34	1	1	10	148	3	3	10	6	15	7	20	2	5	2
5	PHC Bhawanigarh	-	2	18	1	-	10	78	1	1	4	2	7	4	8	1	5	2
6	PHC Sherpur	1	4	23	-	-	9	56	1	1	7	5	5	4	4	1	5	3
7	PHC Amargarh	-	3	29	1	-	11	82	1	1	6	3	8	4	7	5	5	3
8	CH Sangrur	-	-	-	-	-	-	100	4	3	4	4	19	19	24	21	1	1
9	CH Dhuri	-	-	-	-	-	-	36	3	3	2	2	12	9	10	10	1	1
10	CH Malerkotla	-	-	-	-	-	-	100	5	5	4	4	20	11	24	13	2	1
11	CH Sunam	-	-	-	-	-	-	50	2	2	3	1	12	10	10	9	2	1

Source: CMO Office, Sangrur.

3.9: State of Healthcare System

The state healthcare system in Sangrur district (table 3.14) comprises a total of 276 health institutions, including district hospitals primary health centers (PHCs), and health sub-centers (SHCs) government dispensaries, CHCs dental clinics, ayurvedic dispensaries and homeopathic dispensaries excluding private health facilities. State health care covers 7 CD blocks. The detailed coverage of blocks show number of existing health institutions and required institutions, shortage of institutions, health staff, population wise number of beds in the institutions, medical officers, supportive female staff. There is one block Sunam having population of more than two lakh which is highest as compare to other blocks but still it has no district hospital. On account of such inadequacies in the face of an overwhelming system-load, there are some blocks which are deprived in terms of building and existing capacity for healthcare service delivery. For instance Malerkotla-1 having population 137011, has only 1 PHC, 1 CHC, 2 MPHCs which includes 108 villages to serve. On the other hand there are some blocks which have less than 75000 population, but have better infrastructure facilities in terms of the staffs, medical officers and female health assistants. Distribution of health facilities is highly uneven when compared on the basis of population load and number of villages covered. It is found that available services are not sufficient to meet emergency patients and there are major regional deficiencies in the delivery of public healthcare system. The maximum population in these blocks has to depend to a greater extent on private clinics to meet their healthcare needs.

Health-Care System Load

In order to provide healthcare facilities on equity basis across all blocks and municipalities, the provision of public healthcare infrastructure in India is designed around population parameters. Therefore, norms are clearly defined for number of PHCs/CHCs,

MPHCs and hospital on the basis of state development and diseases spread and moreover as per the requirement of district. Because of number of more patients in OPD, and economic pressure, the health system presently carried by public healthcare facilities varies from block to block and municipality to municipality in Sangrur district.

Table 3.14 shows that the total number of block level health care institutions varies greatly across the different blocks of Sangrur district (PHCs/CHCs wise). It also indicates that ratio of institutions which provide both in-patient and out-patient facilities such as block hospitals and PHCs is almost similar across the blocks. Four blocks in the district show that there is high record load system because in these blocks PHCs and CHCs bear uniformly more load of population, i.e., more than one lac persons per PHCs/CHCs. PHCs Kaurian of Sunam block has more than two lac persons which is the maximum load in the district. On the whole, it is found that CHC of Sangrur has maximum beds per 10000 persons, 30 medical officers per 1 lakh and more than 200 per cent.

Table 3.14: Institution Wise Health Load System in Sangrur District, 2007-08

S. NO.	Name of Institution	Population	Hospital Beds	Beds per 10000 population	Medical Officers	Doctors per Lakh	OPD	% of OPD to Population	IPD	% of OPD to Population	Total	% of OPD to Population
1	CHC Sangrur	77989	100	12.8	19	24.36	198842	255	13130	16.84	2001972	2566.99
2	CHC Sunma	56251	50	8.89	10	17.78	71009	126.2	2066	3.673	73075	129.909
3	CHC Malerkotla	137011	100	7.3	11	8.03	167463	122.2	9519	6.948	176982	129.174
4	CHC Dhuri	49406	36	7.29	9	18.21	91812	185.8	3230	6.538	95042	192.369
5	CHC Kaurian	56251	82	14.6	9	16	23079	41.03	1043	1.854	24122	42.8828
6	CHC Amargarh	137011	30	2.19	1	0.73	23329	17.03	646	0.471	23975	17.4986
7	CHC Lehragaga	19336	30	15.5	1	5.17	38216	197.6	1084	5.606	39300	203.248
8	CHC Bhawanigarh	17792	30	16.9	3	16.86	46953	263.9	2133	11.99	49086	275.888
9	CHC Longowal	20239	30	14.8	1	4.94	13061	64.53	465	2.298	13526	66.8314
10	CHC Ahemedgarh	28022	30	10.7	4	14.27	54712	195.2	1511	5.392	16223	57.8938
11	PHC Sangrur	93666	56	5.98	4	4.27	82162	87.72	183	0.195	8345	8.90932
12	PHC Sherpur	214776	82	3.82	5	2.33	62103	28.92	0	0	62103	28.9152
13	PHC Kaurian	93351	78	8.36	4	4.2	61455	65.83	0	0	61455	65.8322
14	PHC Amargarh	137011	82	5.98	6	4.38	60415	44.09	0	0	60415	44.095
15	PHC Moonak	73452	148	20.1	7	9.53	125396	170.7	126	0.172	125522	170.89
16	PHC Longowal	111000	107	9.64	4	3.6	78227	70.47	0	0	78227	70.4748
17	PHC Fateghar Panj	129834	124	9.55	10	7.7	66431	51.17	0	0	66431	51.1661

Source: CMO Office, Sangrur.

Organization of Health Programmes

During the different five year and annual plans, the Government of Punjab has focused on strengthening the health infrastructure in the form of building, machinery, equipment and manpower for PHCs/CHCs. The Department of Health and Family is the prime provider of public health services that are preventive and promotional. The state of Punjab implements various National Health Programmes at district level such as TB, Malaria, Blindness, AIDS, Leprosy and Cancer etc. In order to provide better oral health care services, emphasis must be laid on the prevention of oral and dental diseases by restructuring and expanding oral health care facilities. The state and local governments must introduce various schemes in order to improve health care services in urban areas and in surrounding rural areas of Sangrur District.

The curing rate is more than 85 per cent, default rate varies between 3 to 6 per cent, failure rate varies from 2 to 4 per cent and death rate varies from 3 to 4 per cent (Table 3.15). Maximum numbers of TB patients have been found to be positive in Sangrur block and Malerkotla municipality. The proportion of suspected TB cases where patients are subsequently diagnosed as positive ranges from approximately one in ten cases at Sangrur block to nearly 1 in 14 cases at Amargarh (Malerkotla-I). Sangrur reported higher degree of positive cases. Less number of cases has been reported in Cheema Tehsil, i.e., only 3 positive in 115 cases. The default rate is highest in Malerkotla, i.e., 6 per cent as compare to 3 per cent in Sangrur district. The death rate varies from 2 per cent to 4 per cent in different tehsils and sub-regions. The curing rate is almost same in all blocks/tehsils, i.e., varies from 50 per cent to 85 per cent. Each Tuberculosis Units in Sangrur District is serving one lakh population.

Table 3:15 Microscopic Centers for Detection of TB cases under RNTCP (Each Centre for 100000 people), 2007

Sr. No.	Block / Municipality	Suspected TB Cases in 2007	Patients Diagnosed Positive	Patients initiative Treatment	Cure Rate	Default Rate	Death Rate	Failure Rate
1.	Sangrur	3234	312	302	85	3	3	2
2.	Malerkotla	2521	256	540	82	6	4	4
3.	Ahemedgarh	504	80	95	83	4	3	2
4.	Dhuri	405	33	94	84	4	2	3
5.	Sunam (Kurian)	613	84	118	82	5	4	4
6.	Lehragaga	330	51	115	82	5	4	2
7.	Bhawanigarh	515	43	106	83	4	4	4
8.	Longowal	250	26	60	81	5	3	4
9.	Dirba	47	-	50	80	5	3	2
10.	Moonak	343	70	121	82	5.5	3	4
11.	Cheema	115	3	11	80	5	3	3
12.	Sherpur	159	7	55	80	5	4	3
13.	Malerkotla-2	140	8	69	80	6	3	2
14.	Malerkotla-1 (Amargarh)	225	8	87	81	5	4	3
15.	Sunam Municipality	367	30	105	82	4	3	3
Total Sangrur		9768	1011	1928	83	5	4	3

Source: CMO Office, Sangrur.

3.10: Chronic Diseases

It has been found that there are 73 cases of cancer patients reported in different PHCs district Hospital out of which 65 have been reported in Sangrur district hospital, 7 in Malerkotla and only one case in Dhuri Block in the year 2007-08 (table 3.16). There have been 85 cases of Malaria patients who took treatment from various PHCs/CHCs of Sangrur district. Similarly, 30 cases of Leprosy patients have been found in Sangrur district out of which 12 have been reported to the district hospital.

Table 3.16: Block wise/Municipality-wise Cases of Chronic Diseases, 2006-07

Sr. No.	Block / Municipality	Cancer	Malaria	Leprosy
1.	Sangrur		19	2
2.	Malerkotla 1		7	
3.	Malerkotla 2		2	
4.	Lehragaga			
5.	Dhuri			
6.	Andana at Moonak		5	
7.	Sunam		22	2
8.	Bhawanigarh		8	1
9.	Sherpur		1	2
Rural Total			64	7
10.	Sangrur	65	7	11
11.	Malerkotla	07		2
12.	Ahemedgarh		1	4
13.	Dhuri	1		2
14.	Sunam		9	2
15.	Lehragaga			1
16.	Bhawanigarh		2	
17.	Longowal		2	1
18.	Dirba			
19.	Khanauri			
20.	Moonak		2	
21.	Cheema			
Urban Total		73	23	23

Source: CMO Office, Sangrur.

Performance of various routine immunization programmes in Sangrur district is given in Table 3.17. Table shows that under all the programmes actual immunization reporting has always been less than the targeted level. The shortfall of actual and targeted is quite pronounced in case of some health centers. This shows that there is a still good scope to improve the efficiency of health system dealing with immunization programmes.

Table 3.17: Performance of the Routine Immunization Programmes in Sangrur District, 2007

Sr. No.	PHCs/CHCs	BCG reported	BCG Target	Shortfall	OPV reported	OPV Target	Shortfall	DPT reported	DPT Target	Shortfall	MSLS reported	MSLS Target	Shortfall
1.	PHC Longowal (Sangrur)	3055	3501	446	2952	3501	549	2952	3501	549	2773	3501	728
2.	PHC Fatehgarh Panj (Malerkotla-	3160	3794	634	3162	3794	632	3162	3794	632	2849	3794	945
3.	PHC Sherpur	1975	2990	1015	1813	2990	1177	1813	2990	1177	1751	2990	1239
4.	PHC Amargarh (Malerkotla-1)	2035	2901	866	1910	2901	991	1910	2901	991	1949	2901	952
5.	PHC Bhawangarh	1954	2284	330	1925	2284	359	1925	2284	359	1927	2284	357
6.	PHC Kulrian (Sunam)	3394	4179	785	3245	4179	934	3245	4179	934	3239	4179	940
7.	PHC Andana at Moonak	3773	4728	955	3861	4728	867	3861	4728	867	3667	4728	1064
8.	CH Sangrur	1748	1394	354	1175	1394	219	1175	1394	219	1155	1394	239
9.	Dhuri	961	1004	43	82	1004	178	826	1004	178	877	1004	127
10.	Malerkotla Municipality	2221	2654	476	2236	2654	418	2236	2654	418	2328	2654	326
11.	Sunam Municipality	994	1224	230	1000	1224	224	1000	1224	224	1014	1224	210
Total		25270	30653	5383	24105	30653	6548	24105	30653	6548	23526	30653	7127

Source: CMO Office, Sangrur.

3.11: Sum up

To sum up, the health and medical care services are not only inadequate but also unequally distributed across different blocks and municipalities of the Sangrur district. Although, the system is overloaded yet there is no dearth of funds. A good chunk of funds is going unutilized. Emerging disease patterns in clusters is a matter of serious concern. Economically backward regions are also poor in terms of health services.

Table 1: Religion Wise Number of Births in Sangrur District, 2007-08

Sr. No.	Name of Blocks	Total Population	No. of Birth Registered			Hindu			Sikh			Muslim			Christian			Other			Still Birth		
			Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	Sangrur	111000	580	472	1052	66	50	116	492	434	926	6	3	9	1	0	1	0	0	0	0	0	0
2	Bhawanigarh	95351	703	550	1253	140	116	256	555	430	985	6	3	9	2	1	3	0	0	0	0	0	0
3	Malerkotla 1	137011	776	599	1375	75	78	153	556	409	965	144	111	255	1	1	2	0	0	0	0	0	0
4	Malerkotla 2	129834	791	721	1512	102	65	167	515	429	944	171	225	396	3	2	5	0	0	0	0	0	0
5	Dhuri	76057	358	309	667	43	32	75	308	274	582	4	2	6	3	1	4	0	0	0	0	0	0
6	Sunam	214776	1978	1503	3481	153	131	284	1814	1365	3179	9	6	15	2	1	3	0	0	0	0	0	0
7	Leheragaga	112329	1229	943	2172	189	134	323	1035	805	1840	5	4	9	0	0	0	0	0	0	0	0	0
8	Sherpur	93666	700	525	1225	69	59	128	626	462	1088	4	3	7	1	1	2	0	0	0	0	0	0
9	Andana at Moonak	73452	740	591	1331	255	166	421	476	418	894	5	4	9	4	3	7	0	0	0	0	0	0
Rural Total		**1043476**	**7855**	**1213**	**14068**	**1092**	**831**	**1923**	**6377**	**5026**	**11403**	**354**	**361**	**715**	**17**	**10**	**27**	**0**	**0**	**0**	**0**	**0**	**0**
1	Sangrur	77989	2623	2062	4685	1326	1073	2399	1256	966	2222	30	19	49	3	1	4	8	3	11	0	0	0
2	Longowal	20239	200	177	377	15	20	35	177	147	324	8	10	18	0	0	0	0	0	0	0	0	0
3	Bhawanigarh	17792	605	483	1088	106	73	179	483	394	877	16	16	32	0	0	0	0	0	0	0	0	0
4	Malerkotla	112523	2233	1987	4220	268	220	488	764	614	1378	1190	1152	2342	1	1	2	0	0	0	21	24	45
5	Ahemdgarh	28022	542	408	950	200	175	375	142	103	245	71	72	143	62	35	97	67	35	102	0	0	0
6	Dhuri	49406	689	536	1225	382	248	630	252	240	492	42	35	77	0	0	0	13	13	26	0	0	0
7	Sunam	56251	1433	1233	2666	360	310	670	1049	903	1952	24	20	44	0	0	0	0	0	0	0	0	0
8	Leheragaga	19336	191	139	330	104	80	184	86	57	143	1	2	3	0	0	0	0	0	0	0	0	0
9	Dirba	13079	311	215	526	41	34	75	266	178	444	4	3	7	0	0	0	0	0	0	0	0	0
10	Moonak	14924	199	153	352	92	70	162	98	80	178	9	3	12	0	0	0	0	0	0	0	0	0
11	Khanori	10960	124	132	256	90	94	184	33	36	69	1	2	3	0	0	0	0	0	0	0	0	0
12	Cheema	9245	197	188	385	22	22	44	171	161	332	4	3	7	0	0	0	0	0	0	0	0	0
TOTAL		**429766**	**9347**	**7713**	**17060**	**3006**	**2419**	**5425**	**4777**	**3879**	**8656**	**1400**	**1337**	**2737**	**66**	**37**	**103**	**88**	**51**	**0**	**21**	**24**	**45**

Source: Statistical Abstracts of Punjab, 2007.

Table 2: Religion Wise Number of Deaths in Sangrur District, 2007-08

Sr. No.	Name of Blocks	Total Population	No. of Death Registered			Hindu			Sikh			Muslim			Christian			Other			Infant Death			Maternal Death
			Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	
1	Sangrur	111000	490	268	758	48	36	84	441	232	673	1	0	1	0	0	0	0	0	0	1	0	1	0
2	Bhawanigarh	95351	389	276	665	47	42	89	339	232	571	2	1	3	1	1	2	0	0	0	0	0	0	0
3	Malerkotla 1	137011	584	403	987	48	41	89	490	318	808	46	43	89	0	1	1	0	0	0	5	3	8	1
4	Malerkotla 2	129834	539	386	925	50	37	87	411	289	700	76	59	135	2	1	3	0	0	0	4	2	6	1
5	Dhuri	76057	320	198	518	35	26	61	284	169	453	1	1	2	0	2	2	0	0	0	0	0	0	0
6	Sunam	214776	886	520	1406	95	67	162	788	451	1239	2	1	3	1	1	2	0	0	0	0	0	0	0
7	Leheragaga	112329	503	284	787	82	70	152	420	211	631	0	1	1	1	2	3	0	0	0	2	0	2	1
8	Sherpur	93666	406	291	697	56	22	78	348	268	616	2	0	2	0	1	1	0	0	0	2	4	6	0
9	Andana at Moonak	73452	271	174	445	82	66	148	180	105	285	6	2	8	3	1	4	0	0	0	2	4	6	0
Rural Total		**1043476**	**4388**	**2800**	**7188**	**543**	**407**	**950**	**3701**	**2275**	**5976**	**136**	**108**	**244**	**8**	**10**	**18**	**0**	**0**	**0**	**16**	**13**	**29**	**3**
1	Sangrur	77989	436	284	720	240	137	377	194	147	341	2	0	2	0	0	0	0	0	0	3	2	5	0
2	Longowal	20239	85	37	122	13	14	27	71	23	94	1	0	1	0	0	0	0	0	0	0	0	0	0
3	Bhawanigarh	17792	81	55	136	34	22	56	42	33	75	5	0	5	0	0	0	0	0	0	0	0	0	0
4	Malerkotla	112523	471	259	730	98	61	159	89	47	136	284	150	434	0	1	1	0	0	0	1	2	3	1
5	Ahemdgarh	28022	131	97	228	65	48	113	40	25	65	20	15	35	2	0	2	4	9	13	0	0	0	0
6	Dhuri	49406	200	119	319	90	55	145	76	40	116	26	19	45	0	0	0	8	5	13	0	0	0	0
7	Sunam	56251	218	123	341	65	60	125	151	60	211	2	3	5	0	0	0	0	0	0	4	1	5	0
8	Leheragaga	19336	63	36	99	40	22	62	23	14	37	0	0	0	0	0	0	0	0	0	0	0	0	0
9	Dirba	13079	51	17	68	14	6	20	34	11	45	3	0	3	0	0	0	0	0	0	0	0	0	0
10	Moonak	14924	55	28	83	25	15	40	30	13	43	0	0	0	0	0	0	0	0	0	0	0	0	0
11	Khanori	10960	47	12	59	28	9	37	19	3	22	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Cheema	9245	34	21	55	7	3	10	27	18	45	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		**429766**	**1872**	**1088**	**2960**	**719**	**452**	**1171**	**796**	**434**	**1230**	**343**	**187**	**530**	**2**	**1**	**3**	**12**	**14**	**26**	**8**	**5**	**13**	1

Source: Statistical Abstracts of Punjab, 2007.

Table 3: Drinking Water Samples Status Report (2009)

Sr.No.	Block	Samples Taken (No.)	No.of Samples OK	No. of Samples Faulty	Any Other Finding
1	Sangrur	25	25	0	Normally the Ground Water of deep tube-wells of Block Sangrur is potable, however TDS, Mg are more than Acceptable but less than cause of rejection Other Parameters such as pH. Cl.SO4, NO3, F, Ca, Fe, TH are within acceptable limits
2	Malerkotla-1	52	52	0	Normally the Ground Water of deep tube-wells of Block Malerkotla-1 is potable, however TDS, Mg are more than Acceptable but less than cause of rejection Other Parameters pH. Cl.SO4, NO3, F, Ca, Fe,TH are within acceptable limits
3	Malerkotla-2	20	20	0	Normally the Ground Water of deep tube-wells of Block Malerkotla-2 is potable, however TDS, Mg are more than Acceptable but less than cause of rejection Other Parameters pH. Cl.SO4, NO3, F, Ca, Fe, TH are within acceptable limits
4	Lehragaga	23	22	1	Ground Water of tube-well at Villages Daska is un-potable due to TDS, SO4& Fluorides more than permissible limits. Normally the Ground Water of Block Lehragaga is potable, however TDS, Mg, Total Alk, SO4, Fluorides are more than Acceptable but less than cause of rejection Other Parameters Cl. NO3, Ca, Fe, TH are within acceptable limits
5	Dhuri	26	26	0	Normally the Ground Water of Block Dhuri is potable, however TDS, Mg, Total Alk are more than Acceptable but less than cause of rejection Other Parameters pH. Cl.SO4, NO3, F, Ca, Fe,TH are within acceptable limits
6	Andana	21	20	1	Ground Water of tube-well at Villages Andana is un-potable due to Fluorides more than permissible limits. De-fluoridation Plant has been installed at W/W Andana to decrease Fluorides within permissible limits. Normally the Ground Water of deep tubewells of Block Andana is potable, However TDS, Mg, TotalAlk, Fluorides are more than Acceptable but less than cause of rejection Other Parameters pH, Cl. SO4,NO3, Ca, Fe, TH are within acceptable limits
7	Sunam	38	35	3	Ground Water of tubewell at Villages Sangtiwala, Khadial, is unpotable due to Fluorides more than permissible limits.Normally the Ground Water of deep tube-wells of Block Sunam is potable, However TDS, Mg, TotalAlk, Fluorides are more than Acceptable but less than cause of rejection Other Parameters pH, Cl. SO4,NO3, Ca, Fe,TH are within acceptable limits
8	Bhawanigarh	27	27	0	Normally the Ground Water of deep tube-wells of Block Bhawanigarh is potable, however TDS, Total Alk, Mg, are more than Acceptable but less than cause of rejection Other Parameters pH. Cl.SO4, NO3, F, Ca, Fe, TH are within acceptable limits
9	Sherpur	21	20	1	Ground Water of tube-well at Village Sherpur is un-potable due to Fluorides more than permissible limits. Normally the Ground Water of deep tube-wells of Block Sherpur is potable, However TDS, Mg, Total Alk are more than Acceptable but less than cause of rejection Other Parameters pH, Cl., Fluorides , SO4,NO3, Ca, Fe,TH are within acceptable limits
	Total :-	**253**	**247**	**6**	

Table 4: District-wise Medical Institutions Classified by Area Ownership, Hospital, PHCs and Dispensaries in Punjab, April, 2007

Sr. No.	District	District Population	Urban Area				Rural Area				Owned by			Located by						
			Hospitals/ CHC, CHC, CHC/PHC	Dispensaries	P.H.Cs.	Hospitals	Hospitals/ CHC, CHC, CHC/PHC	Dispensaries	P.H.Cs.	Hospitals	Voluntary Org.	Local Govt.	State Govt.	Urban Area Total	%age of Urban Total to Total Population	Rural Area Total	%age of Rural Total to Total Population	Total	%age of Total to Total Population	Rank
1	Gurdaspur	2343201	5	10	1	10	7	115	45	4	1	1	195	26	0.111	171	0.73	197	0.841	13
2	Amirtsar	2448439	3	17	1	18	2	90	25	10	8	4	154	39	0.159	127	0.519	166	0.678	18
3	Tarn Taran	1065936	-	1	2	5	7	62	22	1	4	-	96	8	0.075	92	0.863	100	0.938	5
4	Kapurthala	827392	1	11	2	5	4	46	9	3	1	-	80	19	0.23	62	0.749	81	0.979	4
5	Jalandhar	2177348	4	39	3	16	4	93	24	5	8	5	175	62	0.285	126	0.579	188	0.863	10
6	Nawan Shehar	623780	1	2	1	2	2	51	14	3	-	-	177	7	0.112	70	1.122	77	1.234	1
7	Hoshiarpur	1601379	3	12	1	7	-	87	34	7	2	1	154	23	0.144	134	0.837	157	0.98	3
8	Rupnagar	708081	2	7	-	5	6	34	14	2	-	-	64	14	0.198	50	0.706	64	0.904	6
9	S.A.S Nagar	786305	2	10	2	3	1	42	11	-	-	-	71	17	0.216	54	0.687	71	0.903	7
10	Ludhiana	3464212	4	41	3	18	5	107	28	10	16	11	189	66	0.191	150	0.433	216	0.624	20
11	Ferozpur	1952213	3	10	1	12	5	79	32	5	3	-	144	26	0.133	121	0.62	147	0.753	17
12	Faridkot	617638	-	6	-	5	2	18	9	1	-	-	41	11	0.178	30	0.486	41	0.664	19
13	Muktsar	861851	1	5	-	2	4	44	14	4	-	-	74	8	0.093	66	0.766	74	0.859	11
14	Moga	972925	1	2	1	2	4	52	20	3	1	-	84	6	0.062	79	0.812	85	0.874	9
15	Bathinda	1320216	2	19	-	8	3	61	22	4	1	-	118	29	0.22	90	0.682	119	0.901	8
16	Mansa	767532	2	3	1	4	3	36	13	1	-	-	63	10	0.13	53	0.691	63	0.821	14
17	Sangrur	1632010	5	10	4	10	2	68	26	3	1	-	127	29	0.178	99	0.607	128	0.784	15
18	Barnala	583717	3	4	2	1	1	35	9	3	-	-	58	10	0.171	48	0.822	58	0.994	2
19	Patiala	1839747	3	28	-	11	5	62	31	1	4	1	136	42	0.228	99	0.538	141	0.766	16
20	Fatehgarh Sahib	594815	1	5	-	2	1	25	14	3	-	1	50	8	0.134	43	0.723	51	0.857	12
	Punjab	27188737	46	242	25	146	68	1207	416	73	50	24	2250	460	0.169	1764	0.649	2224	0.818	

Source: Statistical Abstracts of Punjab, 2007.

Table 5: District-wise Medical and Health: Ayurvedic, Homoeopathic and Unani Institution of Punjab

Sr. No.	District	District Population	Ayurvedic	Unani	Homoeopathic	Total	Institution served per lakh	Rank
1	Gurdaspur	2343201	52	3	6	61	2.603	8
2	Amirtsar	2448439	22	2	3	27	1.103	19
3	Tarn Taran	1065936	22	2	4	28	2.627	7
4	Kapurthala	827392	26	2	7	35	4.23	2
5	Jalandhar	2177348	32	4	8	44	2.021	15
6	Nawan Shehar	623780	24	1	3	28	4.489	1
7	Hoshiarpur	1601379	46	2	8	56	3.497	5
8	Rupnagar	708081	22	2	5	29	4.096	3
9	S.A.S Nagar	786305	23	0	9	32	4.07	4
10	Ludhiana	3464212	36	4	12	52	1.501	18
11	Ferozpur	1952213	38	3	8	49	2.51	10
12	Faridkot	617638	9	0	5	14	2.267	11
13	Muktsar	861851	11	2	1	14	1.624	17
14	Moga	972925	7	0	1	8	0.822	20
15	Bathinda	1320216	27	1	7	35	2.651	6
16	Mansa	767532	12	1	2	15	1.954	16
17	Sangrur	1632010	31	3	8	42	2.574	9
18	Barnala	583717	12	0	0	12	2.056	13
19	Patiala	1839747	32	0	6	38	2.066	12
20	Fatehgarh Sahib	594815	10	2	0	12	2.017	14
	Punjab	27188737	494	34	103	631	2.321	

Source: Statistical Abstracts of Punjab, 2007.

Table 6: District-wise Beds in Medical Institutions in Punjab by Area, 2007

Sr. No.	District	District Population	Beds installed in					Beds in					
			Hospitals	Primary Health Centre	Dispensaries	Hospitals/ CHC,CHC, CHC/PHC	Total Col.	Bed's per 10000	Rural Area	In rural area Beds per 10000	Urban Area	In Urban are Bed's per 10000	Rank
1	Gurdaspur	2343201	646	172	529	360	1707	7.285	998	4.259	709	3.025	14
2	Amirtsar	2448439	3078	44	468	120	3710	15.15	970	3.961	2740	11.19	1
3	Tarn Taran	1065936	400	182	164	240	986	9.25	696	6.529	290	2.720	9
4	Kapurthala	827392	372	48	199	150	769	9.294	407	4.919	362	4.375	6
5	Jalandhar	2177348	1434	106	479	260	2279	10.47	734	3.371	1545	7.095	4
6	Nawan Shehar	623780	145	52	209	90	496	7.952	381	6.107	115	1.843	12
7	Hoshiarpur	1601379	695	140	384	270	1489	9.298	809	5.051	680	4.246	7
8	Rupnagar	708081	392	52	150	60	654	9.236	235	3.318	419	5.917	8
9	S.A.S Nagar	786305	110	56	192	90	448	5.698	246	3.128	202	2.569	20
10	Ludhiana	3464212	2615	112	484	270	3481	10.05	1002	2.892	2479	7.156	5
11	Ferozpur	1952213	851	116	368	240	1575	8.068	709	3.631	866	4.436	10
12	Faridkot	617638	602	44	82	60	788	12.76	206	3.335	582	9.423	2
13	Muktsar	861851	190	60	184	128	562	6.521	416	4.826	146	1.694	18
14	Moga	972925	325	96	212	150	783	8.048	487	5.005	296	3.042	11
15	Bathinda	1320216	455	82	365	120	1022	7.741	521	3.946	501	3.794	15
16	Mansa	767532	187	48	152	150	537	6.996	307	3.999	230	2.996	17
17	Sangrur	1632010	429	120	298	180	1027	6.293	499	3.057	528	3.235	19
18	Barnala	583717	175	40	140	90	445	7.624	273	4.676	172	2.946	13
19	Patiala	1839747	1609	132	318	240	2299	12.5	552	3.000	1747	9.495	3
20	Fatehgarh Sahib	594815	155	56	104	105	420	7.061	295	4.959	125	2.101	16
	Punjab	27188737	14865	1758	5481	3373	25477	9.37	10743	3.951	14734	5.419	

Source: Statistical Abstracts of Punjab, 2007.

Chapter IV
Economic Livelihood Patterns

4.1: Introduction

Livelihoods are the ways and means through which people satisfy their needs, enhance choices and continuously improve welfare. Livelihood is a multidimensional concept and can be equated to a system which describes how people make their actual living (Chambers and Conway, 1992). Variety of sources and dynamics of economic activities, in which households are engaged determine whether the livelihood is secure or vulnerable. Households and individuals functions and secure their livelihoods in an institutional arrangements (Ellis, 2000). These institutions provide opportunities to the households and individuals to acquire essential capabilities to make use of it in the changing circumstances to reduce risk and uncertainty in securing livelihood over time. The opportunities for a better livelihood are highly dependent upon the availability of the resource base and the access to public goods. Therefore, the availability of key assets such as finances, land, human skills, access to markets, employment opportunities, common property resources and public goods plays an important role in making households and individuals to respond to different circumstances in different ways (Sudan, 2007). Human beings by nature remain continuously in search of better and more secure livelihood strategies in the dynamic circumstances, which generate high risk and uncertainty to survive within the existing arrangements. Thus, the household remains in search for alternative, more remunerative, and less risky portfolio of livelihood strategy.

Sangrur district is largely dominated by the people living in the rural areas and this population is deriving their livelihood mainly from agriculture. The agrarian economy of the district remained quite distressed because of the large number of suicides committed by both farmers and farm labour, maximum to be reported from any district. It

is well known fact that the rural households that are more diversified and has created a strong social network are able to develop capacity to save themselves from distress conditions. However, agriculture being highly risky venture and is prone to natural disasters and adverse weather conditions that lead to frequent crop failure. The recent liberalization strategy has also played an important role in squeezing the income of the rural sector and dominant role played by the market forces reduces systematically the surplus which was available to the households engaged in farm sector related economic activities (Gill and Singh, 2006). The mere absence of facilities related to social and modern insurance left the households to fend for themselves in acutely difficult circumstances. In such a situation it is usually suggested that the diversification strategy for secure livelihood should be adopted by the households. But the choice for choosing a diversified strategy for more secure livelihood is dependent on the extent of their asset ownership and human capital resources (Sharma, 2009). Since a large number of agricultural land holdings in the Sangrur district are small and substantial workforce is landless, therefore, their asset base and skill base is very weak and choice of livelihood diversification is very limited. This chapter attempts to explore the economic livelihood pattern of the people of Sangrur district and is organized into seven sections. Apart from introductory section one, the section two examines the demographic trends and livelihood patterns. The sectoral composition of rural workforce in Sangrur district is presented in section three. The analysis of agriculture and rural livelihood situation is presented in section four. Section five presents the pattern of diversification of rural activities. The final section presents the main conclusions and policy implications that have emerged from the chapter.

4.2: Demographic Trends and Rural Livelihood Patterns

According to 2001 census, the population of Sangrur district was 14, 73,242 persons. The increase in population over the previous

census (that is, 1991) was 2,21,745 persons. The compound growth rate of population between the period 1991 and 2001 comes out to be 1.64 per cent per annum, which was little lower than the population growth rate of Punjab state (1.85 per cent per annum). This means that population of Sangrur district during the period 1991-2001 has increased at a rate below the Punjab state average. In terms of proportion of population in the State, it was ranked 8th in the year 2001 and retained this relative rank from the 1991 census. The density of population is 408 persons per square kilometers. According to population density, Sangrur district was ranked 12th in the year 2001. This district has adverse sex ratio because there were only 870 females per 1000 males in the year 2001. The overall sex ratio of the Punjab state was 876 females per 1000 males which was little higher than Sangrur district. Among the districts sex ratio ranking of the Sangrur district was 15th in the year 2001.

The proportion of rural population was 71.20 per cent in 2001 which was higher than the 66.08 per cent of the Punjab state. This shows that Sangrur district is still predominantly rural. However, the people living in urban locations were just 28.80 per cent in the year 2001. The size of the urban towns was also very small. Among the towns/cities, the Malerkotla is the city which inhabited only 1,12,523 persons according to 2001 census (Table 4.1). This city alone constitutes 26.18 per cent of the total urban population of the district Sangrur.

It is worth noticing that the workforce participation rate has improved between the period 1991 and 2001 in the Sangrur district. The proportion of workers was 32.30 per cent and the proportion of non workers was 67.70 per cent in the year 1991. This proportion has increased to 39.34 per cent in the year 2001. Obviously, the non workers proportion in total population declined to 60.77 per cent. The proportion of main workers was very high, that is, 95.57 per cent in the year 1991. However, this proportion declined to 86.99 per cent in

Table 4.1: Population and Workforce in Sangrur District

Sr. No.	Block	Block Area (Sq. Km.)	Block Population		Total Workers		Main Workers		Marginal Workers		Non-Workers	
			1991	2001	1991	2001	1991	2001	1991	2001	1991	2001
1.	Sangrur	348.66	128251	111000	45704	42141	42291	35468	3413	6673	82547	68859
2.	Malerkotla 1	394.25	125411	137011	40603	55684	38747	48902	1856	6782	84808	81327
3.	Malerkotla 2	324.96	139116	129834	46405	54117	43103	47981	3302	6136	92711	75717
4.	Lehragaga	402.18	177749	112329	58843	46576	55518	37437	3325	9139	118906	65753
5.	Dhuri	261.79	131334	76057	43014	34364	401497	29696	2517	4668	88320	41693
6.	Andana	283.55	..	73452	..	31535	..	25285	..	6250	..	41917
7.	Sunam	696.97	169227	214776	57601	90005	55159	77625	2442	12380	111626	124771
8.	Bhawanigarh	323.14	82763	95351	25821	38506	25269	32214	552	6292	56942	56845
9.	Sherpur	274.45	..	93666	..	47051	..	39801	..	7250	..	46615
Municipality												
10.	Sangrur	43.00	56419	77989	16353	25192	16319	23919	34	1273	40066	52797
11.	Malerkotla	36.63	88600	112523	25493	33308	25268	31653	225	1655	63107	79215
12.	Ahemedgarh	5.25	25560	28022	7391	9149	7390	9029	1	120	18169	18873
13.	Dhuri	13.00	37431	49406	10727	16790	10641	15286	86	1504	26704	32616
14.	Sunam	13.00	43909	56251	12574	18520	12564	16657	10	1863	31335	37731
15.	Lehragaga	8.50	15555	19336	4445	5645	4432	5248	13	397	11110	13691
16.	Bhawanigarh	6.00	13900	17792	4089	5360	4084	5033	5	327	9811	12432
17.	Longowal	3.25	16254	20239	5162	8134	5030	6896	132	1238	11092	12105
18.	Dirba	2.70	..	13079	..	4735	..	4279	..	459	..	8344
19.	Khanauri	5.00	..	10960	..	3236	..	3052	..	184	..	7724
20.	Moonak	5.50	..	14924	..	5122	..	4605	..	517	..	9802
21.	Cheema	4.50	..	9245	..	2856	..	2758	..	98	..	6389
Total Sangrur		3456.28	1251479	1473242	404225	578026	747312	502824	17913	75205	847254	895216

Note: ... out of district. .. were not existing before 1991.
Source: District Statistical Office, Sangrur.

year 2001. This shows that in the Sangrur district, the proportion of marginal workers increased substantially between the period 1991 and 2001. Among the nine blocks of Sangrur district, three blocks, that is, Sangrur, Lehragaga and Dhuri, where the proportion of total workers as well as of main workers decreased between the period 1991 and 2001. This fact clearly brings out that the rural Sangrur has registered a rise in the work participation rates during the period 1991-2001. As compared to rural areas, the urban areas of Sangrur observed a rise in the workforce participation rates during the same period. From the above analysis it can be argued that there is an entry of new workers in the district workforce. The new entry of the workers both in the rural and urban Sangrur was mainly because of the rise of the pressure which emanates from intensification of effort in search of livelihood opportunities. The change in the definition of the worker in 2001 census compared with 1991 census may also be the factor that partly explains the rising trend in the workforce participation rates.

4.3: Sectoral Composition of Rural Workforce in Sangrur District

The sectoral composition of rural workforce across blocks and municipalities is presented in Table 4.2a. The analysis of the table clearly brings out the fact that nearly 51 per cent of the workforce of Sangrur district is engaged in other than agricultural and household industrial activities whereas agriculture alone provided occupation to 45.87 per cent of the workforce of Sangrur in the year 2001. Those who engaged themselves to earn their livelihood from agriculture as cultivators constituted 29.13 per cent of the total workforce. The proportion of agriculture labour was 16.74 per cent. The workforce engaged in household industry in Sangrur district was quite low. It was just 3.22 per cent of the total workforce in Sangrur district. Obviously, the household industry as an occupation is on the verge of extinction.

The analysis of the sectoral composition of rural workforce across blocks shows that workforce of two blocks – Andana and Lehragaga are still highly agricultural. The 76 per cent of the workforce of Andana block and 70.52 per cent of the workforce of Lehragaga block was engaged only in the agricultural activities. On the other hand, the four blocks that is, Malerkotla 2, Sherpur, Malerkotla 1 and Dhuri are predominantly non agricultural. Rest of the three blocks are moderately diversified as per the proportion of workforce engaged in the non-agricultural activities. From the above discussion, it can be concluded that except four blocks of Sangrur district, the workforce predominantly deriving their livelihood from agriculture sector. The analysis of the composition of workforce of towns and cities shows that the workforce is predominantly engaged in non agricultural activities except the Cheema municipality.

The comparative analysis of the composition of sectoral workforce between the period 1991 and 2001 clearly brings out the fact that most of developmental blocks have shown declining trends of workforce engaged in agricultural activities (Table 4.2b). Highest decline of workforce was recorded by the Dhuri block followed by Lehragaga, Sangrur and Malerkotla 2. On the contrary, two blocks, that is, Sunam and Bhawanigarh recorded increase in the workforce as cultivators and land less agricultural labourers during the period of 1991 and 2001. The shift of agricultural workforce and also of cultivators may be attributed to wide spread distress which has occurred due to non remunerative nature of agriculture (Singh, 2008). Even the availability of work for the agriculture labour has declined substantially due to shortening of sowing and harvesting period (Ghuman, et. al., 2007). This has a push effect. Therefore, the shift of workforce from agricultural activities is mainly due to push factor rather than pull factors.

4.4: Agriculture and Rural Livelihood Situation

The major productive sector of the district Sangrur is the agriculture sector from where rural people derive their livelihood. The total number of operational holdings was 73342 in the year 2005-06

Table 4.2a: Sectoral Composition of Rural Workforce in Sangrur District in 2001

Sr. No.	Block	Cultivators	Agricultural Labourer	Household Industries	Other workers	Total
1	Sangrur	15453 (36.67)	8963 (21.27)	1073 (2.55)	16653 (39.52)	42142 (100.00)
2	Malerkotla 1	17652 (31.62)	9144 (16.38)	2624 (4.70)	26404 (47.30)	55824 (100.00)
3	Malerkotla 2	14519 (27.19)	8613 (16.13)	1366 (2.56)	28907 (54.13)	53405 (100.00)
4	Lehragaga	20822 (44.77)	11979 (25.75)	2037 (4.38)	11675 (25.10)	46513 (100.00)
5	Dhuri	11177 (32.43)	6121 (17.76)	933 (2.71)	16233 (47.10)	34464 (100.00)
6	Andana	15726 (49.42)	8296 (26.07)	667 (2.10)	7133 (22.42)	31822 (100.00)
7	Sunam	34386 (38.20)	19021 (21.13)	2515 (2.79)	34097 (37.88)	90019 (100.00)
8	Bhawanigarh	14662 (37.93)	8693 (22.49)	1472 (3.81)	13831 (35.78)	38658 (100.00)
9	Sherpur	13845 (29.43)	7161 (15.22)	1130 (2.40)	24915 (52.95)	47051 (100.00)
Municipality						
10	Sangrur	469 (1.86)	428 (1.70)	651 (2.58)	23644 (93.86)	25192 (100.00)
11	Malerkotla	1991 (5.66)	1683 (4.78)	1468 (4.17)	30054 (85.39)	35196 (100.00)
12	Ahemedgarh	69 (0.75)	113 (1.24)	334 (3.65)	8633 (94.36)	9149 (100.00)
13	Dhuri	210 (1.25)	197 (1.17)	778 (4.63)	15605 (92.94)	16790 (100.00)
14	Sunam	1804 (9.74)	1149 (6.20)	700 (3.78)	14867 (80.28)	18520 (100.00)
15	Lehragaga	313 (5.54)	431 (7.64)	214 (3.79)	4687 (83.03)	5645 (100.00)
16	Bhawanigarh	533 (9.94)	557 (10.39)	136 (2.54)	4134 (77.13)	5360 (100.00)
17	Longowal	1508 (18.54)	1747 (21.48)	150 (1.84)	4729 (58.14)	8134 (100.00)
18	Dirba	1185 (25.03)	735 (15.52)	164 (3.46)	2651 (55.99)	4735 (100.00)
19	Khanauri	188 (5.81)	710 (21.94)	107 (3.31)	2231 (68.94)	3236 (100.00)
20	Moonak	1227 (23.96)	738 (14.41)	111 (2.17)	3046 (59.47)	5122 (100.00)
21	Cheema	1142 (39.99)	577 (20.20)	51 (1.79)	1086 (38.03)	2856 (100.00)
Total Sangrur		168881 (29.13)	97056 (16.74)	18681 (3.22)	295215 (50.91)	579833 (100.00)

Note: Figures in parentheses are percentages.
Source: As in Table 4.1.

Table 4.2b: Sectoral Composition of Rural Workforce in Sangrur District

Sr. No.	Block	Cultivators		CRG	Agricultural Labourer		CRG	Household Industries	Others Workers
		1991	2001		1991	2001		2001	2001
1	Sangrur	20798	15453	-2.93	12812	8963	-3.51	1073	16653
2	Malerkotla 1	17149	17652	0.29	11639	9144	-2.38	2624	26404
3	Malerkotla 2	19079	14519	-2.69	12252	8613	-3.46	1366	28907
4	Lehragaga	30425	20822	-3.72	16515	11979	-3.16	2037	11675
5	Dhuri	19753	11177	-5.53	10938	6121	-5.64	933	16233
6	Andana	..	15726		..	8296		667	7133
7	Sunam	29188	34386	1.65	18673	19021	0.18	2515	34097
8	Bhawanigarh	12471	14662	1.63	8569	8693	0.14	1472	13831
9	Sherpur	..	13845		..	7161		1130	24915
Municipality									
10	Sangrur	463	469	0.13	785	428	-5.89	651	23644
11	Malerkotla	1593	1991	2.26	4058	1683	-8.42	1468	30054
12	Ahemedgarh	159	69	-8.01	335	113	-10.30	334	8633
13	Dhuri	115	210	6.21	820	197	-13.29	778	15605
14	Sunam	1535	1804	1.63	1127	1149	0.19	700	14867
15	Lehragaga	307	313	0.19	346	431	2.22	214	4687
16	Bhawanigarh	585	533	-0.93	628	557	-1.19	136	4134
17	Longowal	2282	1508	-4.06	1314	1747	2.89	150	4729
18	Dirba	..	1185		..	735		164	2651
19	Khanauri	..	188		..	710		107	2231
20	Moonak	..	1227		..	738		111	3046
21	Cheema	..	1142		..	577		51	1086
Total Sangrur			168881			97056		18681	295215

Note: 1. CRG stands for compound rate of growth.
2. Stands for non-availability of relevant figures due to carving out Barnala district.

Source: As in Table 4.1.

and were operating area of the order of 3,11,288.52 hectares. The analysis of the composition of agricultural holdings and area operated presented in Table 4.3 which shows that the distribution of area operated was highly skewed in favour of semi-medium and medium category of farmers. These farmers were operating area between 2 to 10 hectares of land. It is important to note from the analysis of the Table 4.3 that the marginal farmers operating less than one hectare of land constituted 10.04 per cent of the total operational holdings and were just operating 1.51 per cent of the area in the year 2005-06. Small farmers constituted 17.20 per cent of the farm households but were operating only 6.26 per cent of the total area of Sangrur district. Together these two categories constituted 27.24 per cent of the number of operational holdings but were operating area 7.77 per cent of the total operated area of the district. On the other hand, 6.43 per cent large sized holdings were operating 23.54 per cent of the total area operated. This clearly brings out the fact that there exists a high degree of inequality in terms of distribution of land across categories of farmers in the district.

The distribution of number of holdings and area operated across tehsils of district Sangrur are also presented in Table 4.3. The analysis of the structure of land holdings and area operated reveals that there exist wide differentials across the tehsils. But the matter of fact is that medium category of holdings (4-10 hectares of operated area) emerged as the predominant in terms of the size of holdings of area operated in the Sangrur district.

4.5: Cropping Pattern and Productivity Growth

Area covered in both the seasons, that is, Kharif and Rabi under various crops grown in the district are presented in Table 4.4. The analysis of the composition of the area covered under different Kharif crops show that paddy crop alone covered more than 80 per cent of the area sown. The major share of livelihood of the rural people in the district is derived from food crop, that is, paddy. Animal fodder has

emerged another important crop sown during the kharif next to paddy in terms of area covered. The area covered under fodder hovered around 8 per cent. It is worth mentioning here that dairying has been remained supplementary occupation. This economic activity provides smooth flow of income during the year. The third important crop during kharif season is cotton. The area under the cotton crop has increased from nearly 5 per cent to more than 6 per cent during the period 2000-01 to 2006-07. The other crops grown in the district during kharif crops were kharif pulses, vegetables, sugarcane, bajra, maize, medicinal plants and horticulture. However, the proportion of the area covered under these crops remained quite meager. Paddy has emerged the most dominant crop, which has been grown over the years in the district.

Wheat crop alone during the Rabi season covered more than 90 per cent of total area sown. Second major crop, which covered sown area more than 6 per cent was fodder. All other crops such as barley, rabi, pulses, rabi soil seeds, vegetables, gram, horticulture, medicinal plants and vegetables just covered less than four per cent of the area sown under rabi crops in the district. From the above analysis, we can conclude that wheat-paddy rotation has emerged the predominant cropping pattern in the Sangrur district.

The productivity levels of major crops (kharif and rabi) sown in the district are presented in Table 4.5. The highest yield of paddy crop, which is a kharif crop was obtained by the Dhuri block of Sangrur district. However, the Lehragaga block obtained yield 3874 kg per hectare of paddy production, which is the lowest among the blocks of the Sangrur district. This implies that across the blocks there are wide variations in the yield levels of paddy crop and have direct bearing on the income earning capacity of the farm households.

Table 4.3: Size of Agricultural Holding in Sangrur District (2005-06)

Sr. No.	Tehsil	Marginal (<1 hectare)		Small (1-2 hectares)		Semi-Medium (2-4 hectares)		Medium (4-10 hectares)		Large (10 hectares and above)		Total no of Holdings	Total Area Operated
		No. of Holding	Area Operated	No. of Holding	Area Operated	No. of Holding	Area Operated	No. of Holding	Area Operated	No. of Holding	Area Operated		
1	Sangrur	1356 (8.92)	863.79 (1.30)	2369 (15.58)	3529.34 (5.32)	5015 (32.98)	13828.41 (20.83)	5417 (35.62)	31108.53 (46.86)	1051 (6.91)	17052.68 (25.69)	15208 (100.00)	66382.75 (100.00)
2	Malerkotla Tehsil	2308 (13.27)	1393.44 (2.38)	3874 (22.28)	5546.57 (9.46)	6191 (35.60)	17259.93 (29.44)	4340 (24.96)	24583.45 (41.94)	678 (3.90)	9836.69 (16.78)	17391 (100.00)	58620.08 (100.00)
3	Moonak Tehsil	1475 (12.37)	892.1 (1.69)	1792 (15.02)	2858.64 (5.43)	3687 (30.91)	9923.33 (18.85)	3885 (32.57)	22367.01 (42.49)	1088 (9.12)	16605.6 (31.54)	11927 (100.00)	52646.68 (100.00)
4	Sunam Tehsil	1190 (6.91)	758.6 (0.94)	2206 (12.80)	3347.41 (4.13)	5663 (32.87)	15446.08 (19.04)	6608 (38.35)	39105.5 (48.21)	1563 (9.07)	22457.8 (27.69)	17230 (100.00)	81115.38 (100.00)
5	Dhuri Tehsil	1339 (9.18)	798.18 (1.52)	2890 (19.81)	4219.64 (8.03)	5486 (37.61)	15543.89 (29.59)	4344 (29.78)	24623.25 (46.88)	527 (3.61)	7339.63 (13.97)	14586 (100.00)	52524.59 (100.00)
	Total	7668 (10.04)	4706.11 (1.51)	13131 (17.20)	19501.6 (6.26)	26042 (34.11)	72001.6 (23.13)	24594 (32.22)	141787.7 (45.55)	4907 (6.43)	73292.4 (23.54)	76342 (100.00)	311289.5 (100.00)

Note: Figures in parentheses are row-wise percentages.
Source: Agriculture Development Office, Sangrur.

Bhawanigarh block has obtained 4681 kg per hectare of yield of wheat which is a rabi crop. However, the wheat yield of Andana block was 4188 kg per hectare, which was lowest among the blocks of Sangrur district. It is important to note here that there are variations in the wheat yield across developmental blocks but the variations are

Table 4.4: Area covered by different crops during the last seven years (in hectares)

Sr. No.	Crops	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Kharif								
1	Paddy	357117 (82.85)	348594 (81.00)	351825 (82.33)	366368 (84.28)	367070 (84.44)	366514 (84.11)	362401 (83.25)
2	Maize	1317 (0.31)	2137 (0.50)	1977 (0.46)	1399 (0.32)	1009 (0.23)	930 (0.21)	735 (0.17)
3	Bajra	1633 (0.38)	2075 (0.48)	1701 (0.40)	2267 (0.52)	2290 (0.53)	1816 (0.42)	1787 (0.41)
4	Kharif Pulses	6647 (1.54)	5726 (1.33)	4741 (1.11)	5228 (1.20)	4383 (1.01)	3617 (0.83)	3645 (0.84)
5	Cotton	21008 (4.87)	28072 (6.52)	23694 (5.54)	16003 (3.68)	18484 (4.25)	22650 (5.20)	26972 (6.20)
6	Sugarcane	3536 (0.82)	4199 (0.98)	4364 (1.02)	2883 (0.66)	1563 (0.36)	1175 (0.27)	3148 (0.72)
7	Kharif oil seed	461 (0.11)	298 (0.07)	348 (0.08)	245 (0.06)	178 (0.04)	132 (0.03)	173 (0.04)
8	Medicine Plants	-	-	-	7 (0.00)	15 (0.00)	25 (0.01)	20 (0.00)
9	Horticulture	409 (0.09)	452 (0.11)	538 (0.13)	710 (0.16)	678 (0.16)	697 (0.16)	728 (0.17)
10	Veg.	1945 (0.45)	2008 (0.47)	2422 (0.57)	1947 (0.45)	1862 (0.43)	1803 (0.41)	1784 (0.41)
11	Fodder	35843 (8.31)	35518 (8.25)	34095 (7.98)	36131 (8.31)	36032 (8.29)	35440 (8.13)	33149 (7.61)
12	Others	1137 (0.26)	1309 (0.30)	1631 (0.38)	1501 (0.35)	1128 (0.26)	952 (0.22)	791 (0.18)
Total		431107 (100.00)	430388 (100.00)	427336 (100.00)	434687 (100.00)	434684 (100.00)	435751 (100.00)	435333 (100.00)
Rabi								
13	Wheat	392443 (90.25)	391653 (90.19)	393612 (90.25)	396488 (90.64)	396966 (90.85)	396372 (90.76)	395723 (90.97)
14	Barley	6872 (1.58)	5966 (1.37)	6236 (1.43)	5086 (1.16)	4768 (1.09)	4589 (1.05)	3599 (0.83)
15	Gram	762 (0.18)	737 (0.17)	811 (0.19)	609 (0.14)	582 (0.13)	472 (0.11)	391 (0.09)
16	Rabi Pulses	647 (0.15)	652 (0.15)	641 (0.15)	501 (0.11)	437 (0.10)	382 (0.09)	423 (0.10)
17	Rabi oil seeds	3482 (0.80)	3361 (0.77)	2974 (0.68)	2558 (0.58)	2675 (0.61)	2739 (0.63)	2281 (0.52)
18	Fodder	26642 (6.13)	28114 (6.47)	27564 (6.32)	27655 (6.32)	27329 (6.25)	27558 (6.31)	27895 (6.41)
19	Vegetable	3101 (0.71)	2786 (0.64)	3231 (0.74)	3466 (0.79)	3113 (0.71)	3312 (0.76)	3537 (0.81)
20	Horticulture	484 (0.11)	555 (0.13)	547 (0.13)	616 (0.14)	654 (0.15)	674 (0.15)	672 (0.15)
21	Medicine Plants	-	-	-	5 (0.00)	11 (0.00)	32 (0.01)	6 (0.00)
22	Others	419* (0.10)	428 (0.10)	516 (0.12)	454 (0.10)	403 (0.09)	618 (0.14)	477 (0.11)
Total		434852 (100.00)	434252 (100.00)	436132 (100.00)	437438 (100.00)	436938 (100.00)	436748 (100.00)	435004 (100.00)

Note: Figures in parentheses are percetnages.
Source: Agriculture Development Office, Sangrur.

quite less in wheat as compared with paddy crop. In the other three crops, that is, cotton, gram and oil seeds, the variations in the yield levels are substantial. It is worth mentioning here that two crops (cotton and oilseeds) were being sown only in four blocks and gram in only two blocks.

Table 4.5: Productivity levels in the Agriculture Sector (2006-07)

Sr. No.	Block	Paddy Yield (Kg/ha)	Wheat Yield (Kg/ha)	Cotton bales/ha	Gram (Kg/ha)	Oil Seeds (Kg/ha)
1.	Sangrur	4562	4381	326	804	850
2.	Malerkotla 1	4588	4556	-	-	915
3.	Malerkotla 2	4231	4562	-	-	-
4.	Lehragaga	3874	4232	655	-	-
5.	Dhuri	4917	4350	-	-	-
6.	Andana	4355	4188	-	-	-
7.	Sunam	4436	4438	672	1829	1460
8.	Bhawanigarh	4662	4681	-	-	811
9.	Sherpur	4894	4268	311	-	-
Total Sangrur						

Note: - represents non-availability or crops have not grown in the block concerned.
Source: Agriculture Development Office, Sangrur.

The level of agricultural output and productivity, which represents the efficiency of the inputs used, usually depends apart from soil fertility upon the rainfall pattern, irrigation facilities and fertilizer use pattern. Average monthly rainfall of Sangrur district during the period 1995 to 2007 is presented in Table 4.6. The cursory analysis of the table 4.6 shows that rainfall pattern during the year is quite erratic. The estimated coefficient of standard deviation clearly brings out the fact that there are wide variations in rainfall pattern during the year. Therefore, there is high degree of dependence of agriculture production on manmade sources of irrigation, that is, canal and tube-wells. During the year 2006-07, governmental canals irrigated 19,000 hectares of cultivable land and 296 thousand hectares were irrigated through tube-wells. These two sources of irrigation are responsible for helping to produce various crops as well as high water intensity crops such as paddy in the Sangrur district. The tubewell irrigation lifts water from the aquifer and hence has

started affecting the sub soil water table in this district. The details of water level conditions of Sangrur district are presented in Table 4.7. The block wise and municipality wise water table depth for the years 1991, 1995, 2000 and 2007 and changes therein are also shown in the Table 4.7. It is significant to note that the sub-soil water level depth has been increasing continuously. Sunam block has witnessed 1.75 meters increase in the depth of water which is highest among all the blocks. The lowest fall of water table depth was 0.77 meters which was witnessed in the Dhuri block. It is important to note that all the blocks recorded a fall in the sub-soil water table. This implies that water lifting cost for irrigation purposes has increased substantially as well as small and marginal farmers may not be able to access the ground water for irrigation purposes because they do not have capacity to install deep tubewells as the water table is receding continuously. If it will remain unattended, this will have a severe effect from medium to long range, on the prospectus of agriculture production and productivity in the Sangrur district. The source of livelihood of small and marginal farmers is under threat.

Table 4.6: Average Month-wise Rainfall (in mm) in Sangrur District 1991-2007

Year	January	February	March	April	May	June	July	August	September	October	November	December	Average	SD
1995	27.18	52.9	3	9	0.4	46.42	99	244.06	171.6	3.8	0.6	1.2	54.93	78.86
1996	19.8	27.8	9.6	0.2	4	52.66	20.75	95.7	35.4	15.4	NIL	1.2	25.68	28.06
1997	21.2	0.4	2.2	28.5	38.6	45	63	194.72	8.4	52.3	6.2	48	42.38	52.45
1998	1.2	57.4	10.8	0.2	4	46.7	67	78.6	146.8	41.2	NIL	NIL	45.39	45.85
1999	19.8	1.0	NIL	NIL	22.2	29.6	129.6	13.6	34.8	NIL	NIL	NIL	35.80	42.78
2000	23	31	NIL	4.0	21.8	43	91.8	40.4	16.6	NIL	NIL	1	30.29	27.18
2001	7.2	NIL	3.2	22.8	17.2	78.6	67.2	35.6	NIL	0.2	NIL	0.4	25.82	29.24
2002	NIL	2.6	1.4	0.6	20	3.8	12.2	8	66.0	NIL	NIL	4.8	13.27	20.71
2003	8.6	47.8	2.0	NIL	4.2	36.4	174.6	67.7	8.5	NIL	NIL	2.6	39.16	55.96
2004	28.7	4.3	NIL	24.7	31.6	51.5	7.4	167.6	10.3	12.9	NIL	NIL	37.67	50.93
2005	38.9	47	20.7	5.9	1.3	28.1	180.2	112.1	94.2	NIL	NIL	NIL	58.71	59.02
2006	4.14	NIL	33.6	NIL	26.7	57.9	122.6	24.9	55.4	2.6	7.8	6.6	34.22	37.01
2007	NIL	47.7	34.8	22.9	4.6	63.0	65.7	6.6	55	NIL	0.8	2.7	30.80	26.17

Source: Agriculture Development Office, Sangrur.

Table 4.7: Water level condition of Sangrur Division

Sr. No.	Block	Pre Monsoon Depth to Water level condition in meters				Annual fluctuation of 2006-07 water in meters
		1991	1995	2000	2007	
1.	Sangrur	3.95-9.43	10.8-15.2	9.32-16.5	16.77-17.37	-1.15
2.	Malerkotla 1	6.48-11.57	9.00-12.05	12.25-15.6	17.95-22.3	-0.82
3.	Malerkotla 2	6.44	6.90-17.9	7.0-19.65	24.25-29.0	-0.65
4.	Lehragaga	4.95-5.05	5.9-7.45	9.45-8.6	16.20	-1.10
5.	Dhuri	8.45-16.72	10.78-12.0	12.45-16.35	18.6-23.8	-0.77
6.	Andana	7.39-13.2	10.39-12.3	8.15-13.30	12.6-23.5	-1.45
7.	Sunam	4.42-12.59	9.10-13.69	8.10-15.54	26.50	-1.75
8.	Bhawanigarh	10.8-13.3	14.81-15.68	12.45-16.5	19.80	-1.15
9.	Sherpur	10.70	15.15	17.7-20.55	29.00	-0.90
10.	Sangrur	9.43	13.10	16.50	16.77	-1.15
11.	Malerkotla	6.48	9.00	15.60	22.30	-0.95
12.	Ahemedgarh	6.44	6.90	7.00	24.25	-1.65
13.	Dhuri	9.05	12.00	16.35	23.80	-0.60
14.	Sunam	12.59	13.69	15.54	26.50	-1.75
15.	Lehragaga	5.05	7.45	8.60	16.20	-1.10
16.	Bhawanigarh	12.42	15.68	16.50	19.80	-1.15
17.	Longowal	6.40	10.80	12.55	16.77	-1.15
18.	Dirba	6.30	9.10	15.40	26.50	-1.75
19.	Handiaya	10.51	13.20	15.80	19.80	-2.45
20.	Khanauri	9.70	12.30	14.05	23.50	-1.50
21.	Moonak	9.70	12.30	13.30	23.50	-1.50
22.	Cheema	6.40	10.80	12.55	16.77	-1.15
Total Sangrur						

Source: Agriculture Development Office, Sangrur.

Intensive agriculture usually reduces the soil nutrients and severally affects agriculture production and productivity. Therefore, soil nutrients are desired to recoup the deficiencies of micro-nutrients of the soil. This is being done in the Sangrur district while using the fertilizer. The fertilizer use pattern is described in Table 4.8. Across the developmental blocks, there exists wide variation in fertilizer use. Per hectare highest fertilizer use was observed in the Dhuri block which is also a very high productivity block and was using 354 kg fertilizer per hectare in the year 2006-07. Sherpur block, however, was using 208 kg per hectare fertilizer. The average fertilizer use per

hectare (276 kg per hectare) in the Sangrur district is very high. There were only two blocks, that is, Sherpur and Malerkotla 1 that has been using fertilizer below the district average. All other developmental blocks have been using fertilizer higher than the district average.

Table 4.8: Block wise consumption of chemical fertilizers during 2006-07

Sr. No.	Block	Fertilizer used (in MT)				Area of fertilizer use (in Hec.)			
		Nitrogen (N)	Phosphorus (P)	Potash (K)	Total fertilizer used	Net sown area	Double cropped area	Gross cropped area	Fertilizer used (in Kg./Hec.)
1.	Sangrur	16727	4315	452	21494	38419	37786	76205	282
2.	Malerkotla 1	13380	3450	362	17192	36205	32204	68409	251
3.	Malerkotla 2	13382	3454	362	17198	30663	27491	58154	296
4.	Lehragaga	16727	4315	452	21494	36022	35629	71651	300
5.	Dhuri	12165	3138	320	15623	22250	21877	44127	354
6.	Andana	11151	2876	302	14329	28630	28408	51038	281
7.	Sunam	29034	2490	766	37290	69768	69333	139101	268
8.	Bhawanigarh	13380	3452	362	17194	29703	28885	58588	293
9.	Sherpur	7871	2030	242	10143	24491	24235	48726	208
	Total	133817	34520	3620	171957	316151	305848	621999	276 (Average)

Source: District Agriculture Office, Sangrur.

4.6: Pattern of Diversification of Rural Activities

Rural workforce engaged in economic activities related to agriculture sector of the Sangrur district was 45.87 per cent in the year 2001. 54.13 per cent of total workforce of Sangrur district was engaged in non-farm activities both in rural as well as in the urban sector of the economy. The household industry has employed 18,681 workers which constitutes 3.22 per cent of the total workforce of the Sangrur district. The organized industry employed 37,513 workers in the year 2006. This comes out to be 12.6 per cent of the total workforce engaged in the economic activities of Sangrur district. It is significant to note that nearly 16 per cent of the workforce of Sangrur district was engaged in non-farm industrial activities.

Table 4.9: Employment Generation by Non-Farm Sector Industrial Unit in Sangrur District (2006)

Sr. No.	Name of the Industry	Number of working factories	Number of workers	Percentage of working factories from Total	Percentage of workers from Total workers
1.	Cattle breading etc.	35	900	3.42	2.33
2.	Cotting ginning of boilding	1	8	0.10	0.02
3.	Manufacturing of food and Bewerages	448	15737	43.79	40.75
4.	Manufacturing of Textiles	18	4311	1.76	11.16
5.	Manufacturing of Textile products including wearing apparel and dyeing	2	17	0.20	0.04
6.	Manufacturing of Leather and fur products	3	260	0.29	0.67
7.	Manufacturing of wood and wood products, furniture and fixtures	66	380	6.45	0.98
8.	Manufacturing of paper and paper products	20	2061	1.96	5.34
9.	Printing publishing and allied services	2	33	0.20	0.09
10.	Petroleum and coal products	1	10	0.10	0.03
11.	Manufacturing of chemicals and chemical products	22	2281	2.15	5.91
12.	Manufacturing of rubber and plastics	9	318	0.88	0.82
13.	Manufacturing of non-matalic products	150	6116	14.66	15.84
14.	Basic metal industries	36	1421	3.52	3.68
15.	Manufacturing metal products and part	35	939	3.42	2.43
16.	Manufacturing of machinery and equipments	35	954	3.42	2.47
17.	Electricity Machinery and other	2	103	0.20	0.27
18.	Manufacturing of motor vehicles and trailor	70	516	6.84	1.34
19.	Other transport equipments	15	495	1.47	1.28
20.	Manufacturing of furniture and others	5	526	0.49	1.36
21.	Electricity supply, gas and steam	32	885	3.13	2.29
22.	Repair of motor vehicles	10	248	0.98	0.64
23.	Retail trade in others except motors	2	68	0.20	0.18
24.	Supporting transport activities	4	30	0.39	0.08
Total		1023	38617	100.00	100.00

Source: ESO, Statistical Abstract 2007, Government of Punjab.

The most significant non-farm industrial sector manufacturing activities were in the food products and beverages. The food product working units in the year 2006 were 448 which constituted 43.79 per cent of the total number of working factories in the Sangrur district (Table 4.9). It is worth mentioning here that the food related working units were largely concentrated in the blocks, that is, Malerkotla 1, Sherpur and Dhuri. The food products industry has been spread over to several rural locations in the unorganized sector. This is quite natural that this industry has generated more employment at least in the organized sector of the industrial economy of Sangrur. The share of employed workforce in the registered working units was 40.75 per cent. It is thus expected that the agrarian economy of Sangrur district has some linkages with the production structure of its agriculture with non-farm industrial activities. Second important industry in terms of proportion of number of units and workers in Sangrur district was manufacturing of non-metalic products (Table 4.9). Two industries together employed more than 56 per cent of the total employed workers in the organized manufacturing industries. Other important industries in the Sangrur district were manufacturing of textiles (11.16 per cent of workers), manufacturing of chemicals and chemical products, manufacturing of paper and paper products, basic metal industries and manufacturing of machinery and equipment. These five industries together employed more than 25 per cent of the workers employed in the working factories in the registered units. However, the unorganized sector non-farm repair related activities are widely spread over the district. This is because of the fact that agriculture support repair related services are required at the doorstep of the rural people. Since agriculture sector is highly mechanized, therefore, the repair of machinery used in the agriculture related activities is usually required especially in the peak season. Apart from that the rural economy of Sangrur is highly integrated with the market, therefore, transport related workshops have been emerged at

various natural nodal points. These activities are related to repair shops of bicycles, scooters and motorcycles. It is important to note here that repair workshops of tractors and pump sets are other important non-farm activities available at the nodal points near rural hinterlands.

4.7: Good Practices

In the range of best practices, Malerkotla's decorative and felicitation embroidery industry is worth mentioning. It manufactures goods that have a wider market not only in India but also abroad. Even the multinational fashion firms and Indian film industry is also on their customer rolls. This industry has a lot of potential for development and income generation.

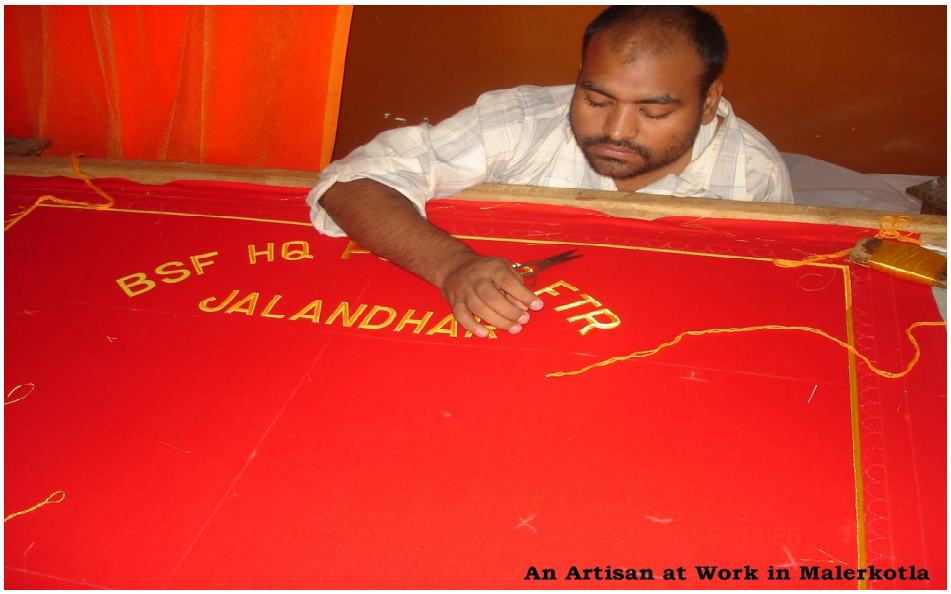
Good Practice Case: Malerkotla

Malerkotla, the historical city, is primarily a Muslim settlement. It is big vegetable market of the region. It is the only hub of decorative and felicitation embroidery. It is a household labour intensive industry. Orders are collected by contractor settled in Delhi and sublet to locals in Malerkotla. There about thirty shops dealing in this embroidery and the products are made in more than five thousand household units. All artisans in this trade are locals and they get in-house on-job training within the family. Wide range of products like, badges, flags, mementos, dress codes etc. are produced here. The products are exported to other countries also. The embroidered articles are used by army, multinational branded clothes industry and film industry worldwide. The production is done on piece rate basis. Wages are low because the major share goes to intermediaries between artisans and final consumers.

To further strengthen this decorative and felicitation embroidery industry, training, marketing and finance facility is a need of the time.

Specime of Decorative Work

An Artisan at Work in Malerkotla



An Artisan at Work in Malerkotla

4.8: Unique Individual Efforts

Following are some of the individuals, who like any other faced the oddities of life and did a big effort to become a successful entrepreneur. Their experience can be a guide for the others too.

Soybean Processing Unit

Mr. Bachitter Singh Garcha, a farmer of village Deh Kalan (Ucha Pind) on Sangrur-Dhuri road, with mere eight acres of land, was traditionally producing potatoes, brinjal, chilies and musk melon. He had his own outlet to sell these products directly to the consumers. Like any other farmer, he suffered a massive financial loss due to chronic market failure of potato crop in the years 1999 to 2003. He came to know about soybean products in a trade fair at Delhi in 2002. Mr. Garcha approached district administration's ATMA organization for help and was sponsored for training in soybean processing from ICAR's Institute at Bhopal in 2003. Mr. Garcha got the training of eighteen days and set up his own cottage production unit with a small investment. His first venture was a complete failure and he lost three lakh rupees because of problems associated with manufacturing and marketing. A team from Bhopal, visited his village and gave him a follow up training in standardizing the production. Initially, he disposed the entire production through his own retail outlet in Sangrur city and later extended the marketing network to include nearby cities like Ludhiana, Patiala and others. Starting with production of soya-milk and soya-cheese only, he has entered into the production of sweets, shakes, snacks and biscuits. With 22 soya-based products selling under the brand name of "BK Soya", he is on a mission to motivate farmers to grow soybean and enter into such ventures.

His continuous interaction with Punjab Agriculture University has helped him to improve his products. He is not only a producer, he markets soya, he writes a lot on soya in vernacular press. A farmer, once in a crisis, is national and state award holder for his innovativeness and entrepreneurial capabilities. Eminent personalities, dignitaries, academicians and several national and international delegations often visit his production site. Mr. Garcha, a living legend, is a source of inspiration and motivator for the others.

Soybean grains

Soya-based biscuits

Mr. Garcha on work

Floriculture Farms

Mr. Avtar Singh Dhindsa, a floriculturist, who gave up career as a landscape officer with Improvement Trust Ludhiana, to pursue a vocation of his choice and dabble with the "biological configurations" of flower compositions. Today, his Beuscape Farm is spread over 115 acres in his native village Langrian in district Sangrur and over 1200 acres are across the Punjab state.

Mr. Dhindsa, completed his Master's degree in Landscaping and Floriculture from PAU in 1979 with a research thesis on "Seed Production in Pansies" sponsored by a Danish company. In 1986, he visited USA and Europe with the idea of striking some business in the field of his specialization of flower seeds production. Luckily a good response from few well-known seed companies came in with the supply of foundation seeds to him. Initial success with the production of many kinds of flower seeds gave him confidence to expand his programme from 3.5 acres to 1200 acres. The seeds are exported to various countries of Europe, USA and Japan and it has brought Punjab in the World map of flower seeds.

He inspired and involved other farmers through training, motivation and contract farming. Along with this, rural women and rural labor is the biggest beneficiary, because they find a sustained year round opportunity to work in the flower seed collection and their processing. This farming requires about 6 to 15 women workers per acre for the flower seed production. For his contributions in the field of floriculture, he has been awarded many state and national awards and has also been office bearer of many government bodies.

On being asked, what is a key to success, Mr. Avtar Singh smiled and said, "give your best and try to be perfect". Regarding his quality standards, he added that as per Japanese standards only 0.3 percent dust presence is allowed in the seeds and his unit adheres to the standard of 0.1 percent dust. The phenomenal rise from a government employee to floral seed king has been possible because of his entrepreneurial skills and his keen interest in research and development.

Visuals from Beuscape Farm

Solvex Extraction Plant

Mr. A.R. Sharma, CMD, A.P. Solvex Ltd., Dhuri is a man with a mission. Born in a business family of Dhuri, a small town in Punjab, Mr. Sharma is graduate in commerce and post graduate in law. He started his career as an Assistant Company Secretary. He had to divert his career just after one year and had to go back to his hometown for some family reasons.

He joined a sick industrial unit of his area as its Managing Director. It was a solvent extraction unit engaged in the extraction of rice bran oil, a vegetable oil produced from rice bran, which is a by-product of the rice milling industry. It was the first big challenge in his life. Mr. Sharma carefully analyzed the problems of the unit on different fronts, took appropriate timely corrective actions and revived the sick unit.

After getting expertise and confidence in the field, Mr. Sharma decided to set up his own solvent extraction plant in the year 1992. Inspired by its use in Japan, Mr. Sharma made it a mission of his life to revolutionalize the rice bran oil processing in India. For executing the plans, a company named A.P. Solvex Private Limited was incorporated in the year 1992 and the 80 T.P.D. Solvent Extraction Plant for extracting edible grade crude oil from rice bran was set up in the year 1993 under the personal supervision of Mr. Sharma. Huge internal accruals coupled with very nominal debt-service requirement, gave encouragement to Mr. Sharma to take the risk of setting up a physical refining plant for producing refined rice bran oil as the conventional process of chemical refining used for refining other common vegetable oil was uneconomical and unviable for refining rice bran oil. The company has expanded the capacity of the unit from 25 T.P.D. to about 100 T.P.D.

In the year 2000 he visited Japan as member of the business delegation of the Solvent Extractors' Association of India to have first hand information of the rice bran oil processing and use scenario in Japan which gave him lot of confidence to go ahead with his plans. Today his company's brand "Ricela" is the most popular brand of Refined Rice Bran Oil in India and has been awarded the "Best Brand Award" by Globoil India. His company is today India's largest rice bran oil producing company with 300 T.P.D. rice bran oil refining capacity and 1200 T.P.D. Rice Bran Extraction capacity.

He is a president of the state and national bodies of edible oil industry. He is a process patent holder and national award holder. Mr. Sharma believes that the age-old dictum of slow and study wins the race is no longer relevant in this era of cutthroat competition. Smartness and speed does matter now.

On being asked the secret of success, Mr. Sharma reacted, "never get upset with the challenges in life, you can convert every challenge into an opportunity by well thought of strategy implemented with sincere hard work and complete devotion"

A.P. Solvex Extraction Plant, Dhuri

Poultry and Feed Industry

Mr. Surinder Bansal belonging to a commission agent family, motivated by friends, entered into poultry farming business at a small scale in 1990. Within a short time, hard work, dedication and discipline helped him to expand his business on scientific and professional lines. Feed is a basic input to the poultry. Along with poultry, Mr. Bansal extended his basic activity to include manufacturing of feed also. Today, it is a big unit under the name and style of "Bansal Poultry & Feed Industries" at Dhuri. It is a farm with more than one lakh bird capacity and more than 30 employees working in it. There are big airy sheds with all modern poultry farming requirements. Scientifically designed sheds help him to gather the outputs efficiently. Being sitting in the region of vegetable producers, even the waist of poultry farm fetches him a good return. The waist is sold as a organic manure.

Regarding expectation from the state, he added that if the waist wheat of the public sector storehouses is given to them even at the market rates, it will cut-down their feed cost by at least 30 percent. On being asked, what made him successful, he replied, "It is only hard work, it is 4.00 pm now, even at this stage of business, I and my son Pankaj Bansal have not been able to take a bath and we have missed our lunch also due to heavy workload and time-bound jobs".




Visuals from Bansal Poultry and Feed Industries

Dasmesh Mechanical Works

Mr. Amar Singh Matharu, son of an agriculture implements repair mechanic, got the first inspiration from his father and decided to set up a manufacturing unit. The unit was set up in 1982, at Raikot (Malerkotla). First it manufactured small agricultural implements and later ventured into manufacturing of tractor-trolleys, threshers, seed drills and other implements. Later in 1990, it started manufacturing tractor driven combine harvester and straw reaper machine. The firm got a state award, *Udyog Bhushan,* in 1990. In the year 2002, the firm started manufacturing self-propelled combine harvesting machines and straw reapers. It got a brand certification from different government departments and finally the ISO 9001:2000 certification. Presently it is also exporting the machines. Further, the in-house R&D of the firm is in progress to modify its products.

To conclude, all the above good practices and individual efforts show that in the development of a region, social response and active participation of masses matters a lot and a little state support to such efforts proves to be a big catalyst. In the development process, the need is to identify such cases and give an impetus.

To ascertain the involvement of landless rural workforce in economic activities to derive their livelihood we have conducted primary survey from randomly chosen two villages selected from two development blocks, that is, Malerkotla1 and Andana. One block,

that, Malerkotla1 is highly developed development block of the Sangrur district and other development block, that is Andana which is most backward. The Mohammad Nagar Village falls in the Malerkotla1 and Banarsi village comes under the Andana development block. According to the educational qualifications of the workers, both the villages shows that educational level of landless workforce is very low. 38.67 per cent of the landless labour of Mohammad Nagar village is illiterate and the percentage of illiteracy among landless labourers of Banarsi village is little lower, that is, 36.24 per cent. Among the educated landless labourers (primary and middle level education) Mohammad Nagar workers proportions are higher compared with landless labourers of Banarsi village. So far as secondary school education and beyond is concerned, the landless workers of Banarsi village scored better over the Mohammad Nagar Village. On the whole, 37.35 per cent of the landless labourers were illiterate. It is significant to note that 5.4 per cent of the land less workers out of the 166 workers covered in the survey were having educational qualifications higher secondary and beyond (Table 4.10).

Table 4.10: Distribution of non-farm Labour according to educational attainments in two villages of Sangrur District

Education	Mohammad Nagar	Banarasi	Total
Illiterate	29 (38.67)	33 (36.26)	62 (37.35)
Primary	18 (24.00)	20 (21.98)	38 (22.89)
Middle	16 (21.33)	18 (19.78)	34 (20.48)
Secondary	9 (12.00)	14 (15.38)	23 (13.86)
Higher Secondary	3 (4.00)	4 (4.40)	7 (4.22)
Pharmacy	0 (0.00)	1 (1.10)	1 (0.60)
Graduation	0 (0.00)	1 (1.10)	1 (0.60)
Total	75 (100.00)	91 (100.00)	166 (100.00)

Source: Field Survey.

It is important to understand from which source the landless workers engaged in to derive their livelihood. According to the survey conducted from two villages of Sangrur district, the majority of the landless workers are working outside the village to find out work for

earning income. Only 16 per cent of the workers of Mohammad Nagar and 27 per cent of the workers in the Banarsi Village are solely dependent on farm sector. The combined percentage of landless workers of both the villages comes out to be 22 per cent. This shows that large proportion of landless workers does not depend on the farm sector to earn their livelihood. The other activities in which they are working outside the village are drivers of cars, trucks and auto rickshaw/rickshaw pullers; petty shopkeepers, repair workers (mechanics); hair dressers, raj-mistry, carpenters, painters and others are owner of flour mill and handlooms. Since some of the landless workers do not possess skills at all, therefore, and there earning level is also very low.

But those who have little better skills and are educated are able to earn higher level of income. On the whole, the availability of work is either seasonal or total availability of work is quite less or highly uncertain, therefore, they remain quite vulnerable in terms of earning sufficient amount of income for decent living. The study also shows that Banarsi village is more diversified in terms of its landless workers working in more diverse activities than the Mohammad Nagar village.

The landless workers are mostly engaged in economic activities which do not provide employment on regular basis. Therefore, non availability of regular work certainly effect their capacity to earn livelihood. In case of major illness, social ceremonies and in other difficult situations, they have to borrow for survival. The borrowings made during the time of distress situation and their sources are presented in Table 4.12.

The analysis of the table reveals that out of the total 166 landless workforce in both the villages, 21.69 per cent landless workers borrowed only from friends or known persons. The 4.82 per cent, 6.63 per cent and 1.81 per cent landless workers borrowed only from shopkeepers, owners and zamindars, respectively. The

percentage share of those landless workers, who borrowed from more than one sources is quite high as 65.06 per cent. The foregoing

Table 4.11: Classifications of rural non-farm labour in two villages of Sangrur district according to economic activities

Activity	Mohammad Nagar	Banarasi	Total
Non-Farming Casual Workers	14 (18.67)	0 (0.00)	14 (8.43)
Non-Farming Attached Workers	3 (4.00)	1 1.10)	4 (2.41)
Casual Workers (Farming)	7 (9.33)	13 (14.29)	20 (12.05)
Attached Workers (Farming)	5 (6.67)	12 (13.19)	17 (10.24)
Casual Workers Non-Farming & Farming	9 (12.00)	8 (8.79)	17 (10.24)
Drivers	6 (8.00)	5 (5.49)	11 (6.63)
Owner & Drivers	7 (9.33)	3 (3.30)	10 (6.02)
Shops	6 (8.00)	15 (16.48)	21 (12.65)
Mechanic	4 (5.33)	6 (6.59)	10 (6.02)
Workshops	3 (4.00)	2 (2.20)	5 (3.01)
Hair dresser	1 (1.33)	6 (6.59)	7 (4.22)
Rajmistry	5 (6.67)	2 (2.20)	7 (4.22)
RMPs	0 (0.00)	2 (2.20)	2 (1.20)
Dairy/Milk man	3 (4.00)	1 (1.10)	4 (2.41)
Tailor Master	0 (0.00)	3 (3.30)	3 (1.81)
Rickshaw	0 (0.00)	4 (4.40)	4 (2.41)
Painter	0 (0.00)	2 (2.20)	2 (1.20)
Wheat Floor	1 (1.33)	2 (2.20)	3 (1.81)
Wheat floor &v Rice mill	0 (0.00)	1 (1.10)	1 (0.60)
Carpenter	1 (1.33)	2 (2.20)	3 (1.81)
Handloom(Hath Khaddi)	0 (0.00)	1 (1.10)	1 (0.60)
Total	75 (100.00)	91 (100.00)	166 (100.00)

Source: Field Survey.

Table 4.12: Classification of non-farm workers according to Sources of Borrowing in the Time of Crisis in two villages of Sangrur District

Source	Mohammad Nagar	Banarasi	Total
Friends(known Person)	14 (18.67)	22 (24.18)	36 (21.69)
Shopkeeper	3 (4.00)	5 (5.49)	8 (4.82)
Owner (attached With)	5 (6.67)	6 (6.59)	11 (6.63)
Zamidars	2 (2.67)	1 (1.10)	3 (1.81)
More than one Source	51 (68.00)	57 (62.64)	108 (65.06)
Total	75 (100.00)	91 (100.00)	166 (100.00)

Source: Field Survey.

analysis points out that, there is almost similar situation in both the villages in terms of sources of borrowing. It is pertinent to point out that landless workers do not have access to institutional sources of finance. The informal lenders other than friends and relatives usually charge very high interest rates and therefore, this is a sure way through which landless workers, fall into debt trap. These meagre earnings are being further reduced through exploitation done by the informal lenders. Providing institutional finance during the time of exigencies to the rural workforce is a gigantic task but is a step towards a right direction. Therefore it is suggested that formal financial institutions must extend credit facilities to the landless rural households.

4.9: Rural Poor and Alternative Livelihood

Role of NGO 'UMEED':

'Umeed', a ray of hope, is an NGO to help the rural poor getting essential services they so deserve, targeting healthcare, social empowerment of women and employment generation and creation. Various social empowerment initiatives of the organization are as follows.

Social Empowerment Initiatives

Venture	Activity	Coverage
Self Help Groups 	Women Empowerment by forming self help groups.	300 groups, 4000 beneficiaries
Skill Development Training 	Training in bag making, soap and candle making, pickles and preserves, chalk and bookbinding	Trained 1,000 women, At least 30% of the women have started their individual enterprises and have become self-employed.
Stitching Centers 	Teaching girls cutting, stitching, embroidery and crotchet work through stitching centers run on a cluster of villages' scheme.	Covered 350 villages, trained 6,000 girls in this skill and 55% of the beneficiaries are earning a steady livelihood stitching clothes in their villages.
Adult literacy	Imparting elementary education to illiterate women	500 women
Promotion of Commercial Activity 	To encourage rural women to take up commercial activities by using their inherent skills.	Embroidery: 30 Women Dairying: 200 women Durree (Cotton Carpet) weaving: Launching
Awareness Generation	Teaching women their rights under the law and the various benefits and concessions given by the government to the girl child.	Progressing

Umeed' NGO has covered a vast canvas of health, education and empowerment. It started with its own resources and involved corporate world and national and international social and funding organizations. Such an initiative in the area of health, education and infrastructure can show a new ray of hope if replicated at a large level. The state government and the district authorities should identify and support such initiatives, as they are the agents that create and take the development to the doorsteps of masses.

Fishery Department's Venture

The village Ghabda, on Sangrur-Patiala road, had 100-200 acres of non-cultivable land where even grass could not be grown. Department of Fisheries gave training to two farmers and motivated them to start a fishery farm. This became an example for the others. Four more farmers joined the fishery farming. Fisheries Department of the State arranged loans, subsidies and exposure visits for the farmers. Presently in 64 acres of land, about 1600 quintals of fish is being produced, the market value of which comes out to be nearly rupees one crore. It is a source of employment for many workers. If access road to the ponds and marketing facilities are improved, it can improve the profitability of the units. To improve the fish farming, a fish seed farm at village Benra and Patiala gate Sangrur have been set up since 1992. In the district, some individual farmers have also done a good effort in this direction, e.g., model fish farm of village Ballian.

Social and Self Help Groups

Many Social and self help groups are actively working in the district. In social forestry, the group *NishkamSeva Sabha Dhuri* is worth mentioning which did a plantation in 96 acre of land. Many self help groups are active in engaging the rural masses in useful economic activities. The self help groups active in the district are: *Kabir Self Help Group Kanjli; Baba Balk Nath Self Help Group Dhuri; Mai Bhago Self Help Group Kalabula; Anvarat Self Help GroupKatro;* and *Guru Nanak self Help Group Kheri Khurad,*

4.10: Distress in Rural Economy

Rural economy of the district is in deep trouble. Agrarian distress is wide spread. The lower segment of the rural households, both farmers and agricultural labourers, have been reported to resorting to committing suicides which shows grim reality of the rural economy of the district. The available empirical evidence of suicides related to farmers and agricultural labourers during the period 2000 to 2008 clearly brings out the fact that suicides were reported from all

the developmental blocks of the district (Table 4.13). The total number of suicides both of farmers and agricultural labourers, during the above-mentioned period, were 1634. Out of which, 984 (60.22 per cent) were the farmers and 650 (39.78 per cent) were the agricultural labourers. The high incidence of suicides occurred in the developmental blocks of Lehragaga, Sunam, Andana, and Bhawanigarh.

Among the farming category, the marginal and small farmers constituted 75 per cent of the farmers who have committed suicides during the period 2000 to 2008. If we include the semi medium category of farmers along with marginal and small farmers, it comes out to be 93 per cent of the farmers those who have resorted to committing suicides in the district. It is important to note that even the medium and large sized farmers have also been prone to suicides. This shows that something is seriously wrong with the agrarian economy of the district. However, the number of farmers committing suicides and farm size has inverse relationship. As the size of farm increases, the number of farmers committing suicides decreases. The non-viability of marginal and smallholdings can be one of the reasons for not receiving enough income for a decent livelihood, which is

Table 4.13: Block-wise Details of Suicides of Farmers and Agricultural Labourers in Sangrur District 2000-2008

Sr. NO	Block	Farmers												Agricultural Labourers						
		No. of Cases	Landholding Size					Debt–income Ratio				Primary Reason of Suicide		No. of Cases	Primary Reason of Suicide		Debt –income Ratio			
			M	S	SM	M	L	<1	1-2	2-5	>5	Debt	Others		Debt	Others	<1	1-2	2-5	>5
1	Sangrur	55	15	14	18	7	1	12	4	20	19	40	15	35	16	19	15	9	7	4
2	Malerkotla-I	90	51	26	10	3	-	39	11	22	18	67	23	79	58	21	24	14	27	14
3	Malerkotla-II	67	37	18	9	2	1	20	5	10	32	48	19	42	19	23	25	7	6	4
4	Lehragaga	202	79	72	35	15	1	68	32	50	52	160	42	127	73	54	51	15	47	14
5	Dhuri	59	22	25	10	2	-	17	5	18	19	44	15	35	22	13	13	8	9	5
6	Andana	133	67	32	29	5	-	9	14	39	71	120	13	83	66	17	17	18	23	25
7	Sunam	190	90	57	35	6	2	92	23	35	40	121	69	144	75	69	65	28	32	19
8	Bhawanigarh	105	48	32	14	10	1	16	25	39	25	91	14	44	37	7	8	28	6	2
9	Sherpur	83	37	20	22	4	-	29	9	32	13	47	36	61	28	33	29	10	9	13
Total		984	446	296	182	54	6	302	128	265	289	738	246	650	394	256	247	137	166	100

Source: Compiled from Annexure B1 and B2, PAU (2009) Farmers and Agricultural Labourers Suicides Due to Indebtedness in the Punjab State: Pilot Survey in Bathinda and Sangrur Districts, Department of Economics and Sociology, PAU, Ludhiana, April 2009.

Note: M-marginal farmers, S-small farmers, SM- semi-medium farmers, M-medium farmers and L-large farmers

Farmers

minimum possible income to sustain the household and household related social responsibilities. In the absence of availability of sufficient amount of income, the farmers resorted to borrowing from institutional and non-institutional sources. The debt-income ratio clearly brings out the fact that 56 per cent of the deceased farmers ranged between 2-5 and greater than 5 debt-income ratios which is very high. It is important to note here that the recorded reasons for committing suicides of 75 per cent of the farmers were the unbearable burden of debt (Table 4.13). A sample based study (Kaur, 2005) of sources of borrowing of funds by the farmers of Sangrur district shows that the farmers mainly borrow (62 per cent to 80 per cent of the total credit across farm size classes) from informal lenders and pay very high rate of interest (18-24 per cent). It becomes more exploitative when informal lenders linked the credit with other markets, which are popularly called interlinked agrarian credit markets (Gill, 2004). The interlinked credit markets triggers the process that entails the borrower into debt trap. When the borrower falls into debt trap and is dispossessed from his/her prized asset, that is, land-the only source of livelihood, he/she commits suicide.

The suicides committed by the agricultural labourers have been reported from all the blocks of the Sangrur district. But there are wide variations across developmental block of the district. More than 60 per cent of the agricultural labourers reported the main cause of suicide as indebtedness. 62 per cent of the deceased agricultural labourers were having debt-income ratio more than one, which clearly brings out the fact that agricultural labourers were under heavy debt (Table 4.13). This implies that they were not able to earn income sufficient enough even to repay back the outstanding borrowed credit that especially from informal lenders. The informal lender in the case of agricultural labourers is usually the farmer who has been charging very high rate of interest (Kaur, 2005). It is significant to note that agricultural labourer under debt is also being tied with other markets and remain no more independent to perform labour at higher wages

other than for the lender farmer. The indebted agricultural labourer's working conditions are usually bad and he is occasionally being humiliated and abused by the lender farmer. When his income is not sufficient to repay debt and he does not have some income to support the family and fulfill social responsibilities, then he feels trapped in the circumstances that compel him to commit suicide. In the rural economy of the district, agriculture has become relatively more mechanized and this has led to reduction of required labour hours in the agriculture. Therefore, this has led to decline in the earning capacity of the agricultural labour. The lack of alternative work other than agriculture has acted as a drag on the rural agricultural labour and that may precisely be the reason for the rise in debt-income ratio of the agricultural labour.

4.11: Concluding Remarks

The development experience of district Sangrur shows that more than 71 percent of the population has been residing in rural areas. Thus deriving their livelihood mainly from agriculture related economic activities. Four blocks, i.e., Dhuri, Sherpur, Malerkotla_I and Malerkotla-II of Sangrur district were relatively diversified, so far as economic activity in which main workforce is engaged. However, there is a dire need to alter the occupational structure of the district from agriculture to other remunerative non-farm economic activities. Even the agriculture is highly biased towards food grain production, i.e., wheat and paddy. Diversified and remunerative (other than food related production) agriculture activities need to be promoted for ensuring regular flow of income to the owners of cultivable land and rural labour. Scientific research related agriculture sector needs to be strengthened for ensuring reduction in productivity gaps, both across crops and blocks. The existing cropping pattern of agriculture is water intensive, such as paddy. This has led to the depletion of groundwater in the district across the blocks. Therefore, it is suggested that the recharging of groundwater be done on the war footing along with

reducing area under water intensive crops. The major problem faced by the population dependent on the agriculture is declining surpluses generated from this occupation, especially the small and marginal farmers. The rural population with declining income needs to be shifted from agriculture to other non-farm industries and other service sector, i.e. to remunerative economic activities. However, the existing informal sector, economic activities are not very attractive because of the fact that the wage rate and working conditions are not at all attractive. Therefore, new initiatives, both formal and informal, non-farm economic activities should be started in high value added, as well as, high wage paying sectors. It needs to be mentioned that the statistics relating to both agriculture and informal sector activities are generally not reliable. Even the database relating to informal non-farm activities is almost nonexistent. Therefore it is suggested that some initiative needs to be taken by the state government to collect detailed information regarding existing non-farm economic activities in which workforce of the district already engaged in. This information base, if generated, will go a long way, to make the planning process at the district level more relevant and effective to uplift the welfare of the rural people while involving them into gainful non-farm economic activities.

Agrarian distress has been felt most by the agricultural labour, marginal and small farmers. They are reeling under high incidence of indebtedness. Therefore, it is suggested that Punjab Government must constitute State Farmers and Agricultural Labour Debt Relief Commission on the pattern of Kerala Government (NCEUS, 2009). Since the larger part of the indebtedness belongs to the informal lenders, therefore the debt relief must be provided to the rural poor (agricultural labour, marginal, small and semi-medium farmers) as a short-term measure. The young rural work force is looking for remunerative and regular employment opportunities. The national rural employment guarantee act (NREGA) should be implemented by Punjab Government in the district Sangrur for ensuring employment

to the young rural work force at a stipulated minimum wage and minimum conditions of work (NCEUS, 2007). The rural unemployed youth has already been demanding change in the rural development strategy, which is more inclusive (Gill, 2006). Therefore, it is high time for the Punjab Government to respond to the difficulties being faced by the rural population of the district. A comprehensive social security scheme needs to be devised on the pattern as suggested by the National Commission for Enterprises in the Unorganised Sector set up by the Government of India. The unemployment insurance scheme should be introduced so that displaced agriculture labour, distressed farmers and retrenched work force from informal sector needs to be compensated and this compensation should be converted into an insurance based social security benefit. A special programme needs to be designed for the regeneration of agriculture especially for the marginal and small farmers. The skill base of the rural work force need to be improved through special initiative for imparting new skills and training programmes should be taken up by the Punjab Government. There is a dire need to initiate skill up gradations and training programmes for the rural poor with a view to provide local jobs for rural women. The rejuvenation of the rural economy of the district can be done while integrating farmers' income primarily through promoting high value added agriculture operations, processing and marketing activities. The generation of non-farm income sources is the prime need of the rural economy. Government of Punjab may also consider providing elderly farmers and agricultural labourers (aged 60 years and above) adequate pension on Taiwanese pattern so that they can retire from active economic activities (Tsai, 2006). This scheme if introduced may have a capacity to reduce son preference, which has adversely affected the sex ratio of the district.

Chapter-V
Human Vulnerability

Economic development of a region is a necessary condition but not a sufficient condition to ensure “human security”. Vulnerability has emerged as a leading concept in the field of development economics. According to UNDP (2006), “Vulnerability is the exposure to hazard by external activity and coping capacity of the people to reduce the risk at a particular point of time”. Vulnerability refers to the lack of cushion available to the community to combat any kind of threat to human wellbeing and existence. It is a dynamic concept in which we try to understand how the system responds to an external trigger and how reliant it is in maintaining its stability. Selected criteria for vulnerability include social, economic, natural and institutional aspects. That is to say: (a) social (poverty, health; (b) economic (economic losses, loss of intellectual property rights etc.); (c) natural (loss of natural heritage, extreme events); and (d) institutional (conflict).

Several economic and demographic factors, can also contribute to vulnerability within human populations, as a result of which social inequalities may widen during the course of development. In such a situation the vulnerable chunk of the society may not be in a position to leverage the new development opportunities up to the same extent as their counterparts have done and may remain economically motionless or even may suffer developmental setback relative to their counterparts. This needs identification of such groups who have been unable to share equitably the benefits of development so that a focused intervention can be made to improve this lot.

The process of development should generally reflect the widening of opportunities for all, but generally it is not so. The dispersal of benefits of development may not always be uniform or equitable. In both economic and human development terms, the

development process may even perpetuate or amplify the socio-economic and (or) cultural inequalities. As a result some selected groups of individuals may secure greater benefits at the expense of other social and cultural groups.

In the regional situation of Sangrur district, where the sustained economic losses and personal distress have repeatedly affected certain sections of the district population as a direct consequence of floods, soil erosion and poor quality ground water. It is thus an important issue to examine the effect of these adversities on the development achievements of the district. Human vulnerability in Sangrur district is rooted in the distinctly visible processes, namely: (a) poverty; (b) natural calamities like floods and loss of livelihood; (b) deteriorating groundwater situation (c) emerging ecological situation and human health; and (d) debt burden and farmer suicides.

Poverty

Number of yellow card holders (table 5.1) may be taken as a measure of poverty level of a region. The poverty is not evenly distributed in the district. There are wide disparities in the district. In terms of yellow card holders, the Lehragaga block is at the top with percentage mark of 48.25 percent. It is followed by Andana (28.17 percent), Bhawanigarh (24.42 percent) and Sangrur (21.89 percent) blocks in order. Lower percentage of yellow card holder families is found in Sherpur (6.40 percent) and Malerkotla-I (6.55 percent) blocks. In terms of poverty Lehragaga and Andana blocks are at higher levels of vulnerability.

Floods

As per an earlier study of our department (Singh, Baldev et al., 1998), during 1994, a flood prone constituent of the Lehragaga block was carved out as a separate entity. It was named as Andana block. Owing to contiguity considerations, however, certain non-flood prone villages got attached to it. The Ghaggar River, historically known as *Sarsvati*, flows down in a zigzag pattern in the middle of the Andana at

Moonak block and is a main source of flood in the block. It enters the block from the north-eastern direction at Khanauri, moves towards south-west and enters the Haryana State. The natural flow of the river is supplemented by rain fed drain *Jhambo Wali Choe* that joins it at Chandu village. That is why the water spillover at this juncture apart from other points, is substantially high.

Table 5.1: Block-wise distribution of yellow card holders in Sangrur

Block	Number of Families	No. of yellow Card holder SC families		No. of yellow Card holder other families		No. of yellow Card holder total families	
		No.	Percent	No.	Percent	No.	Percent
Andana at Moonak	11854	2287	19.29	1052	8.87	3339	28.17
Bhawanigarh	16619	3235	19.47	823	4.95	4058	24.42
Dhuri	13500	1933	14.32	637	4.72	2570	19.04
Lehragaga	19324	6713	34.74	2611	13.51	9324	48.25
Malerkotla-I	23475	848	3.61	690	2.94	1538	6.55
Malerkotla-II	22425	1657	7.39	819	3.65	2476	11.04
Sangrur	19727	3505	17.77	814	4.13	4319	21.89
Sherpur	16388	791	4.83	258	1.57	1049	6.40
Sunam	36959	4967	13.44	1335	3.61	6302	17.05
Total	180271	25936	14.39	9039	5.01	34975	19.40

Source: Village Directory, Sangrur, 2007.

Distribution of flood prone villages according to extent of damage due to floods is given in table 5.2. Extent of damage due to floods may be defined as the area damaged as a percentage of total area of a region. With extent of overall damage of 60.50 percent, Anadana block is the worst hit in Sangrur district. This figure of damage stands at 66.36 percent for Moonak (urban) and at 59.53 percent for rural. The rural affected area constitutes twenty five villages. Uniformly the extent of damage is more than forty percent. Temporal statistics given in table are indicative of the fact that over the years the position has not changed much. Year after year, same villages are being affected by the flood in Kharif season. Persistent state apathy is displayed in the following visuals which show there are more foundation stones and hoardings than the substantial effort.

Table 5.2: Distribution of villages according to extent of flood in Andana block

Village	Total land as per records (Acres)	Acres of area damaged in Kharif season				Maximum damage (Acres)	Extent of Damage (%)
		1993	1994	1995	2008		
Ganota	548	110	-	98	222	222	40.51
Andana	4151	855	446	853	1680	1680	40.47
Hamirgarh	2770	540	130	650	1121	1121	40.47
Makorarh Sahib	3850	504	664	1243	1558	1558	40.47
Baoupur	1744	586	480	626	706	706	40.48
Ghamur Ghat	1159	7	-	470	469	470	40.55
Banarshi	2755	1152	1259	1300	1115	1300	47.19
Mandvi	6088	3000	1952	2961	2464	3000	49.28
Fulad	1853	1030	525	800	750	1030	55.59
Rampur Gujran	1584	920	-	675	641	920	58.08
Bajidpur Nava Abad	801	485	338	365	324	485	60.55
Salemgarh	1957	1238	28	760	792	1238	63.26
Sahpur Therri	870	500	516	578	352	578	66.44
Nava Gaon	3002	1250	1800	2120	1215	2120	70.62
Chandu	1275	-	895	903	516	903	70.82
Karhel	1742	1250	398	752	705	1250	71.76
Bhundrh Bhaini	1043	850	82	400	422	850	81.50
Hotipura	1332	1050	800	1120	539	1050	78.83
Kundani	553	473	2	323	224	323	58.41
Bushera	2943	2605	980	2400	1191	2605	88.52
Khanauri Kalan	1678	540	374	540	679	679	40.46
Handa	1070	1020	476	1022	435	1022	95.51
Surjan Bhaini	617	573	513	590	250	590	95.62
Kabirpur	677	539	131	649	274	649	95.86
Banga	2738	951	1733	2700	1108	2700	98.61
Total	**48800**	**22028**	**14522**	**24898**	**19752**	**29049**	**59.53**
Moonak (Urban)	**8063**	**5351**	**2490**	**5203**	**3263**	**5351**	**66.36**
Grand Total	**56863**	**27379**	**17012**	**30101**	**23015**	**34400**	**60.50**

Source: Office of Deputy Commissioner, Sangrur.

Visuals of foundation stones and hoarding

The problem of floods calls for, from planning perspective, short term, medium term and long term measures that may be specific to the block.

Long Term Measures: First, the problem of floods in the fertile plains of Punjab and Haryana state can be handled, in the long run, by taming the Ghaggar River and its tributaries in the lower Himalayan region. This is an age old solution to the problem. Flood storage dams were proposed in 1850 by Captain J.D. Cunnigham, in 1927 by A.J. Wiley, in 1945 by Rai Bhadur A.N. Khosla and by Haryana Government in the 1990s. Three proposal of Haryana Government included: (i) Ghaggar Dam Project on Ghaggar near Chandi Mandir; (ii) Khet Purali small dam on tributary of Tangri; and (iii) Bhud small dam on another tributary of Tangri Nadi. Some of the efforts done in Punjab to divert the surplus waters are worth mentioning here, e.g., Patiala-ki Rau to Jayanti-devi-ki-Rau by constructing Dadu Majra regulator. From the

perspective of the block, another aqueduct needs to be built near the existing one at Chandpur on the Bhakhra canal.

Medium Term Measures: To prevent overflowing of flood water from Ghaggar River in the block, the measure that had been proposed by an earlier referred study is the construction of Bundhs on both sides along Ghagar from Khanauri to Haryana border near Jakhal town in Andana at Moonak block. Here the effort of self help groups is worth mentioning, whereby the villagers themselves strengthened the embankment of the river in 1996-97 and the area adjoining the villages remained flood free.

Short Term Measures: Short terms measures proposed by the above referred study of our department included: (i) The existing Bund and deposits due to silting on the left side of the River Ghaggar as well as underneath the aqueduct (at RD-490797) needs to be cleared and bends straightened to regulate the normal flow of water; (b) The Jhambo Wali Choe, a tributary of Ghaggar that merges into it at village Chando needs to be doctored.; (c) Proper coordination with authorities managing Mustafabad (Bibipur) lake water release. Our team visited the site and found that some construction work at Chando is in Progress.

Visual: An Existing congested passage near Khanauri

Visual: Project at Chando to control flood situation

So, a two pronged strategy is needed: first, taking up the matter with Haryana state and the Central Government; and secondly, strengthening the flood related systems of the block.

Ground Water Resources of Sangrur

The ground water situation in Punjab state (table 5.3) is continuously deteriorating. The ground water development is normally classified into four categories: (i) Safe-areas (ground water development <= 70 percent) which have ground water potential for development; (ii) Semi-critical area (ground water development > 70 percent and <= 90 percent) where cautious ground water development is recommended; (iii) Critical areas (ground water development > 90 percent and <= 100 percent); and (iv) Over exploited areas (ground water development > 100 percent) where there should be intensive monitoring and evaluation and future ground water development to be linked with water conservation measures. The number of over-exploited blocks has increased with time as per various ground water estimation studies carried out from time to time.

Table 5.3: Block-wise temporal situation of groundwater resources in Punjab

Block Category	Year-wise number of blocks					
	1984	1986	1989	1992	1999	2004
Dark (Over-exploited)	53 (44.92)	55 (46.61)	62 (52.54)	63 (53.39)	73 (52.90)	103 (75.18)
Dark/Critical	7 (5.93)	9 (7.63)	7 (5.93)	7 (5.93)	11 (7.97)	5 (3.65)
Grey/Semi-Critical	22 (18.64)	18 (15.25)	20 (16.95)	15 (12.71)	16 (11.59)	4 (2.92)
White/Safe	36 (30.51)	36 (30.51)	29 (24.58)	33 (27.97)	38 (27.54)	25 (18.25)
Total	118 (100.00)	118 (100.00)	118 (100.00)	118 (100.00	138 (100.00)	137 (100.00)

Note: Figures in braces are percentages.
Source: Report on Dynamic Ground Water Resources of Punjab State, 2007.

The long term water table fluctuation for the period 1979 to 1998 (table 6.4) indicates decline of water table in nearly 76 percent of the area of the state. During this period, fall in water table in the range of 0-3 mbgl is in 35 percent of the area, between 3 to 5 meters in 17 percent of the area and more than 5 meters in 24 percent of the area in the state. Summary of long-run fall in water table (pre-monsoon) during the different years of study over the last two decades is given below. Block- analysis of water table has already been done in chapter on livelihood patterns.

Table 5.4: Long term water table temporal fluctuations in Punjab

Year	Range of Fall (% of State Area)		
	0-3 m	3-5 m	Above 5 m
1979-80	49	30	3
1979-94	34	23	29
1979-97	39	18	20
1979-98	35	17	24
1979-99	31	21	20
1984-2000	43	22	7
1984-2001	39	24	16
1984-2002	34	21	23

Source: Report on Dynamic Ground Water Resources of Punjab State, 2007.

Ecology and Health

Punjab, the granary state of India has been the leader of the Green Revolution. Growth of agriculture output in Punjab has led to higher per-capita income and better standards of living. Falling water table and groundwater overdraft has become a serious problem in the state. Punjab is the topper state in consumption of chemical fertilizers and pesticides per hectare. Presently the Punjab, with only 1.57 percent of the geographical area is consuming 15 percent of the pesticides and more than 8 percent of chemical fertilizers of India. The

health ailments are alarmingly rising and are being getting closely identified with indiscriminate chemical use in agriculture.

Our earlier pilot study indicates that there is an indiscriminate use of pesticides in the region (Singh, Inderjeet and Kumar, Parmod, 2007). Pesticide use is more than four times of the recommended amount. The illiteracy rules the farming system of the state. Even if the formal education of a farmer is low, the training or skill of the farmers in handling the pesticides can save them from side effects of pesticide use. The study showed that One-third of the farmers have got no formal/informal training in storage, handling, transportation and use of the pesticides. Next 44 percent of the farmers have just the informal training which they have obtained from their relatives and forefathers and that too on hear-and-say basis and more so on hit-and-trial basis. Only 22.40 percent of the surveyed farmers got training from formal institution of government, companies, Krishi Vigyan Kendras (KVGs) or the Punjab Agriculture University, Ludhiana. That is why, when we looked at the storage aspect, it showed that one-third of the farmers store the pesticide in the living area itself. Here living area means the area where they cook, eat and sleep. Another one-half of the farmers store these chemicals near to the living area and just 12 percent of the farmers store them away at a safe distance.

Because of poor knowledge-base of the farmers, the type of pesticides and its frequency of use are based mostly on the recommendation of the traders. The pilot survey shows that about two-third of the farmers are using the pesticides at the recommendation of retailers. In Punjab, most of the pesticide retailers are seed and fertilizer dealers, money lenders and *Arhtias.* Farmers have to depend on them for their short and long term debt requirements and in lieu they are under compulsion to buy farm inputs from them and sell output to them. In the process, the unbranded and spurious pesticides also find their way into this kind

of retailing. So much so, persistent organic pollutants (POP) and celphos category of pesticides banned by the government years ago are freely available in the market. In terms of quantity, intensity and frequency, sometimes the farmers go beyond the so called "demonstration effect" of economics they often try to compete with their neighbours and relatives in this aspect. Because of the frequent failure of spurious pesticide to give the outcome, a cocktail of these banned pesticides is prepared. Sixty eight percent of the farmers use this kind of cocktail pesticide, without being aware about its health effects on the user and the consumer.

Due to lack of education and poor product handling knowledge, much needed precautions for safety in use of pesticides are generally ignored. The users are totally unaware of the safety guidelines and precautions required for safe handling of deadly chemicals. After the spray of pesticide is over, the clothes are never washed by one-third of the farmers, another fifty percent do it only sometimes and just the ten percent of the farmers do it always and every time. Regarding use of a protective mask on the face along with full goggles to covers the eyes also, is totally an unheard concept for them. They use a thin cloth covering to cover the mouth and nose only which is not sufficient to stop inhalation of fine sprayed chemicals. More than 70 percent of the farmers have never used such a protective mechanism and another 25 percent have used it sometimes. Only 3 out of 125, i.e., 2.40 percent have always taken such a protection. Covering hands, arms and legs while doing the pesticide spray protects the user from direct exposure. About one-third of the farming community does not adhere to following such a protection. Empty canes and packing should not be used for household use but often fifty percent of the farmers do use it and that too sometimes for the purposes in/ around the kitchen area. By culture, during heavy workdays at farm, the lunch/tea break is taken at the farm site itself. Before such a break proper hand and face wash is not done by majority of the people. But after the work is over in the evening, the legs and arms are not

washed thoroughly by majority of the people. Only 6 percent of the farmers do it every time, others are totally unserious about this precaution. In farming, most of the community normally wears a turban on the head and top of the turban provides a very thin covering to hairs and provides an enough space for letting the chemicals to settle down and allows a sustained inhalation for a long time. Further, the washing of hair is weekly phenomena for them. Two-third of the farmer community never washes the hair after immediately finishing the spray job and only 5.60 percent of them do it strictly.

The effect of mishandling and overuse of pesticides is clearly visible. The health related problems are rather the symptoms reacted by the farmers. These are the immediately visible symptoms and not the long term effects. Eye irritation and skin problems immediately after the spray is very common and are found in its severe form. One third of the farmers reported headache problem immediately after the spray is done. The problems like vomiting, dizziness and breathing are less common in the post spray sessions. The health and environmental hazards of pesticides can be partly avoided by education and creation of incentives to curb the trend of overuse.

Above referred study relates the number of ailments data with fertilizer consumption, pesticide consumption and the per capita net state domestic product. An interesting fact that comes to light is that all the states that are leaders in Green Revolution are also leaders in consumption of fertilizers and pesticides. Fertilizer consumption per hectare in Punjab is the highest as compared to other states.

Punjab ranks at number one in terms of total quantity of pesticide consumed (table 5.5). In terms of health ailments, the rural Punjab scores at 136 per thousand as compared to 53 in Bihar, 57 in Rajasthan and 77 in Orissa. The urban situation in health ailments is relatively better, it is 107 per thousand. So, the total health ailments incidence in Punjab is almost 2.5 times of what it is in Bihar. It is

followed by West Bengal, U.P. and Haryana in order. Thus, heavy chemicalization of agriculture has no doubt raised the per capita income of the region but has at the same time led to increase in health aliments. Block-wise analysis of fertilizer consumption has already been done in chapter on livelihood patterns.

Table 5.5: No. of Health Ailments and Chemical Consumption in Punjab, 2004

State	Fertilizer Consumption		Pesticide Consumption		Per Capita NSDP		No. of Ailments/1000			
	Per Hectare	Rank	MT Tech. Gr.	Rank	NSDP	Rank	Rural	Rank	Urban	Rank
Andhra Pradesh	155.8	3	2133	9	20757	9	90	8	114	4
Assam	41.6	13	170	15	13139	12	82	9	83	9
Bihar	85.7	10	850	11	5780	15	53	15	63	13
Gujrat	106.8	8	2900	6	26979	4	69	11	78	10
Haryana	166.2	2	4520	3	29963	1	95	5	87	8
Karnataka	110.8	7	2200	8	21696	7	64	12	57	14
Kerala	67.4	11	360	14	24492	5	255	4	240	1
M.P.	56.0	12	749	12	14011	11	61	13	65	12
Maharashtra	97.7	9	3030	5	29204	2	93	7	118	3
Orrisa	40.4	14	692	13	12388	13	77	10	54	15
Pujab	192.5	1	6900	1	27851	3	136	2	107	6
Rajasthan	36.6	15	1628	10	15486	10	57	14	72	11
Tamil Nadu	152.9	4	2466	7	23358	6	95	6	96	7
Uttar Pradesh	125.5	6	6855	2	10118	14	100	4	108	5
West Bengal	129.0	5	4000	4	20896	8	114	3	157	2

Source: 1. Statistical Abstract, Punjab, 2004
2. NSSO Report on Mortality and Morbidity, 2004

The presence of POPs in blood samples and cancer concentrations found (PGIMER, Chandigarh and CSE Studies) in the cotton belt is also an indication towards the bad health effects of pesticides. ICMR report on cancer cases registered in selected big medical institutions shows that the cancer is also emerging as a big disease in the region. In this report, number of cases shown in Bhatinda, Faridkot, Mukatsar district are only those who came to the sampled hospitals and the sample itself is very small. Due to poor literacy level masses, till death, are unaware of the very existence of such disease. Even if they come to know, due to misbelieves and non-affordability they get into the trap of quacks. More than a half of the people leave the treatment after one or two procedures. In such a dismal scenario, by just rough approximation, the ICMR results are just a fraction of the ground reality. Hence, the occurrence of cancer

cases in the pesticide users' belt is an alarming bell for the ecology of the region.

Indebtedness and Farmer Suicides

Indebtedness rules the region. There are several villages with cent percent farmers in debt trap and put on village sale. Bhuttal Kalan in Sangrur district comprises 1000 acres of land and the neighbouring Bhuttal Khurd has 1200 acres of land where eighty per cent of the village land is already mortgaged to moneylenders and commission agents. While both these villages are up for sale, the situation is no better in the adjoining villages. No wonder, 37 per cent of the farmers in Punjab have in the latest National Sample Survey Organization (NSSO) report expressed the desire to quit farming (Davinder Sharma, 2006).

Due to economic distress, the number of farmers committing suicide has been alarmingly rising (Bhalla et. al., 1998). Several such cases, due to harassment and cultural reasons, go unreported to the police. Several individuals and organizations have given various estimates of suicides. The data collected by Hardev Singh Arshi, CPI in 1998 and Inderjeet Singh Jaijee (Akali Dal) are based on Sangrur, Mansa and Bathinda districts. Another study by Bhalla et al., based on police records, confirmed 11 cases of suicide in Sangrur out of total 53 investigated. The report brought out that 45.20 of the suicide cases were landless labourers; 24.20 percent were small and marginal farmers; 24.40 percent were medium and rest of the 5.60 percent the large farmers. Another study by Iyer and Manick (2000), based on 80 suicide cases of seven villages of three blocks of old Sangrur district (Lehragaga, Sangrur and Barnala) has confirmed the Bhalla et al. findings. Economic compulsion has been the main cause of suicides in the region. Another study by (Gill et. al., 2000), based on 79 suicide cases, in 29 villages of Patiala, Mansa, Sangrur and Bathinda has brought out similar findings. Economic distress primarily and some non-economic factors have the main cause suicides. Study

underscored the fact an elaborate registry of the cases be prepared and preventive socio-economic mechanism be designed at the state level.

Thus, vulnerability, the lack of cushion available to the community to combat any kind of threat to human wellbeing and existence, is rooted in the distinctly visible processes, namely: (a) poverty; (b) natural calamities like floods and loss of livelihood; (b) deteriorating groundwater situation (c) emerging ecological situation and human health; and (d) debt burden and farmer suicides. This needs an immediate policy intervention.

Chapter-VI
Human Development and the Way Ahead

Because of composite character of human development, to trace the action oriented steps as a way ahead, let us first summarize the report in the form of comprehensive indices. There is a well defined UNDP methodology for calculation of HDI. According to this methodology, the HDI is an un-weighted average of three indices relating to health, education and livelihood. The methodology is well defined for national and international application. One faces both conceptual and data problems when HDI is to be computed at sub-state or sub-district level exercises. That is why most of such disaggregate studies compute HDI based on some proxy measure instead of actual measures given in UNDP methodology (Singh, Inderjeet and Singh, Reena, 1998, 2001) . But keeping in view the paucity and limitations of data, it is not advisable to present HDI at sub-district level; instead a comparison across indicators has been made.

Indexing Human Development in Sangrur District

Human development is a complex multidimensional process through which gains accruing to the region from economic growth and development consolidate and enhance the lives of the people. The simplicity of HDI lies in capturing, indexing and comparing the three intrinsic dimensions of human development, namely: the enhancement of human capabilities that lead to healthy and lengthened lives; the augmentation of human productivity; and the improvement of material standards of life through progressive increase in income and consumption standards. Under the UNDP methodology, these three dimensions of human development attributes are named as: *life expectancy at birth* as a measure of longevity of human lives; *adult*

literacy rates and *gross enrolment ratios* as a measure of education and knowledge acquisition; and *per capita income* (GDP) as a measure of material standards of life. Because of lack of robust databases of UNDP indicators at sub-district level, the exercise has been limited to three sub-indices of HDI and comprehensive HDI has not been computed. Till the availability of elaborate database, the current exercise may prove to be a best guide for human development planning and resource allocation. Following is the detailed analysis of three component indices of human development index.

The Livelihood Index

Because of lack of reliable statistical estimates of block level domestic product, the livelihood index used in this report makes a complete departure from the methodology used in the UNDP Human Development Reports. Instead of quantification of current material standards enjoyed by the target population in the form of income, an alternative index of livelihood has been computed. It is based on available employment opportunities to the people of district Sangrur. Available employment opportunity is best measured by the work participation rate (WPR) of a population. WPR can be measured directly from the Census work participation rate. However, work participation yields different incomes to those who participate in regional work opportunities on a regular basis, and those who participate casually as occasional or marginal workers. That is why; there is a need to distinguish between main and other workers. Accordingly, the block-wise/municipality-wise proportion of main workers to the total workforce has been included in the computation of livelihood component index. Since land is scarce and there is underemployment in it, the next opportunity lies in the non-farm employment. Hence other workers as a proportion of total population have also been included in the livelihood

opportunity index. From the resulting index (Table 6.1), it can be readily seen that the livelihood opportunities are more centered on the rural areas than the urban ones. This is clear in the table that the top five ranking blocks in terms of livelihood opportunities are in the rural segment of Sangrur district. It is primarily because of the availability of unemployed workforce in these areas. Legragaga (u), Malerkotla (u), Khanauri, Bhawanigarh (u) and Cheema, in order, are at the tail-end of livelihood opportunities.

Table 6.1: Computation of Livelihood Opportunities Index for Sangrur District

Sr.No.	Block	Population (2001)	Total Workers (2001)	WPR (2001) Percent	Main Workers among Total Workers (2001) Percent	Other Workers among Total Workers (2001) Percent	Livelihood Opportunity Index
1	Sangrur	111000	42141	37.96	84.17	15.83	0.460
2	Malerkotla 1	137011	55684	40.64	87.82	12.18	0.469
3	Malerkotla 2	129834	54117	41.68	88.66	11.34	0.472
4	Lahragaga	112329	46576	41.46	80.38	19.62	0.472
5	Dhuri	76057	34364	45.18	86.42	13.58	0.484
6	Andana	73452	31535	42.93	80.18	19.82	0.476
7	Sunam	214776	90005	41.91	86.25	13.75	0.473
8	Bhawanigarh	95351	38506	40.38	83.66	16.34	0.468
9	Sherpur	93666	47051	50.32	84.59	15.41	0.501
Rural		**1043476**	**439979**	**42.16**	**84.68**	**15.32**	**0.474**
Municipality							
1	Sangrur	77989	25192	32.30	94.95	5.05	0.441
2	Malerkotla	112523	33308	29.60	95.03	4.97	0.432
3	Ahemedgarh	28022	9149	32.65	98.69	1.31	0.442
4	Dhuri	49406	16790	33.98	91.04	8.96	0.447
5	Sunam	56251	18520	32.92	89.94	10.06	0.443
6	Lehargaga	19366	5645	29.19	92.97	7.03	0.431
7	Bhawanigarh	17792	5360	30.13	93.90	6.10	0.434
8	Longowal	20239	8134	40.19	84.78	15.22	0.467
9	Dirba	13079	4735	36.20	90.37	9.69	0.454
10	Khanauri	10960	3236	29.53	94.31	5.69	0.432
11	Moonak	14924	5122	34.32	89.91	10.09	0.448
12	Cheema	9245	2856	30.89	96.57	3.43	0.436
Urban		**429796**	**138047**	**32.12**	**92.71**	**7.30**	**0.440**
Total Sangrur		**1473242**	**578026**	**39.23**	**86.99**	**13.01**	**0.464**

The Education Index

Education index, one of the important of the three indices on which human development index (HDI) is built, has been developed on the basis of UNDP recommendations, i.e., by giving two third weight to adult literacy ad one third weights to enrolment rate. Due to the limitations of the data regarding adult literacy, functional literacy rates (15 years and above) has been used in place of adult literacy rate for 2001, and gross enrolment rate for 6-14 years of ages. Block-wise and municipality-wise information regarding education index of Sangrur district is presented in Table 6.2. Education index is indicative of the fact that low literacy rates, low education index and higher ranking in education index points out the deprivation in literacy of the concerned block and municipality of the Sangrur district. Cheema, Dirba and Logowal municipalities and Lehragaga, Andana and Sunam blocks have been more deprived in terms of literacy as compared to other blocks and municipalities. Hence, to reduce deprivation in literacy the areas with higher education index ranking must be targeted.

Table 6.2: Block-wise and Municipality-wise Education Development Index and Rural-Urban Ranking

Sr. No.	Block	Population	Population Below 6	Population Above 6	Literate Persons	Literacy Rate	Enrol. Rate	EDI	Rank
1	Sangrur	111000	14183	96817	53945	55.72	97.8	0.697	5
2	Malerkotla-1	137011	17068	119943	77488	64.6	97.7	0.756	2
3	Malerkotla-2	129834	17199	112635	74193	65.87	96.7	0.761	1
4	Lehragaga	112329	15643	96686	42361	43.81	91.1	0.596	9
5	Dhuri	76057	9881	66176	40182	60.72	95.4	0.723	3
6	Andana	73452	11350	62102	29985	48.28	90.6	0.624	8
7	Sunam	214776	28984	185792	91514	49.26	94.1	0.642	7
8	Bhawanigarh	95351	12774	82577	46217	55.97	96.5	0.695	6
9	Sherpur	93666	11500	82166	47937	58.34	96.7	0.711	4
Rural Total		1043476	138582	904894	503822	55.68	95.4	0.689	
Municipality									
1	Sangrur	77989	8683	69306	56346	81.3	95.6	0.861	1
2	Malerkotla	112523	15884	96639	60881	62.99	87.1	0.710	9
3	Ahemedgarh	28022	3384	24638	19758	80.19	97.2	0.859	2
4	Dhuri	49406	6168	43238	33142	76.65	96.6	0.833	3
5	Sunam	56251	6962	49289	34125	69.23	89.8	0.761	6
6	Lehragaga	19336	2514	16822	12225	72.67	92.0	0.791	5
7	Bhawanigarh	17792	2228	15564	10854	69.74	98.9	0.795	4
8	Longowal	20239	2522	17717	10422	58.82	92.4	0.700	10
9	Dirba	13079	1750	11329	6535	57.68	86.1	0.672	11
10	Khanauri	10960	1784	9176	5927	64.59	84.1	0.711	8
11	Moonak	14924	2377	12547	7699	61.36	92.9	0.719	7
12	Cheema	9245	1309	7936	4133	52.08	87.6	0.639	12
Urban Total		429766	55565	374201	262047	70.03	92.6	0.776	
Sangrur		1473242	194147	1279095	765869	59.87	94.8	0.715	

Source: ESO, Sangrur, DEO, Primary and DEO, Secondary, Sangrur.

The Health Index

Unlike the DHDR education index that approximates the UNDP methodology of calculation, the index used for computing health related disparities between the Sangrur blocks/municipalities is based on synthetic methodology to compensate for the dearth of reliable indicators for current infant mortality rates in the district. Instead of calculating life expectations at birth as a direct method of quantifying the underlying human development attribute of a long and healthy life, a suitable proxy index has been developed. Life expectation is a direct function of available health related infrastructure and the health manpower. Health index has been based on two sub-indices: indoor medical facilities sub-

index and medical manpower sub index. Best measure of health related infrastructure is availability of beds per hundred unit of population (Table 6.3). It may be termed as an indoor medical facilities sub-index. An analysis of the indoor facilities index is indicative of the fact that indoor facilities are not evenly distributed in the district. Urban areas are in advantage-position as compared to the rural ones as far as these facilities are concerned. The urban area of Sangrur district Bhawanigarh, Lehragaga and Longowal in order, are the top-rankers in terms of indoor health facilities. All the blocks of rural Sangrur are far behind.

The medical manpower sub-index may be defined as the availability of medical manpower per hundred unit of population in an area. Medical manpower sub-index is presented in table 6.4. Medical manpower availability sub-index is exactly in consonance with the earlier index, the indoor medical facilities index. Here also the rural area is trailing behind and the selected urban areas are in a privileged position.

Comparative picture of sub-indices of human development of Sangrur district is presented in table 6.5. The table is indicative of the fact that all the sub-indices follow a mixed behaviour pattern. Education level and health facilities are depicting a positive association but the livelihood pattern is behaving in an unexpected way. This is primarily because the livelihood index is a function of WPR and is not depicting the actual income levels of the people. However the three stand alone sub-indices sufficiently highlight the spatial dynamics human development in Sangrur district.

Table 6.3: Computation of Indoor Facilities Sub-Index in Sangrur District

Sr. No.	Block	Population 2001	Total Beds	Indoor Medical Facilities sub-Index
1	Sangrur	111000	200	0.180
2	Malerkotla 1	137011	30	0.022
3	Malerkotla 2	129834	50	0.039
4	Lehragaga	112329	30	0.027
5	Dhuri	76057	50	0.066
6	Andana	73452	50	0.068
7	Sunam	214776	50	0.023
8	Bhawanigarh	95351	30	0.031
9	Sherpur	93666	30	0.032
Rural		**1043476**	**520**	**0.050**
1	Sangrur	77989	100	0.128
2	Malerkotla	112523	100	0.089
3	Ahemedgarh	28022	30	0.107
4	Dhuri	49406	30	0.061
5	Sunam	56251	50	0.089
6	Lehragaga	19336	30	0.155
7	Bhawanigarh	17792	30	0.169
8	Longowal	20239	30	0.148
9	Dirba	13079	4	0.031
10	Khanauri	10960	4	0.036
11	Moonak	14924	30	0.201
12	Cheema	9245	25	0.270
Urban Total		**429766**	**463**	**0.108**
Sangrur		**1473242**	**983**	**0.067**

Table 6.4: Computation of Medical Manpower Sub-Index in Sangrur District

Sr. No.	Block	Population	Pharmacists	Lab Staff	Medical Officers	Govt. Nurses	Health Sub Centers	Female Health Assistants	Total Medical Manpower	Medical Manpower Index
1	Sangrur	111000	13	3	1	23	19	8	67	0.060
2	Malerkotla 1 (Amargargh)	137011	12	6	6	31	28	7	90	0.066
3	Malerkotla 2 (FGP)	129834	12	6	7	28	31	4	88	0.068
4	Lehragaga	112329	18	6	1	33	19	3	80	0.071
5	Dhuri	76057	-	-	-	-	14	5	19	0.025
6	Andana	73452	-	-	-	-	15	6	21	0.029
7	Sunam	214776	15	8	3	33	38	11	108	0.050
8	Bhawanigarh	95351	12	2	1	18	17	10	60	0.063
9	Sherpur	93666	14	7	5	22	12	6	66	0.070
Rural		**1043476**	**96**	**38**	**24**	**168**	**193**	**60**	**579**	**0.055**
1	Sangrur	77989	20	10	23	3	-	76	132	0.169
2	Malerkotla	112523	5	4	14	1	-	52	76	0.068
3	Ahemedgarh	28022	3	1	4	4	-	49	61	0.218
4	Dhuri	49406	4	2	8	4	-	86	104	0.211
5	Sunam	56251	4	3	9	3	-	140	159	0.283
6	Lehragaga	19336	1	-	1	-	-	85	87	0.450
7	Bhawanigarh	17792	2	2	3	-	-	97	104	0.585
8	Longowal	20239	4	3	1	1	-	132	141	0.697
9	Dirba	13079	1	1	1	-	-	-	3	0.023
10	Khanauri	10960	3	1	-	-	-	84	88	0.803
11	Moonak	14924	3	3	-	-	-	-	6	0.040
12	Cheema	9245	1	1	-	-	-	-	2	0.022
Urban Total		**429766**	**51**	**31**	**64**	**16**	**-**	**801**	**963**	**0.224**
Sangrur		**1473242**							**1542**	**0.105**

Table 6.5: Comparative Position of Sub-indices of Human Development in Sangrur

Sr.No.	Block/ Municipality	Livelihood Index		Education Development Index		Indoor Medical Facilities Index		Medical Manpower Index	
		Index	Rank	Index	Rank	Index	Rank	Index	Rank
Rural									
1	Sangrur	0.460	10.0	0.697	15.0	0.180	3.0	0.060	15.0
2	Malerkotla 1	0.469	7.0	0.756	8.0	0.022	21.0	0.066	13.0
3	Malerkotla 2	0.472	5.5	0.761	6.5	0.039	14.0	0.068	12.0
4	Lahragaga	0.472	5.5	0.596	21.0	0.027	19.0	0.071	9.0
5	Dhuri	0.484	2.0	0.723	9.0	0.066	12.0	0.025	19.0
6	Andana	0.476	3.0	0.624	20.0	0.068	11.0	0.029	18.0
7	Sunam	0.473	4.0	0.642	18.0	0.023	20.0	0.050	16.0
8	Bhawanigarh	0.468	8.0	0.695	16.0	0.031	17.5	0.063	14.0
9	Sherpur	0.501	1.0	0.711	11.5	0.032	16.0	0.070	10.0
Urban									
10	Sangrur	0.441	16.0	0.861	1.0	0.128	7.0	0.169	8.0
11	Malerkotla	0.432	19.5	0.710	13.0	0.089	9.5	0.068	11.0
12	Ahemedgarh	0.442	15.0	0.859	2.0	0.107	8.0	0.218	6.0
13	Dhuri	0.447	13.0	0.833	3.0	0.061	13.0	0.211	7.0
14	Sunam	0.443	14.0	0.761	6.5	0.089	9.5	0.283	5.0
15	Lehargaga	0.431	21.0	0.791	5.0	0.155	5.0	0.450	4.0
16	Bhawanigarh	0.434	18.0	0.795	4.0	0.169	4.0	0.585	3.0
17	Longowal	0.467	9.0	0.700	14.0	0.148	6.0	0.697	2.0
18	Dirba	0.454	11.0	0.672	17.0	0.031	17.5	0.023	20.0
19	Khanauri	0.432	19.5	0.711	11.5	0.036	15.0	0.803	1.0
20	Moonak	0.448	12.0	0.719	10.0	0.201	2.0	0.040	17.0
21	Cheema	0.436	17.0	0.639	19.0	0.270	1.0	0.022	21.0

The Way Ahead and Policy Recommendations

The analysis is indicative of the fact that there are wide spatial variations in the sub-indices of human development in district Sangrur. This calls for an active state intervention and an active social response. Following are the section-wise action oriented policy recommendations, if translated into an actionable plan, can improve the human development level significantly.

Education

A look at the current situation of education in Sangrur district reveals that the progress and achievements so far has been behind the targets as far as the following are concerned: universal elementary education, education for disabled children, free and compulsory education up to 14 years, eradication of dropout from the schools, and equity in education. Uneven development of education on many counts among different blocks and municipalities of the district demonstrates that a large number of goals of national education polices of different periods have not been achieved so far as all the indicators of literacy and education in Sangrur district remained below the state average. In this context, following are the actionable policy recommendations related to education:

a) Analysis clearly points out the wide gaps in literacy in rural-urban, male-female, within rural areas and within urban areas and remains behind the state averages. So, to remove these gaps and for balanced and high human development, all the necessary physical and intellectual infrastructure should be in place, especially in rural areas. This requires immediate attention of the state.

b) Considering the sizeable and considerable number of school dropouts and out of school children in rural Sangrur and at all school levels, serious efforts for removal of out of school children problem and for the retention of students at all school levels should be made in rural areas as well as in urban areas of the district. For the purpose immediate actions are required to solve these problems. There is a need to involve parents of the school children through PTA and rigorous implementation of mid-day meal scheme.

c) Higher than the stipulated student teacher ratio in many schools of the district urgently require new appointments of teachers in schools. For the improvement in school education and school environment stipulated teacher student ratio should be brought down to around 1:20 or 1:25. As far as the issue of vacant posts is concerned it has been observed that the situation is bad in primary schools as compared to secondary schools. In the light of this evidence, for the improvement in school education and school environment, the need of the hour is to fill all the sanctioned posts of both primary and secondary teachers as early as possible on regular basis. Further, it is recommended that all part time/contract basis/adhoc teachers be replaced with permanent regular teachers. Analysis of schools without regular and permanent headmasters/principals of primary and secondary schools of the district reveals serious and unwarranted situation. So it is pertinent to provide regular and permanent headmasters/principals to all the schools of the district without waiting more time. Further, it is strongly recommend that all the schools should be shifted under education department of the State. Poor pass percentages, higher percentages of students failed and placed under compartment as compared to Punjab put the

question mark on the quality, performance and effectiveness and achievements of teachers of Sangrur district. Hence, the proper monitoring and evaluation of teachers be ensured and therefore, there is urgent need to look upon this issue to address it as early as possible involvement of PRIs and local bodies.

d) Majority of the primary schools are facing the inadequacy of basic physical infrastructure especially safe buildings, toilets and clean and safe drinking water. Hence, the basic physical infrastructure should be provided and strengthened in all the schools of the district. It has been reported that many primary schools in the district have single teacher for all the classes. Thus for the improvement in school education and school environment all the schools should be provided stipulated strength of teachers. Target allocation of 6 per of the gross domestic product (GDP) of the state for education should be provided so that the problems of stagnation of funds and insufficient funds be tackled.

e) It has been observed that access to secondary schools in rural areas is a little difficult as some schools draw their students from more than 5 kilometres distance so some existing school should be upgraded in those areas.

f) As far as grants under SSA it was found that educationally and economically backward blocks of Lehragaga and Andana remained neglected in this regard as during last two year they were not able to receive a penny from the grants. Under SSA programme schools in backward rural and urban areas should be given preference in disbursing grants. Mid-day meal scheme remained a problem in many of the schools mainly because of per student low monetary provisions, cooking, material and management problems. To make mid-day meal scheme meaningful monetary support should be increased and for better implementation permanent trained cooks

and employees should be appointed. Therefore, it is urgently required that problems of the mid-day meal be immediately looked into. It is important to note that during interaction with block education officers of the district it was reported that refresher courses and seminars lacks seriousness and were of poor standards. Thus the need of the hour is to thoroughly change the present system of teacher development programmes as it is sheer wastage of resources. For the purpose, a state level teacher development institute should be established for intensive subject refresher courses/workshops/seminars for teachers and each teacher would be required to attend a course of minimum of two to three weeks every three years.

g) Education for disabled students and disabled out of school children has posed serious challenge. The disabled out of school children of the district should be enrolled as early as possible. So, all efforts should be made for inclusive education of these children in the district. If the schooling for these children is not found suitable new specialised need schools should be opened in adequate number.

h) Efforts should be concentrated to open higher educational institutions, especially in the educationally backward blocks and municipalities. More students should be encouraged to go for higher studies in professional courses as well as in liberal arts courses. Low literacy rates, low education index and low ranking in education index points out the deprivation in literacy of the concerned block and municipality of the Sangrur district. Hence, to reduce deprivation in literacy the areas with low education index ranking must be targeted, first.

Health

The health and medical care services are not only inadequate but also unequally distributed across different blocks and municipalities of the Sangrur district. Although, the system is overloaded yet there is no dearth of funds. Economically backward regions are also poor in terms of health services. Following areas need immediate attention of the planners and policy makers.

a) The healthcare system needs to be strengthened and made affordable and more inclusive, through strengthening of government hospitals and dispensaries.

b) There is an urgent need of the time to introduce a health insurance schemes for people in the below poverty line region.

c) The health related database of the district needs to be strengthened and standardized and information on health related aspects of population should be regularly collected and processed.

d) The utilization of public funds in the government health institutions be regularly monitored and regular flow of these funds be ensured in the backward blocks and especially in the rural areas.

e) A comprehensive survey needs to be undertaken to prepare the registry of HIV/AIDS cases in the rural areas. An awareness campaign and a curative programme should be implemented at a war footing.

f) An elaborate drinking water census is need of the time.

g) Viability of government-private partnership in the operation and maintenance of the select government hospitals be explored.

Economic Livelihood

The development experience of district Sangrur shows that more than 71 percent of the population has been residing in rural areas and thus deriving their livelihood mainly from agriculture related economic activities. Following are the recommendations in this regard.

a) There is a dire need to alter the occupational structure of the district from agriculture to other remunerative non-farm economic activities such as manufacturing, repair, trade and service sector.

b) Even the agriculture is highly biased towards food grain production, i.e., wheat and paddy. Diversified and remunerative (other than food related production) agriculture activities need to be promoted for ensuring regular flow of income to the owners of cultivable land and rural labour. Scientific research related agriculture sector needs to be strengthened for ensuring reduction in productivity gaps, both across crops and blocks.

c) The existing cropping pattern of agriculture is water intensive, such as paddy. This has led to the depletion of groundwater in the district across the blocks. Therefore, it is suggested that the recharging of groundwater be done on the war footing along with reducing area under water intensive crops. Works under NREGA can be directed in this direction.

d) The major problem faced by the population dependent on the agriculture is declining surpluses generated from this occupation, especially the small and marginal farmers. The rural population with declining income needs to be shifted from agriculture to other non-farm industries and other service sector, i.e. to remunerative economic activities. The self employment among them needs to be promoted by providing them training in the KVCs.

e) The existing informal sector, economic activities are not very attractive because of the fact that the wage rate and working conditions are not at all attractive. Therefore, new initiatives, both formal and informal, non-farm economic activities should be started in high value added, as well as, high wage paying sectors. The payment of minimum wages must be ensured in all the activities.

f) It needs to be mentioned that the statistics relating to both agriculture and informal sector activities are generally not reliable. Even the database relating to informal non-farm activities is almost nonexistent. Therefore it is suggested that some initiative needs to be taken by the state government to collect detailed information regarding existing non-farm economic activities in which workforce of the district already engaged in. This information base, if generated, will go a long way, to make the planning process at the district level more relevant and effective to uplift the welfare of the rural people while involving them into gainful non-farm economic activities.

g) Agrarian distress has been felt most by the agricultural labour, marginal and small farmers. They are reeling under high incidence of indebtedness. Therefore, it is suggested that Punjab Government must constitute State Farmers and Agricultural Labour Debt Relief Commission on the pattern of Kerala Government. Since the larger part of the indebtedness belongs to the informal lenders, therefore the debt relief must be provided to the rural poor (agricultural labour, marginal, small and semi-medium farmers) as a short-term measure.

h) The young rural work force is looking for remunerative and regular employment opportunities. The national rural employment

guarantee act (NREGA) should be implemented by Punjab Government in the district Sangrur for ensuring employment to the young rural work force at a stipulated minimum wage and minimum conditions of work.

i) A comprehensive social security scheme needs to be devised on the pattern as suggested by the National Commission for Enterprises in the Unorganized Sector set up by the Government of India. The unemployment insurance scheme should be introduced so that displaced agriculture labour, distressed farmers and retrenched work force from informal sector needs to be compensated and this compensation should be converted into an insurance based social security benefit.

j) A special programme needs to be designed for the regeneration of agriculture especially for the marginal and small farmers. The skill base of the rural work force need to be improved through special initiative for imparting new skills and training programmes should be taken up by the Punjab Government. There is a dire need to initiate skill up gradations and training programmes for the rural poor with a view to provide local jobs for rural women. The KVC and NGOs can be involved in this process.

k) The rejuvenation of the rural economy of the district can be done while integrating farmers' income primarily through promoting high value added agriculture operations, processing and marketing activities. The generation of non-farm income sources is the prime need of the rural economy. The training of the farmers in the new activities and processes must be undertaken on priority basis.

l) Government of Punjab may also consider providing elderly farmers and agricultural labourers (aged 60 years and above) adequate pension on Taiwanese pattern so that they can retire from active

economic activities. This scheme if introduced may have a capacity to reduce son preference, which has adversely affected the sex ratio of the district.

Vulnerable Sections

Vulnerability, the lack of cushion available to the community to combat any kind of threat to human wellbeing and existence, is rooted in the distinctly visible processes, namely: (a) poverty; (b) natural calamities like floods and loss of livelihood; (b) deteriorating groundwater situation (c) emerging ecological situation and human health; and (d) debt burden and farmer suicides. Following are the policy implications in this regard.

a) If number of yellow card holders is taken as a rough approximation of poverty level of a region, the poverty is not evenly distributed in the district. In terms of poverty Lehragaga and Andana blocks are at higher levels of vulnerability. The poverty elevation and employment generation programmes of the district should be targeted heavily to these disadvantaged blocks. Schemes like, NAREGA need to be implemented in these blocks.

b) With extent of overall damage of 60.50 percent, Anadana block is the worst hit by floods in the Sangrur district. Year after year, same villages are being affected by the flood in Kharif season. The problem of floods calls for short term, medium term and long term measures that may be specific to the block.

c) Farmer awareness and training regarding ground water resource management is need of the time. Chemical fertilizer use and pesticides needs to be regulated both at farmers' and traders' level. Alternative methods of farming with minimal or no use of deadly chemicals needs to be propagated.

d) An elaborate registry of the debt burden and suicide cases needs to be prepared and a viable preventive socio-economic mechanism needs to be established by providing them financial assistance and employment. The potential victims (poor farmers and agricultural labour) need to be provided with supplementary employment, training and financial support to overcome vulnerability.

Good Practices

District Sangrur is characterized by some good or unique practices. These practices can be strengthened or replicated at other places, too. Most of the good practices are result of an individual effort or of an active social response. Following are the policy implications in this regard:

1. Two villages, Akbarpur Channa and Jitwal Kalan, are characterized by high literacy rate of the range of 71.73 and 70.23 percent respectively. At both the places, in addition to general economic development, the active social response of the people to build the school infrastructure and take interest in its working, played a catalytic role in education attainment of the area. This kind of active participation of the society in school organization and management should be promoted to strengthen the system.

2. Malerkotla, the historical city, is the only hub of decorative and felicitation embroidery. Wide range of products like, badges, flags, mementos, dress codes etc. are produced here. The products are also exported to other countries. To further strengthen this industry, training, marketing and finance facility is a need of the time.

3. Mr. Bachitter Singh Garcha, a small farmer of village Deh Kalan (Ucha Pind) on Sangrur-Dhuri road, starting with production of

soya-milk and soya-cheese only, entered into the production of soya-based sweets, shakes, snacks and biscuits. A farmer, once in a crisis, is a national and state award holder for his innovativeness and entrepreneurial capabilities. As soybean is the product of future, with the help of financing and training agencies, many others can be motivated to enter in to this kind of ventures.

4. Mr. Avtar Singh Dhindsa's venture of floriculture in Langrian village is a unique experiment. The seeds are exported to various countries of Europe, USA and Japan. He inspired and involved other farmers through training, motivation and contract farming. Such individual effort needs to be strengthened and showcased.

5. Mr. A.R. Sharma, born in a business family of Dhuri, a small town in Punjab, with his individual effort emerged as a solvent extraction king in the region. Similarly Mr. Surinder Bansal belonging to a commission agent family emerged as poultry king in the region. Mr. Amar Singh Matharu, son of an agriculture implements repair mechanic, emerged as an innovator and producer of agricultural machinery in the region. Showcasing of such individual efforts can serve as a motivating force for the others.

6. '*Umeed'*, a ray of hope, is an NGO that covers a vast canvas of health, education and empowerment. It started with its own resources and involved corporate world, national and international social and funding organizations. Such an initiative in the area of health, education and infrastructure can show a new ray of hope, if replicated at a large level. The state government and the district authorities should identify and

support such initiatives, as they are the agents which create and take the development to the doorsteps of masses. Some more self help groups should be motivated to venture into social and economic activities.

7. Fishery experiment of Ghabra village should be replicated at other places of the district with the active help of government departments and the society.

To sum up, the human development in district Sangrur has a long way to go. Education, health and livelihood need to be strengthened and made more inclusive. Vulnerable sections of the district need to be provided with a special care at a priority. Good practices and successful individual efforts need to be showcased and promoted.

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