DISTRICT HUMAN DEVELOPMENT REPORT

HOSHIARPUR

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CONTENTS

ABBREVIATIONS

AIE	Alternative and Innovative Education
ANC	Ante Natal Care
APL	Above Poverty Line
ART	Antiretro Viral Therapy
ASHA	Accredited Social and Health Activist
AYUSH	Ayurvedic Unanai Sidhi and Homeopathic
BCG	Bacillus Calmette Gueri
BDPO	Block Development and Panchayat Officer
BPL	Below Poverty Line
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CARE	Cooperative For Relief Everywhere
CHC	Community Health Care
CMO	Chief Medical Officer
COI	Census of India
DEO	District Education Officer
DH	District Hospital
DOA	District Olympic Association
DOT	Directly Observes Treatment
DPT	Diphtheria, Pertussis Tetanus and Poliomyelitis Vaccines.
DRDA	District Rural Development Agency
ECCE	Early Child Care and Education
EG	Economic Growth
EGS	Education Guarantee Scheme
ESO	Economic and Statistical Organization
FAPRO	Farms Produce Promotion Society
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GAD	Government Ayurvedic Dispensary
GDP	Gross Domestic Product
GNP	Gross Net Product
Ha	Hectare
HD	Human Development
HRH	Human Resource for Health
HUDCO	Housing and Urban Development Corporation Limited
IAY	Indira Awas Yojana
ICDS	Integrated Child Development Scheme
ICTC	Integrated Counseling and Testing Centre
IED	Integrated Education For Disabled
IFA	Iron and Folic Acid
IMNCI	Integrated Management of Neo-natal and Child Care
IMR	Infant Mortality Rate

INST	Institution
ISHM	Indian System of Homeopathic and Medicine
JSY	Janani Suraksha Yojana
KSY	Kishori Shakti Yojana
LHV	Lady Health Visitor
MCH	Maternal and Child Health
MDG	Millennium Development Goal
MDM	Mid Day Meal
MIS	Management Information System
MMR	Maternal Mortality Rate
NABARD	National Bank for Agriculture and Rural Development
NACO	National AIDS Control Organization
NBCP	National Blindness and Control Programme
NCDC	National Cooperative Development Corporation
NCUI	National Co-operative Promotion Society
NDP	Net Domestic Product
NFHS	National Family and Health Survey
NFWP	National Food for Work Programme
NGO	Non Government Organization
NHE	Nutritional and Health Education
NLM	National Literacy Mission
NP	Nagar Panchayat
NREGA	National Rural Employment Guarantee Act
NRHM	National Rural Health Mission
NSDP	Net State Domestic Product
P&T	Post and Telegraph
PADB	Punjab State Cooperative Agricultural Development Bank Limited
PEDA	The Punjab and Energy Development Agency
PHC	Primary Health Care
PMGSY	Pradhan Mantri Gram Sarak Yojana
PNSDP	Per Capita Net State Domestic Product
PRI	Panchayati Raj Institutions
PSTC	Punjab State TubewellCorporation
PVT	Private
PWD	The Public Works Department
RCH	Reproductive and Child Health
RNTCP	Revised National Tuberculosis Control Programme
RSVY	Rashtriya Sam Vikas Yojana
RSVY	Rashtriya Sam Vikas Yojana
RTI	Reproductive Tract Infection
SC	Sub Centre
SDH	Sub Divisional Hospital
SGRY	Sampoorna Grameen Rozgar Yojana

SGSY	Swaranjayanti Gram Swarozgar Yojana
SHC	Subsidiary Health Centre
SHG	Self Help Group
SHP	Supplementary Nutritional Programme
SOSVA	Society for Service to Voluntary Agencies
SRS	Sample Registration Sysytem
SSA	Sarv Shiksha Abhiyan
STD	Sexually Transmitted Diseases
TB	Tuberculosis
TPP	Twenty Point Programme
TPR	Teacher Pupil Ratio
TSR	Teacher School ratio
TT	Tetanus Toxoid
UEE	Univarsalization of Elementary Education
UFWC	Urban Family Welfare Centre
UHP	Urban Health Post
UNAIDS	United Nations AIDS
UNESCO	United Nations Educational Scientific and Cultural Organization
VHSC	Village Health and Sanitation Committee
WHO	World Health Organizations
WSSD	Water Supply and Sanitarian Department

Executive Summary

Hoshiarpur, one of the oldest districts of Punjab, is located in the North-east part of the Punjab state and shares common boundaries with Gurdaspur district in the north-west, Jalandhar and Kapurthala districts in south-west, Kangra and Una districts of Himachal Pradesh in the north-east. Hoshiarpur district comprises of 4 sub-divisions, 10 community development blocks, 9 urban local bodies and 1417 villages. The district has an area of 3365 sq. kms. and a population of 14,80,736 persons as per census 2001.

Hoshiarpur along with the districts of Nawanshehar, Kapurthala, and parts of Fazilka, Jalandhar and Gurdaspur, represents one of the cultural region of Punjab called Doaba or the Bist Doab - the tract of land between two rivers namely Beas and Sutlej. The area along with the Shivalik foothills on the right side of Chandigarh-Pathankot road in Hoshiarpur is sub-mountainous and this part of the district is also known as Kandi area. The two rivers, Sutlej and Beas along with two other seasonal streams provide drainage to the region. Besides these, the Kandi region is full of seasonal streams.

The decadal population (1991-2001) growth rate of the district was 14.02 percent, whereas it was 16.98 in 1981-1991. According to the 2001 census the density of population is 440 persons per square kilometers which have increased from 375 over a period of one decade. It is one of the least urbanized districts of Punjab. Eight out of ten persons of the district are residing in rural areas (Census, 2001). The sex ratio of Hoshiarpur district is the highest among all the districts of Punjab. There are 935 females per 1000 males (2001, COI). Juvenile sex ratio of the district is 810 girls per 1000 boys. Hoshiarpur district is one of the few districts that have a Hindu majority. The proportion of Hindus is 58.9 percent while that of Sikhs 38.8 percent according to 2001 census.

Scheduled Castes population in the district comprises of 34.3 percent of the total population. The proportion of Scheduled Castes population in Hoshiarpur district is higher than the state's Schedule Castes population (28.35 percent) and is ranked at the 5^{th} position among all the districts. It may be mentioned that proportion of the Scheduled Castes population varies among blocks of Hoshiarpur district. In four blocks the population of Scheduled Castes is more than 40 percent. Two blocks namely, Hoshiarpur-I and Hoshiarpur-II have 48 percent Scheduled Castes population. In Mahilpur block the proportion of

Scheduled Castes population is 44 percent and in Bhunga block it is 41 percent while in the remaining blocks the proportion of Scheduled Castes population is less than 40 percent.

In this report we have discussed the key indices related to human development such as education, health, economy, infrastructure and lastly the policy recommendations. The data used for preparing the present report is based both on primary and secondary sources. A primary survey has been conducted during March- May, 2008 in Hoshiarpur district. In the survey, 50 Primary sampling units were taken. From the list of all the villages and urban wards, 40 rural and 10 urban wards were selected by multi stage stratified sampling technique. Out of total ten CD blocks, four villages and one urban ward from each CD block was selected on the basis of proportion of rural and urban population. In total 500 households were covered.

INFRASTRUCTURE

Drinking Water

Most of villages of Hoshiarpur district fall in kandi area and mountainous area. There is acute shortage of drinking water in these areas of the district. As per the survey carried out in 1992, 1102 villages were identified as scarcity villages having drinking water problems in which either the source of drinking water was having depth more than 15 meters, or the under ground water suffers from excessive salinity, iron, fluorides or other toxic elements hazardous to health.

In rural areas the drinking water charges are levied in all the cluster villages having private connections. The Department, however, could not make the investments necessary to keep the water supply infrastructure in good condition. Consequently, the water supply in most of the clusters have come to stand-still as a majority of the individual households have not paid the water charges because of erratic water supply either due to power failure or lack of timely repair/maintenance. Importantly, to obtain water from public stand post no water charges are being levied. According to the findings of the primary survey conducted in 40 villages nearly two-third of villages are getting tap water supply and for one-third village source of water supply is either hand pump or tube well.

Power (Electricity)

All the villages of Hoshiarpur district are electrified. However the supply of electricity is not regular in two-third villages and only in one-third of villages supply is regular. Apart from this government has also tapped the source of solar energy by providing

solar panels for providing street lighting, solar water pumping systems at some places. In large majority of villages there is no street lighting.

Sanitation and Waste Disposal

Regarding proper drainage of waste water most of the villages (sampled villages of primary survey) have pucca drainage system with open outlet, some villages have open drainage for waste water and only one village had underground drainage. In villages solid waste is disposed in 'Rudies' which are located in the periphery of the village.

Rural Link Road

The small rural areas are connected with the metalled roads and these link roads are being planned according to the terrain. Survey results show that 90 percent of villages are connected with pucca roads. In majority of these small rural settlements except road network, all other infrastructure facilities such as educational, medical, post & telegraph, drinking water, recreational & cultural etc. are consequentially missing. Survey results reveal that post office is located in half of the villages and for the remaining half the post office is located at a distance of 1-4 kms. More than three-fourths of the villages have a bus stand in the village itself.

Agricultural Markets Centers

The marketing infrastructure for agricultural produce has been concentrated in and around five principal Agricultural Market Centers located at Hoshiarpur, Mukerian, Tanda Urmur, Dasuya and Garhshankar towns. Whereas, the rural credit Agencies have fully developed infrastructure and wide spread network in terms of coverage through rural co-operative societies.

Irrigation

The irrigation infrastructure has remained under utilized because of various operational problems. The deep tubewells run by the Punjab State Tubewell Corporation (PSTC), the main source of irrigation for fragmented holdings because of high operational costs, poor maintenance, and erratic water supply are unable to provide the desired services to the farmers. On the other hand, the tube wells owned by the individual farmers have increased manifolds during last three decades because of increasing cropping intensity and state subsidies being provided to the electric driven pump-sets. Nevertheless, the ensured eight hours continuous power supply could not keep up which make the subsidy worth obtaining.

The rapid and wide spread fall in groundwater table levels has made large number of pump-sets redundant in a short span. Consequently, the immediate and massive replacement of shallow water tubewells has unequivocally been beyond the reach of small and marginal farmers. The institutional intervention is essential for replacing the groundwater irrigation infrastructure to take the agricultural operations back on the rails.

Keeping in view the rapid depletion of ground water source, in the District the availability and use of 'surface water source' has been added by constructing Kandi Canal. The Canal stage-I irrigates 49072 hectares of agricultural land in 215 villages of Bhunga, Dasuya, Hajipur, Hoshiarpur-I and Talwara Blocks. In the recent years, in the foot hill plains of Kandi Areas, eight Earthen Check Dams have been constructed to start the community based rainwater harvesting and watershed development projects.

In case of urban infrastructure, the District has sufficient facilities such as educational, medical, post and telegraph offices, recreational & cultural, drinking water supply, electrification, banking and other public credit facilities. The sewerage system in urban areas has partially covered the population in Hoshiarpur city, Dasuya, and Mukerian towns, and the remaining urban centers are devoid of under ground sewerage systems.

EDUCATION

Hoshiarpur is the most educationally advanced district of Punjab. The literacy rate is 81.02 percent as against 69.7 percent for the state. Among all the districts of Punjab, Hoshiarpur tops with 80 percent and 87 percent literacy in the rural and urban areas respectively. However sex differentials exist. Literacy rate among males is 85.5 percent and that of the females 75.3 percent- a gap of 12 percent points. It occupies 3rd rank (value .645) in Gender Development Index and 5th rank (value .718) in Human Development Index during 2001. Within the district, Hoshiarpur II CD block ranks first and Garhshankar ranks at the bottom of the literacy ladder. Talwara block has the highest male as well as female literacy rate and Garshankar the lowest.

There are 86 primary, 12 middle, 9 secondary and 8 senior secondary schools per lakh population in Hoshiarpur district and within the state the district occupies a very high position in terms of availability of schools per lakh population.

Primary Education

In the district, some blocks namely Hoshiarpur-I, and Bhunga has a good network of government primary schools. On the other hand, Hajipur block and Hoshiarpur II have the

least number of government primary schools schools. On an average there is one government primary school for a population of 1151. The number of government primary schools per lakh population is about 86 in district Hoshiarpur.

Infrastructural facilities in terms of government buildings for schools were satisfactory. However, average number of class rooms in primary schools were 3.2 which reflects that there was not even a separate room for each class. The number of teachers per primary school ranged between 2 to 3. Only Hoshiarpur-I and II had three teachers per school. In three blocks namely Garshankar, Talwara, Mukerian there was acute shortage of teachers as nearly 50 percent positions of teachers are vacant. In Hoshiarpur district the teacher-pupil ratio (TPR) in government primary schools was 28. Dasuya had the highest teacher-pupil ratio, i.e., 46 while Garhshankar had the lowest, i.e.18.

Middle and Secondary and Senior Education

At middle level, Bhunga has recorded highest number of government middle schools. On an average there is one middle school for a population of 8272 persons. For a population of one lakh there are 12 middle schools in district Hoshiarpur. Infrastructural facilities indicate that all the middle schools are functioning in their own building. Average number of class rooms is 3.3 which indicate that each class had a separate room.

Teachers School Ratio (TSR) reveals that the average number of teachers in government middle schools was 5. In middle schools TPR was better - 15 students per teacher. TPR ranged between 12 to 22. Among CD blocks, Talwara and Hoshiarpur schools have the highest number of teachers (TSR) while Mahilpur block has the least.

At secondary and senior secondary level, Bhunga block and Garshankar block has the highest number of secondary schools and senior secondary level respectively whereas Hajipur block and Talwara has the least number of secondary and senior secondary schools. There are 12 secondary schools and are 7 senior Secondary schools per lakh population per lakh population. In other words there is one secondary and one Senior Secondary school for a population of 10888 and 14929 respectively.

In government secondary schools TPR was 20 students. There were on an average 12 teachers in a school although the number ranged between 5 to 23. Mukerian CD block has lowest number of teachers in secondary schools while Hajipur has the highest.

All the government secondary and senior secondary schools had their own building. On an average there were 7.9 rooms in secondary schools and 14.7 in senior secondary

schools. Space-wise senior secondary schools of Hoshiarpur II had maximum number of rooms (23.7) while Dasuya had the minimum (8.7). Among secondary schools Hajipur had maximum rooms (15) whereas Tanda and Mukerian had least – 2.4 and 3.1 respectively.

Primary survey results highlight that all the schools did not have the facility of staff rooms and library. Eight out of ten middle schools and nearly one-tenth of secondary schools lacked science laboratory facility. Computer laboratory was not available in six out of ten middle schools.

It was found that facility of toilet was available in all the schools. However, provision for separate toilet for girls and boys was available in 80 percent primary schools and 88 percent secondary schools.

Enrolment Rate

The Gross Enrolment Ratio (GER) in the rural blocks of the district in the age group 6-11 years was 79.81 percent. Within the blocks, Bhunga (R) and Talwara (R) recorded highest GER – nearly 110 percent and Dasuya block recorded lowest GER (63 percent). Among children in age group 11-14 years the GER was 73.91 percent. Within the blocks Tanda had the highest GER and Hajipur the lowest. The enrolment ratio among the scheduled caste children was highest in Talwara (94 percent) followed by Tanda (86 percent), but only 62 percent of children in Hoshiarpur-I were attending schools.

For children in age group 6-11 years the cohort drop out rate was 5.26 percent in Hoshiarpur district. At block level Dasuya (9.19 percent) had the highest cohort drop out rate followed by Talwara, while Tanda block had the lowest drop out rate. Among children in 11-14 years the cohort drop out rate for the whole district was 8.47 percent. Blocks Talwara, Dasuya and Garshankar reported the highest drop out rate, while Hajipur and Mahilpur had the lowest.

In Hoshiarpur district the repetition ratio for the children in age group 11-14 years was 18.91 percent while it was 5.59 percent for children in age group 6-11 years.

Out of al school going child population (86 percent) almost an equal proportion of girls (86 percent) and boys (85.5 percent) were attending school. Thus there was no gender disparity in education of children in all age groups.

Higher Education

For higher education a total of 25 arts/science/commerce colleges and 6 teacher training colleges are available in the district. For a population of one lakh there are 2 colleges.

On an average there are 52 teachers per lakh population in these colleges. To provide technical education four government institutions - 3 polytechnic and 1 pharmacy are available. However, a significant number of private institutions provide technical education. There are 10 Industrial Training Centres (ITCs), 2 Industrial Training Institutes (ITIs), 1 Arts and craft centre and 1 for Computer Technology.

The district of Hoshiarpur is a fore-runner on the literacy front in the state of Punjab, however, rigorous efforts are required to further enhance its status at national level.

HEALTH

Hoshiarpur district is divided into nine health block level PHCs: Bhunga, Man Mandher (Dasuya), Possi (Garhshankar), Chakowal (Hoshiarpur-I), Harta Badla (Hoshiarpur-II), Paldi (Mahilpur), Budhabar (Mukerian), Hajipur (Talwara) and Tanda. The administrative control of the blocks is within the block PHCs

Health Infrastructure

There is a good physical health infrastructure, a network of 9 CHCs, 30 PHCs (4 PHCs and 26 Mini PHCs), 244 SCs, 85 Subsidiary Health Centres (SHC) and 9 Civil Dispensaries. SHC are under the control of Panchayati Raj Institution (PRI) i.e. under Zila Parishad. The Civil hospital located in Hoshiarpur is 200 bedded hospital, Dasuya hospital is 100 bedded and Mukerian and Garhshankar hospitals are 50 bedded each. Besides this there are 53 AYUSH dispensaries, 10 Tuberculosis Centres and 1 Urban Family Welfare centres. (UFWCs) and one MCH centre in the district. There is no CHC in block Harta Badla and Possi, while block Bhunga and Hajipur have two CHCs each.

Regarding the infrastructure of the public health facilities, majority of the SC buildings are not in a good condition. Most of the sub centres are functioning in one room Panchayat buildings. Half of the PHCs and all the CHCs buildings are in good condition. More than half of the SCs and nearly all PHCs and CHCs have electricity. Furthermore 78 percent CHCs have alternative arrangements for electricity in the form of gensets and inverters. Basic facility of water supply in available in all the PHC and CHCs and tap water is the major source of water supply. In case of SCs less than two- thirds have the facility of water supply.

Availability of the labour room is essential for promoting institutional deliveries but none of the SCs have labour room. Only 7 PHCs and all CHCs have the facility of labour room. The facility of Operation Theatre is available in one- fourth of PHCs and less than 50

percent are functioning as 24x7. Thus it may be pointed out that the SCs, PHCs, CHCs have not been upgraded as per the Indian Public Health Standards.

Human Resource

In Hoshiarpur, there were 233 doctors including 85 working under Zila Parishad, 141 nurses, 238 ANMs, 95 pharmacists and 64 laboratory technicians, who are covering a total population of 1548296 persons in district Hoshiarpur. However it may be mentioned that there is a dearth of specialists in the district. The data reveal that there are nearly 15 doctors per lakh population.

In the public health system the doctor patient ratio is low and it is worse in rural areas. Doctor's per lakh population was lowest in block PHC Budhabar (8.23), Man Mander (8.89) and Harta Badla (9.70) and highest in Hajipur (16.83). The hospital bed per ten thousand population was abysmal low –even less than one bed in Paldi and Budhabar.

Availability and Utilization of Public Health Facilities

By and large health facility is available within an easy reach in villages of Hoshiarpur district. However to seek the services of medical doctor people have to travel some distance. Government health facilities are available in medium and large sized villages and this is true in case of availability of Private Doctor.

During the period 2006-07, nearly 27 percent of the total rural population sought treatment from government sector both as in and out patients. PHC Mand Mander (49 percent) had the highest proportion of patients and lowest at PHC Paldi (5 percent). The proportion of in-patients was highest in PHC Tanda followed by PHC Hajipur. There were no in patients at PHC Harta Badla.

On the basis of findings of primary survey, utilization of primary health care in public sector was less, as 23 percent availed services at public sector during three months prior to the survey. Reasons for not availing the services are non-availability of drugs, locational distance of health facility, non-availability of doctor and laboratory facilities.

As far as the utilization of public health facilities is concerned, people prefer to go to private sector despite higher cost, however for ante natal care and immunization purposes they avail the services of government sector. In Hoshiarpur district, 85 percent mothers received three ANC check ups and the same proportion received TT immunization. PHC Chakowal reported to have the highest (96 percent) three ANC checkups closely followed by PHC Hajipur (95 percent), while PHC Possi recorded the lowest (69 percent) ANC 3 check-

ups. Blockwise information on TT immunization of pregnant women shows that in block PHCs Mand Mander and Budhabar (91 percent each) the TT coverage was high and the lowest TT coverage was in PHC Chakowal.

For the year 2008-09 the proportion of institutional deliveries was reported to be 60 percent in District Hoshiarpur and 40 percent were home based deliveries. Proportion of deliveries taking place in private institutions (54 percent) was more than in government institutions. Highest percent of institutional deliveries were reported in PHC Budhbar (69.6 percent) and Man Mander (69.1 percent) whereas in PHC Harta Badla proportion of births that took place in medical institutions was the lowest, i.e. 47 percent followed by PHC Paldi (49 percent). The share of deliveries in private institutions was highest in PHC Paldi (63 percent), Chakowal and Harta Badla (61.5 percent each). Proportion of home deliveries was highest in Harta Badla and Hajipur.

In Hoshiarpur district for the year 2008-09 the complete immunization of children was reported to be 94 percent. Block wise analysis indicates that coverage of BCG vaccine was highest in PHC Hajipur and lowest in PHC Possi, while in urban area it was highest in Garhshankar hospital. In case of three doses of DPT, Polio and Measles it was lowest in PHC Possi and in urban area in ESI hospital.

In government sector, there is a shortage of medicines and diagnostic facilities at CHCs, PHCs and sub centres. For instance, half of the selected Sub centres (findings of primary survey) did not have basic medicines like Paracetamol tablets and syrup in their stock and testing facility like urine sugar and urine albumin were not available. Vast majority of those seeking medical care have to travel long distance to reach the nearest doctor and also due to lack of proper referral system people have to travel to cities to visit various specialists. CHCs were created to provide efficient referral services within the rural areas at a lower cost and with best treatment. However CHCs have failed to serve as referral centre and provides services to the local population only. In fact most of the hospitals and dispensaries providing specialized care are located in urban areas and health care continues eludes the rural masses.

Morbidity

Regarding the prevalence of diseases, it was noted that in Hoshiarpur district 37 persons per 100,000 population were reported to be suffering from TB(RCH-RCS-2002). Tuberculosis (TB) was the most prevalent disease in the villages. In Hoshiarpur district PHC

Chakowal had the highest number of patients suffering from TB followed by Hoshiarpur City. In Hoshiarpur district prevalence of Malaria was 121 per 100,000 population in 2002-04 (RCH-RHS, 2002-04). On the basis of information provided by Health Department for the year 2006-07, the prevalence of malaria has been rather low.

In Hoshiarpur district one-third of ever married women were anaemic. The proportion of anaemic ever married women was more than 50 percent in two health blocks namely Hajipur and Harta Badla. The proportion of pregnant women suffering from anaemia was 47.4 percent. Block Chakowal reported the highest proportion of anaemic pregnant women, i.e.68 percent and the least in PHC Possi (15.8 percent).

In the primary survey, information was collected on self reported morbidity as reported by the respondents. The findings reveal that prevalence of morbidity was reported to be 126 per thousand population in rural Hoshiarpur. Gender differentials existed as proportion of females reporting sickness was higher than their male counterparts. The results reveal that the reported morbidity prevalence rate was higher among females (138 per thousand population) as compared to males (113 per thousand). In this study the hospitalization rate was 43 per thousand population which is much higher than 23 per thousand population for rural India. Nature of morbidity includes a mixture of diseases. The ailments have been classified into 12 categories. The most common ailments reported by the respondents were allergy, fever, urinary disorder, sore throat, common cold, tonsillitis, cough, migraine, headache which may be attributed to seasonal variation, followed by ailments related to stomach and heart.

Under the nutritional programme, 42 percent of the beneficiaries in 0-6 years and 74 percent pregnant and lactating women were covered under Supplementary Nutrition Programme under ICDS. Under the Kishori Shakti Yojana (KSY) 63 percent of the beneficiaries were covered under Nutritional and Health Education(NHE), Supplementary Nutritional Programme (SNP), Deworming and IFA.

ECONOMY AND LIVLIHOOD

Economy

The economy of Hoshiarpur district has remained predominantly agrarian. Over time there has been a decline in share of agricultural and allied activities. The increase in secondary and tertiary sector has been marginal. The economy of the district has experienced a rate of growth which is much below the standard norm of economic development. Similarly

the per capita income of the district is one of the lowest in Punjab. The work force participation rate has improved over the last one decade in Hoshiarpur district. The proportion of workers was nearly 29 per cent and the proportion of non workers was 71 per cent in the year 1991, whereas this proportion increased to 34.7 per cent in the year 2001. The proportion of marginal workers increased by nearly 6 percent points between the period 1991 and 2001.

Agriculture

In Hoshiarpur district net sown area is 60 percent of the total geographical area of the district and out of this 85 percent is irrigated with 170 cropping intensity compared to 188 for the state as a whole. Half of the cultivators are marginal and small farmers, having land holdings less than 2 acres. There is inter-block variation in the area irrigated. In Kandi blocks (Talwara, Bhunga, Garhshankar and Mahipur) only one-fourth of the area is irrigated. Wheat, rice and maize are the main crops sown in the district. The productivity of major crops is much lower in the district than the state average. The land productivity measured by value of 45 crops is the lowest in the district among all the districts. Factors responsible for lower productivity are the lack of irrigation facilities, degradation of land in the Kandi area due to soil erosion. The size of land holdings is another problem causing lower productivity. The problem of soil erosion and water loss is more acute in the kandi area of the district where severe erosion occurred due to undulating topography and erratic behaviour of the rainfall. The total annual rainfall is about 1125 mm but 80 percent of this rain is received during three months of monsoon. This results in high runoff. The high velocity aggravates the problem of serious soil erosion.

District Domestic Product

The district contributes nearly 5 percent in the state's net domestic product (NSDP). District domestic production experienced a growth rate of 3.5 over the last ten years, lower than the growth rate of many other districts. The rate of growth was also lower than that of Punjab state as a whole. Per capita income in the district is also lower than the average income of the state. This district falls in the category of less developed districts and is at the bottom among the districts so far per capita income is concerned. Per capita income of the district is also growing at a very slow rate (2.0 percent) in the last ten years. The structure of economy of Hoshiarpur is predominantly agrarian. The share of agricultural and allied sector in the district income has declined over time and the major decline is in forestry/logging and

live stock sector. The share of industrial sector has increased over time but it is contributing only one-fifth of NDP of the district.

Policy Recommendations

Infrastructure

- The public departments at district level are over burdened with work due to shortage of manpower. Some of the department is functioning with 50 percent of the sanctioned staff thus leading to backlog of work. Efforts should be made to fill the vacant positions in various departments so as to streamline the functioning of several departments.

- It has been observed that diversification of the economy especially the agricultural production the much emphasized issue has serious policy implications. Precisely, the diversification drive which includes dairy farming/animal husbandry, aquaculture, horticulture, vegetable cultivation, all perishable commodities require extensive rural infrastructure such as cold storage, roads, communication, electrification, marketing, irrigation, extension and research services etc. These infrastructural facilities require large allocation of public funds, which at present is not there in the district and even in the state as a whole.
- It is suggested that in both rural and urban areas the provision, management, operation, maintenance/repair, replacement and improvement of infrastructural facilities are important for improving agriculture output, diversification of economic activities and regional integration.

Education

The educational policies lay stress on the universal, compulsory and free primary education. To achieve this target quality educational infrastructure is needed.

- In Hoshiarpur district, primary schools lack the infrastructure in terms of number of classrooms and teachers. On an average there are only 3 classrooms per primary school and number of teachers range between 2 to 3. Proper classrooms with tables/chairs/benches are needed. In majority of the primary schools children sit on coir mats/rugs which is rather uncomfortable during winter season. The surroundings within and around the schools should be neat and clean.

- For each class, one room and one teacher is required at primary level to improve quality of education. Enrollment in schools is important but to retain the enrolled students till completion of school education is more important and needs extra efforts. Syllabus should be made more interesting and engrossing. It needs to be ensured that all the children who pass primary level education can read, write and understand basic arithmetic. All vacant positions of teachers need to be filled on merit basis to ensure quality of education. Local trained teachers should be appointed particularly in remote areas, to minimize the absenteeism among teachers. At present, it has been observed that the commuters to and from schools to residence needs well-defined transport facility to make the schooling system functionally more viable.
- It is suggested that the government should appoint one qualified English teacher for every government primary school to improve the standard of education in schools. Also there should be some regulatory mechanism to check the quality of education being imparted in private schools. There should be a transparent system of promotion and transfer of teachers.
- Furthermore it was suggested that at block level there should be one teacher who is specially trained to teach disabled children.
- The block level data analysis shows gender, rural-urban, region/block wise wide disparities in the existing literacy rates in spite of wide spread network of educational infrastructure. Garshankar block has lowest literacy level and wide male female disparity. Thus, this needs special attention and additional efforts are required to create awareness about the importance of having the ability to read and write.
- Intra block disparity in enrollment rates was observed. The enrolment rate in 6-11 years age group (primary level) varies from 36 percent in Hajipur block to 118 percent in Dasuya block. The enrolment rates and dropout rates not only depend on the quality of education but also on incentives such as 'mid-day meal, free uniform and books/stationary, full attendance, and merit scholarships' etc.

Health

- The district is relatively less urbanized thus the health status of the people can be improved with more attention to the rural health services. Various measures should be adopted to strengthen the rural infrastructure, supply of consumables and medicines, and availability of trained manpower around the clock (24x7). If trained manpower is

available with proper facilities in rural areas that can lead to reduction in infant and maternal mortality rate.

- Efforts should be made to improve the connectivity of small sized villages with those villages having health facilities by improving the availability and frequency of public transport system
- The private health sector is expanding rapidly and there is no check or control to monitor the kind of health care being provided to the masses in rural areas which is often substandard and expensive. In fact, the rural masses prefer to avail the services of local private doctors/RMPs in villages due to several reasons like easy availability, drugs/medicines and its locational advantage. Public private partnership in health care should be explored and made viable in rural areas.
- To provide accessible, affordable quality care to the rural population, especially the vulnerable sections National Rural Health Mission has been launched but its implementation in the district has been slow. Through informal discussions with the community and several leaders, it was found that by and large people were not aware of NRHM and its several components like formation of Village Health and Sanitation Committee, appointment of ASHAs in villages and benefits given under Janani Suraksha Yojana. The IEC activities should be strengthened and the masses should be made aware of the various ongoing programmes.
- There has been delay in receiving grants from state government. Consequently, it was reported that some of the health workers have not received their salary for several months. Efforts should be made to get the grant released from the state government in time and also regularize the remunerations of the staff.
- Intra district analysis indicates that positions of ANMs were vacant in some PHCs. Due to this ante natal care and immunization of infants was low. All the vacant positions should be filled. ANMs and ASHA should regularly make home visits in motivating women to go in for ante natal care and immunization.
- Hoshiarpur district is way behind in achieving the National Socio-demographic goals for 2010 mentioned in National Population Policy -2000 pertaining to safe motherhood i.e., 80 percent deliveries should be institutional. Proportion of institutional deliveries was low especially in Harta Badla and Paldi blocks. Sustained efforts should be made by grassroots level workers in counseling pregnant women to

go in for institutional deliveries and also make them aware of the cash incentives given to women of underprivileged sections under Janani Suraksha Yojana (JSY).

- People should be made aware of the Tuberculosis disease and motivate them to go in for complete treatment which is free of cost. Efforts should be made to sensitize the slum dwellers about the disease. At school level also the students should be sensitized about the prevalent diseases like TB, HIV-AIDs, etc.

Economy and Livlihood

District Hoshiarpur, with half of its area as sub-mountainous, is a very backward district of Punjab and 80 percent of its population is residing in rural areas. Main economic activity of the workforce in the district is agriculture and that too with low productivity of land and labour. There is immediate need to bring changes in the occupation distribution of district from agriculture to other non-farm activities.

- Agriculture in all the Kandi belt is rain fed. Irrigation facilities especially in five blocks i.e. Talwara, Bhunga, Hajipur, Garhshankar and Mahilpur needs to be strengthened and it is the main reason for low productivity of agriculture in Hoshiarpur District.
- The district needs special attention of the state for prevention of soil erosion which can be controlled by constructing more check dams.
- Promotion of crop diversification from wheat-paddy or wheat-maize is possible with the introduction of state owned marketing support for other cash crops such as kinnows, potatoes and vegetables. Promotion of medicinal plants and fruits can help in reducing soil erosion. Soil erosion is also a reason for excessive use of chemical fertilisers in the district which can be substituted by promoting vermi-compost of cow-dung, kitchen and other agricultural waste, a simple cost effective way to reduce the dependence on costly input in agriculture.
- The agricultural economy of the district need diversification. At the policy level there a need to step up agricultural research, especially technology focusing on the new activities. Much of the commercial crops are highly perishable and there is a need for the development and up-gradation of infrastructure for roads, markets, storage and processing.
- In district as a whole, the rapid fall in the ground water table levels has made large number of pump-sets redundant in a short span. In the state as a whole, at the policy

level, institutional support both financial as well as technical is essential for replacing the massive irrigation infrastructure to increase production in agriculture.

CHAPTER I

INTRODUCTION

The basic objective of development, wrote Mahbub ul Haq in the first *Human Development Report* in 1990 "is to create an enabling environment in which people can enjoy long, healthy and creative lives." Sixteen years on, that vision retains a powerful resonance. People are the real wealth of nations. That simple truth is sometimes forgotten. Mesmerized by the rise and fall of national incomes, we tend to equate human welfare with material wealth. The importance of GDP growth and economic stability should not be understated: both are fundamental to sustained human progress, as is clear in the many countries that suffer from their absence. Nevertheless, the ultimate yardstick for measuring progress is people's quality of life.

The idea that social arrangements must be judged by the extent to which they promote "human good" dates back to Aristotle (384 – 322 B.C.). Aristotle argued, "Wealth is evidently not the good we are seeking; for it is merely useful and for the sake of something else." That "something else" is the opportunity of people to realize their potential as human beings. Real opportunity is about having real choices—the choices that come with a sufficient income, an education, good health and living in a country that is not governed by tyranny. As Amartya Sen has written: "Development can be seen… as a process of expanding the real freedoms that people enjoy." Human development, therefore, means allowing people to lead a life that they value and enabling them to realize their potential as human beings.

The normative framework for human development is today reflected in the broad vision set out in the Millennium Development Goals, the internationally agreed set of time bound goals for reducing extreme poverty, extending gender equality and advancing opportunities for health and education. Progress towards these objectives provides a benchmark for assessing the international community's resolve in translating commitments into action. More than that, it is a condition for building shared prosperity and collective security in our increasingly interdependent world.

Initiative to prepare District Human Development Reports is one such attempt for making an in-depth analysis at the block level to assess the quality of life of the people as well as to identify the areas requiring intervention for enhancing their capabilities and to effectively address the grey areas. In other words, the development report will help to focus on the core issues and crystallize a growth and development model which takes into account the hopes and aspirations of the local populace, helps retain its culture and heritage and restores the ecological balance by creating synergy between elements of nature, science and technology. Such an exercise will help in identifying the strengths, weaknesses, opportunities and threats experienced by the district.

The Punjab state currently has twenty districts namely Amritsar, Barnala, Bathinda, Firozpur, Faridkot, Fatehgarh Sahib, Gurdaspur, Hoshiarpur, Jalandhar, Kapurthala, Ludhiana, Mansa, Moga, Mohali, Muktsar, Nawanshahar, Patiala, Rupnagar, Sangrur and Tarn Taran.

A district of the Punjab state is an administrative geographical unit, headed by a Deputy Commissioner or District Magistrate. The responsibility of General Administration of the District lies with the Deputy Commissioner. He is the Executive Head and has three fold roles as - Deputy Commissioner, District Collector and District Magistrate. A Senior Superintendent of Police of the district is entrusted with the responsibility of maintaining law and order in the district. A Division Forest Officer is responsible for managing the forests, environment and wild-life related issues of the district. The district head of each development department such as PWD, Agriculture, Health, Education, Animal husbandry, etc. is responsible for looking after the sectoral development of the district.

Hoshiarpur is one of the oldest districts of Punjab and is located in the North-east part of the state. It shares common boundaries with Gurdaspur district in the north-west, Jalandhar and Kapurthala districts in south-west, and Kangra and Una districts of Himachal Pradesh in the north east.


PUNJAB
District Map
JAMMU & KASHMIR
N
PAKISTAN
HIMACHAL PRADESH
Gurdaspur
GURDASPUR
Amritsar
HOSHIARPUR
Hoshiarpur
AMRITSAR
Kapurthala
Jalandhar
KAPURTHALA
KAPURTHALA
Nawanshahr
NAWANSHAHR
RUPNAGAR
JALANDHAR
Firozpur
Ludhiana
Rupnagar
LUDHIANA
CHANDIGARH
FIROZPUR
Faridkot
FARIDKOT
MOGA
Moga
Fatehgarh Sahib
FATEHGARH SAHIB
MUKTSAR
Muktsar
Bhathinda
BHATHINDA
SANGRUR
Sangrur
PATIALA
Patiala
Mansa
MANSA
RAJASTHAN
HARYANA
LEGEND
International Boundary
State Boundary
District Boundary
State Headquarter
District Headquarter
Map not to Scale
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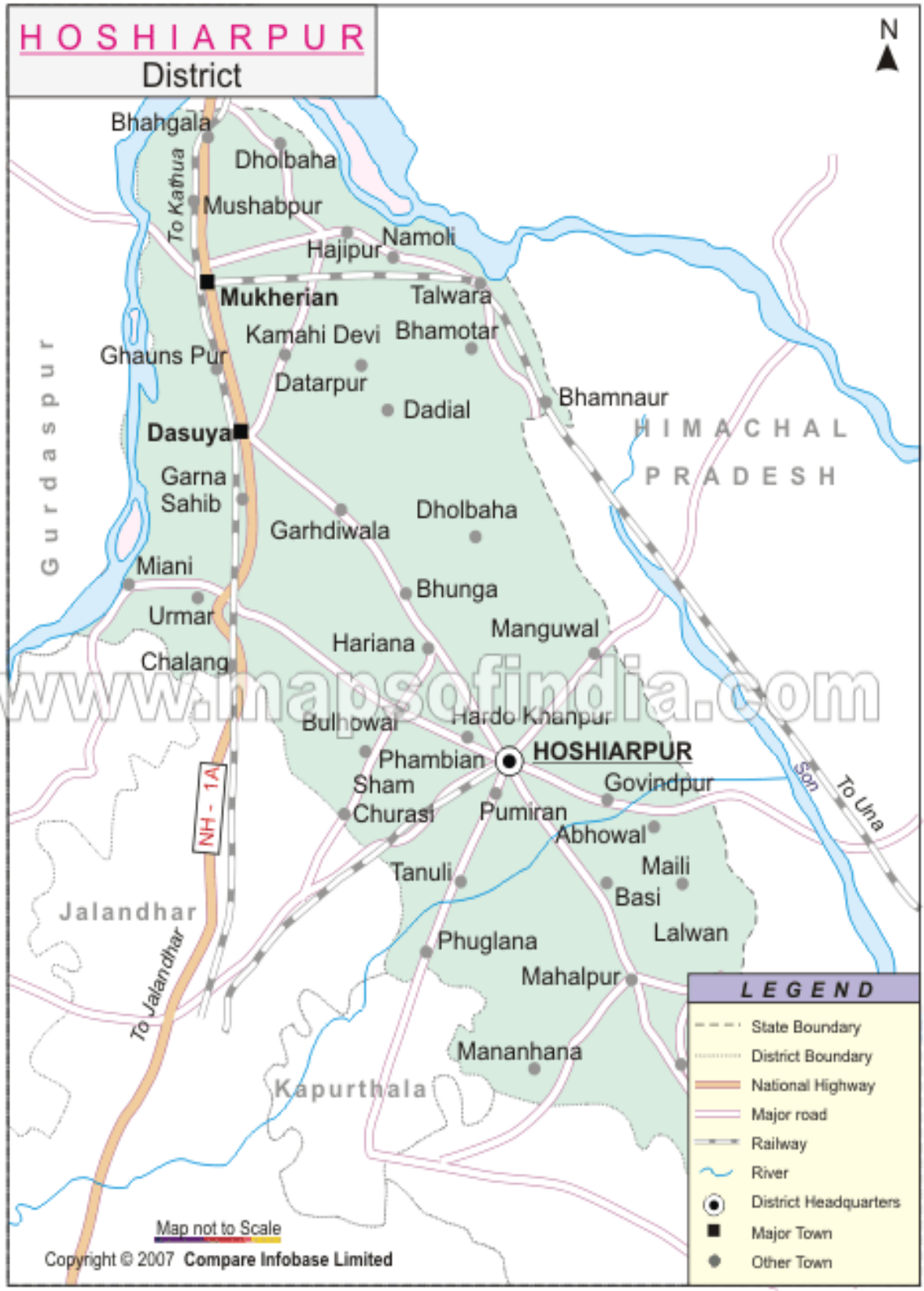
Hoshiarpur along with the districts of Nawanshahar, Kapurthala, and parts of Fazilka, Jalandhar and Gurdaspur, represents one of the culture regions of Punjab called Doaba or the Bist Doaba - the tract of land between two rivers namely Beas and Sutlej. The area along with the Shivalik Foothills on the left side of Chandigarh-Pathankot road in Hoshiarpur is known as Kandi Area. This part of the district is also known as Kandi area. The district has an area of 3365 sq. km and a population of 14, 80,736 persons as per census 2001.

It shares common boundaries with Himachal Pradesh and it is triangular in shape, with its base at the Himachal border, and apex on the Beas- Sutlej confluence. The two rivers, Sutlej and Beas along with two other seasonal streams provide drainage to the region. Besides these, the Kandi region is full of seasonal streams. The boundaries of Hoshiarpur district have seen changes over times. Hoshiarpur is also known as the city of saints and is famous for Vedic research.

Historical Background

The area of present Hoshiarpur District was also part of Indus Valley Civilization. Recent excavations at various sites in the district have revealed that the entire area near the Shivalik foothills was selected for habitation not only by the early Paleolithic man but also by those in the protohistoric and historic periods. The legends associate several places in the district with Pandavas. Dasuya is mentioned in epic of Mahabharata as the seat of Raja Virata in whose services the Pandavas remained for thirteen years during their exile. Bham, about 11 kms. west of Mahilpur is said to be the place where the Pandavas passed their exile. Lasara, about 19 kms. north of Jaijon, also contains a stone temple stated to date back to the time of Pandavas. According to the chinese pilgrim, Hieun Tsang, the area of Hoshiarpur was dominated by a tribe of Chandrabansi Rajputs, who maintained an independent existence for centuries before the Muhammadan conquest.


HOSHIARPUR
District
N
Bhahgala
Dholbaha
Mushabpur
To Kathua
Hajipur
Namoli
Mukherian
Talwara
Kamahi Devi
Bhamotar
Ghauns Pur
Datarpur
Bhamnaur
Dadial
Dasuya
HIMACHAL
PRADESH
Garna
Sahib
Dholbaha
Garhdiwala
Gurdaspur
Miani
Bhunga
Urmar
Manguwal
Hariana
Chalang
Hardo Khanpur
Bulowal
HOSHIARPUR
Phambian
Govindpur
Sham
Churasi
Pumiran
Abhowal
NH - 1A
Tanuli
Maili
Basi
Jalandhar
Lalwan
Phuglana
Mahalpur
To Jalandhar
Mananhana
Kapurthala
Sutlej
To Una
LEGEND
State Boundary
District Boundary
National Highway
Major road
Railway
River
District Headquarters
Major Town
Other Town
Map not to Scale
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The archaeological explorations made during the recent years have revealed the antiquity of the Hoshiarpur District to the Harappan Period. The archaeological excavations carried out at Dholbaha, situated at a distance of about 30 kms. to the north-west of Hoshiarpur, reveal its relationship with the pre-historic period. This area has been a place of habitation right from the very early times; the archaeological discoveries have related its antiquities to the Pleistocene period. Fossils and stone tools found in this picturesque valley indicate the appearance of early man here in this region. Presence of fossils and beautiful sand stone sculptures of medieval period underline the importance of Dholbaha and tend to establish the fact that Dholbaha valley was occupied by the affluent iconolatry at various intervals. The sculptures and other findings excavated from Dholbaha pertain to the Gurjara Prathihara Period (C-800-1100 A. D). In the 10^{th} century A. D. Shivalik areas came under the influence of Pratiharas.

In the Medieval period the plains of the present Hoshiarpur District probably came under the Muhammadan rule on the fall of Jalandhar in A.D. 1088 but the hills, however, remained under the Hindu Chieftains. It is said that before the first Muhammadan invasion, Raja Shankar Dass built a fort on the site of the present town of Garhshankar, but it was taken by Mahmud Ghazni and subsequently given by Emperor Shahab-ud-Din Ghori to the sons of Raja Man Singh of Jaipur State. The Mahtons who appear to have been the original inhabitants of the place were over powered and driven out by the Rajputs in AD 1175.

Subsequently, during several invasions, various places in Hoshiarpur district like Bajwara, Dasuya and other places were used by several rulers as safe passage or to seek shelter and some attempted to capture Bajwara, but the Hindu Rajas gave a tough fight and retreated or escaped to Shivalik hills. In the process of conquering territory several Mughal rulers like Babur, Humyan and Akbar fought battles at number of places in Hoshiarpur district. Babur overtook Daulat Khan Lodi and Ghori Khan and captured the fort near Hariana and made Daulat Khan a prisoner. Later on Humayun sent troops under Bairam Khan to attack the Afghan General – Nasib Khan at Panj Bhain near Hariana but the Afghans retreated and fled. Akbar fought battle with Sikandar Sur as he started collecting revenue from area of Jalandhar Doab. The forces advanced through Jalandhar to the Shivalik hills and encamped at Dasuya in Hoshiarpur district and moved further to Nurpur. Later on Sikandar

Sur submitted to Akbar. Bairam Khan was defeated by the imperial forces at Gunachaur and he went to Talwara. Later, he surrendered at Hajipur after a brief resistance.

With the downfall of the Mughal Empire and the rise of the Sikh power, the district saw its most stirring scenes. The history of the Sikh Gurus in the Hoshiarpur District mainly revolves round the towns of Kiratpur and Anandpur Sahib, which formed part of it before the re-organisation of the Punjab in November 1966. The first five Sikh Gurus appear to have had a non-contact with the district. It was after the birth of Hargobind, the sixth Guru of the Sikhs in 1595 that the district of Hoshiarpur also became the centre of religious and military activities. Guru Hargobind is regarded as the first champion in arms who consolidated his army to save Sikhism from the wrath of the Mughals. He visited Mukerian in the Hoshiarpur District from where he recruited the able bodied persons for his army. In almost all the six battles which the Guru fought against the Mughals, the soldiers in the army from the district played a significant role in achieving victory for the Guru.

Guru Gobind Singh created Khalsa on Baisakhi day in 1699 at Anandpur Sahib to fight against the tyranny of the Mughals and to abolish caste system. The Guru initiated five Sikhs, among them one Sahib Singh, barber of village Nangal Shahidan belonged to Hoshiarpur District. Jaijon in the Hoshiarpur District was once the seat of Jaswal Rajas. Raja Ram Singh took up his residence here and built a fort in 1701, which was dismantled at the annexation by the British Government.

In 1815 the aggressive Maharaja Ranjit Singh, forced the rulers of Jaswan to forgo his territories in exchange for an estate on feudal tenure; three years later the Raja of Datarpur met with similar treatment. By the close of the year 1818, the whole area from the Sutlej to Beas came under the government of Lahore, and after the first Sikh war in 1846 it was passed to British government. During the Second Sikh war in 1848 the Rajas of Jaswan, Kangra and Datarpur revolted against the British rule. The Rajas were defeated and deported.

Unpopular policies of the British government raised a political storm in the Punjab including the Hoshiarpur District. This caused much discontentment among the people of the district. The deportation and arrest of Lala Lajpat Rai on 9 May 1907, without any substantial charges made against him stirred up the revolutionary movement, particularly in the Punjab including the district of Hoshiarpur.

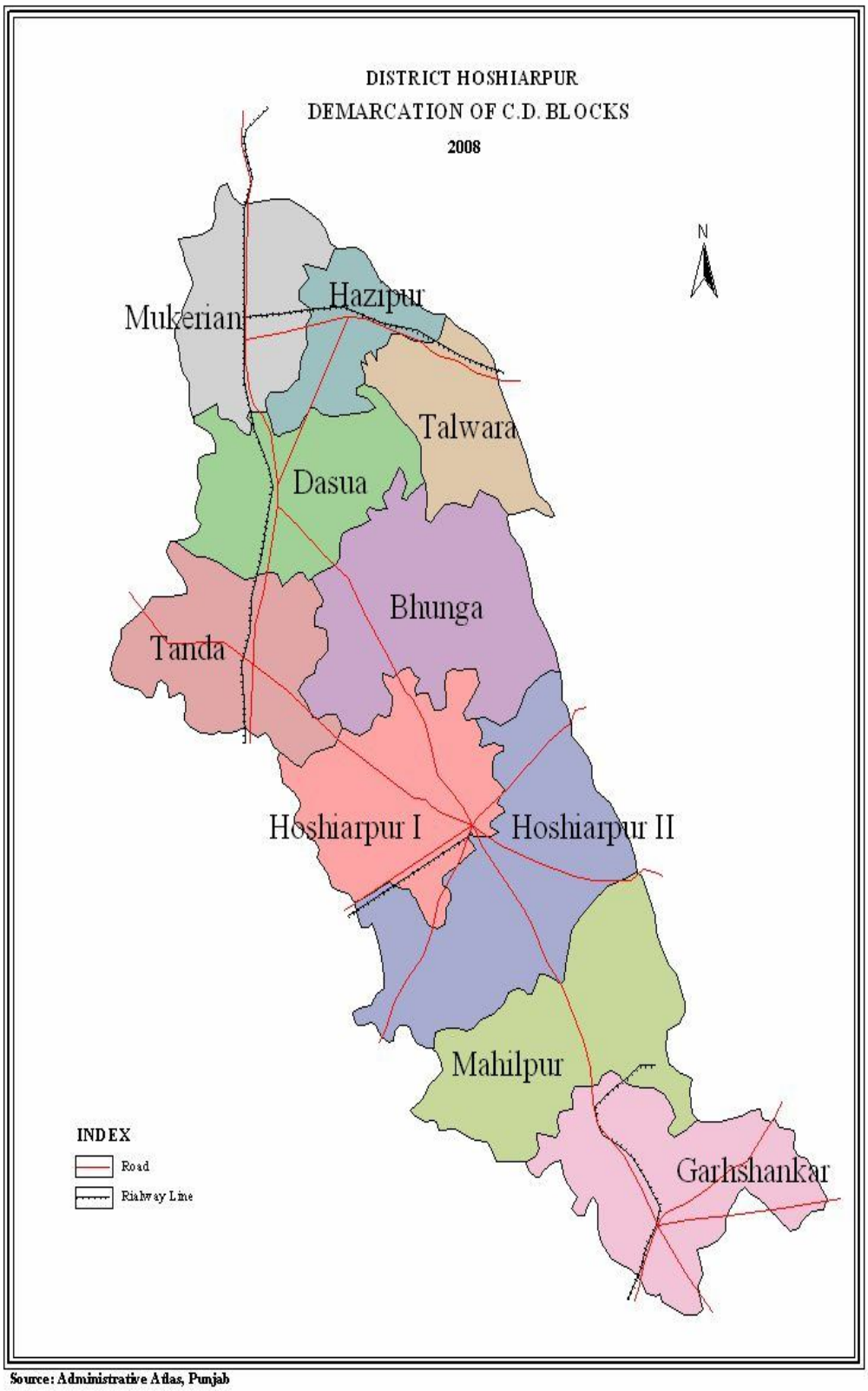
Munshi Ram and Pandit Jagat Ram of Hariana of the Hoshiarpur district were the executive members of the Ghadar party which had its headquarter at San Francisco. With a view to stimulate the political activities in the Punjab, District Congress Committees were set up in all the districts. Accordingly, the District Congress Committee, Hoshiarpur was formed in 1917. People of Hoshiarpur actively participated in the country wide hartal- a call given by Mahatama Gandhi against Rowlatt Act in 1919.

There was formation of Shiromani Gurdawara Parbandhak Committee on 15th November, 1920 for undertaking the management of sikh shrines. As at other places of the Province, a big public meeting was organised at Hoshiarpur on 23rd February, 1921 under the auspices of the District Sikh League to protest the Nankana Sahib Holocaust which occurred on 20th February.

When Simon Commission visited India, there were protests and demonstrations all over the country. Lala Lajpat Rai led anti-Simon demonstration at Lahore. To suppress the movement, the police resorted to lathi-charge which severely injured Lala Lajpat Rai. Shortly afterwards, Lalaji died and these incidents caused great disturbances all over the province, Demonstrations and protest meetings were held in various parts of the Hoshiarpur District and people shouted the slogan 'Simon go back'.

Swadeshi bazars were organised at Hoshiarpur to exhibit and supply all sorts of clothes and other articles manufactured in India to bring about an effective boycott of foreign goods in March, 1930. Mahatma Gandhi was arrested on 5th May 1930 and there was a nation wide hartal to protest against his arrest. A large number of people, who went on strike in the Hoshiarpur District, were arrested.

The schools at Miani in the Dasuya Tehsil of Hoshiarpur District were closed down and protest meetings were held at Dasuya, Gardiwala and Hariana. Hoshiarpur has a long tradition of educational attainments. The D.A.V. and Singh Sabha movements resulted in establishment of many educational institutions. On the eve of partition, the Punjab University, Lahore was shifted to Government College, Hoshiarpur and remained there till the early sixties when it was shifted to Chandigarh. As a result of this, the district has many luminaries in various fields of society.



Source: Administrative Atlas, Punjab

Administrative Structure

The boundary of Hoshiarpur district has seen the changes over times particularly after the re-organization of the composite Punjab on linguistic basis. Earlier Hoshiarpur comprised of 4 tehsils- Hoshiarpur, Dasuya, Garshankar and Una. Tehsil Una was partly merged into newly carved Ropar district and partly into Kangra district in Himachal Pradesh.

In 1970 a separate Balachaur tehsil was carved out of Garshankar Tehsil. However, in 1995 a new district- Nawanshahar was carved out of Hoshiarpur and Jalandhar districts of Punjab. Presently the district comprises of four Sub-Divisions, ten Development Blocks, eight Municipal Councils, one Notified Area Committee, three Census Towns and one thousand four hundred seventeen villages. The following table gives detailed information about the administrative set of the district.

Administrative Profile of the District

Administrative set-up	No.	Name
Sub-divisions	4	Dasuya, Mukerian, Hoshiarpur, Garhshankar
Community Development Blocks	10	Hoshiarpur-I, Hoshiarpur-II, Bhunga, Tanda, Dasuya, Mukerian, Talwara, Hajipur, Mahilpur, Garhshankar
Municipal Councils	8	Hoshiarpur, Hariana, Urmar Tanda, Dasuya, Mukerian, Garhdiwala, Sham Chaurasi, Garhshankar
Notified Area Committee	1	Mahilpur
Census Towns	3	Hajipur, Talwara, Chohal
Villages	1417	Inhabited : 1386, Uninhabited : 31

Demographic Profile

Hoshiarpur tops with 80.09 percent and 86.66 percent literacy in the rural and urban literacy rate respectively. Hoshiarpur occupies 3rd rank (Value .645) in Gender Development Index and 5th rank (Value .718) in Human Development Index vis-à-vis other district of Punjab during 2001. Hoshiarpur district occupies seventh position in terms of population size among all the districts of Punjab.

It is one of the least urbanized districts of Punjab. Eight out of ten persons of the district are residing in rural areas (Census, 2001). The decadal growth rate of the district was 14.02 percent, whereas it was 16.98 in 1981-1991. Density of population is 440 persons per

Demographic Profile of Hoshiarpur District

1	Population	Total : 14,80,736 Male : 7,65,132 Female : 7,15,604
2	Scheduled Caste	5,07,544 34.28 percent
3	Population in the 0-6 age group	12.44 percent
4	Main Workers	28.03 percent
5	Marginal Workers	6.63 percent
6	Non-Workers	65.33 percent
7	Cultivators	24.05 percent
8	Agricultural Labourers	16.63 percent
9	Household Industries	2.79 percent
10	Other Workers	56.53 percent
11	Decennial Growth Rate in the decade (1991-2001)	14.02 percent
12	Literacy rate (excluding 0-6 population)	Total : 81.02 percent Males : 86.45 percent Females : 75.32 percent
13	Percent of Rural Population to total	80.28 percent
14	Percentage of Urban Population to total	19.72 percent
15	Sex Ratio (per 1000 males)	Overall : 935 0-6 age : 812
16	Density of Population (per Square Km.)	440

square kilometers which has increased from 375 over a period of one decade. The sex ratio of Hoshiarpur district is the highest among all the districts of Punjab. There are 935 females per 1000 males (2001, COI). Juvenile sex ratio of the district is 810 girls per 1000 boys. There has been an increase in sex ratio since the last decade which was 919 in 1991.

Literacy rate of Hoshairpur district is highest in Punjab. Apparently, Hoshiarpur district is one of the few districts that have a Hindu majority. The proportion of Hindus is 58.9 percent while that of Sikhs 38.8 percent according to 2001 census.

Out of a total of 14,80,736 persons in the district, main and marginal workers constitute 34.67 percent. Among the workers, 40.68 percent are in primary sector (cultivators

or agricultural labourers), 2.8 percent in manufacturing/household industry and 56.53 percent are other workers engaged in tertiary sector.

Scheduled Caste population comprises of 34.3 percent of the total population of Hoshiarpur district and is ranked at the 5th position among all the districts. The proportion of Scheduled population in Hoshiarpur district is higher than the state's SC population (28.35 percent).

Further analysis depicts that there is preponderance of Scheduled Caste population in rural area than in urban area. Sex ratio of Scheduled Caste population is 932 females per thousand males and it is the highest in the state.

It may be mentioned that proportion of the Scheduled Caste population varies in different blocks of Hoshiarpur district. There are four blocks of Hoshiarpur district where the population of Scheduled caste is more than 40 percent. Two blocks Hoshiarpur I and Hoshiarpur II have 48 percent Scheduled caste population in each block. In Mahilpur block the proportion of Scheduled Caste population is 44 percent and in Bhunga block it is 41 percent, while in the remaining blocks the proportion of Scheduled population is less than 40 percent.

According to the information provided by the District Welfare Office- Hoshiarpur district there are few schemes being implemented at district for the Scheduled Caste both in rural as well as in urban areas.

The name of the different schemes along with the number of beneficiaries availing the benefit under each scheme is given below for both rural and urban areas.

Name of Schemes and the Number of beneficiaries under each scheme in Hoshiarpur district (2008-09)

	Rural			**Urban**		
Name of Scheme	**Grant Received in Rs**	**Expenditure**	**No of Beneficiaries**	**Grant Received in Rs**	**Expenditure**	**No of Beneficiaries**
Shagun Scheme	1,86,60,000	1,86,60,000	1244	1,68,30,000	1,68,30,000	1122
Stipend to SC girls	31,87,200	31,87,200	15236	6,00000	6,00000	3000

students in primary school						
Housing Scheme	36,00000	36,00000	75	9,00000	9,00000	45

Source: District Welfare Offficer, Hoshiarpur District, 2010

The funds allocated for each scheme has been utilized for the benefit of Scheduled Castes of the district.

Enrolment rate of Scheduled Caste children in age group 6-11 years varies from a high of 94 percent in Talwara block to a low of 62 percent in Hoshiarpur I. Blockwise analysis of enrolment rate of Scheduled caste children has been discussed in the Chapter on education.

It will be in order here to delineate the strengths, weaknesses, opportunities and threats experienced by the district.

Strengths

The existing status of industry in Hoshiarpur district is indicative of its strengths. The district has 9,109 units of small scale industries and 33 units of large/medium industries which are source of employment for large number of persons. With continuous efforts as well as State Govt.'s liberal policies, Small Scale Industry (S.S.I) and large & medium scale units have generated a large employment investment. Due to wide spread awareness of the entrepreneurs, development of small scale sector is picking up at uniform rate among all blocks of the district compared to their earlier trend of concentration only in the selected blocks.

Hoshiarpur district is famous for its traditional wooden handicrafts, ivory and plastic inlay works. There are more than 125 such small units and 8 lacquer ware units in the district.

Large and Medium, S.S.I. and handicrafts sector has been jointly contributing in exporting their manufactured goods to various countries such as U.S.A., U.K., Canada, Singapore and many Middle East countries.

The high level of literacy is an asset for the district in understanding and implementing the different schemes & programmes meant for the welfare of the people.

Inter and intra road connectivity of the district through road and telecommunication is indicative of the fact for further increasing the scope for trade and commerce and other service oriented activities

Weaknesses

Soil and Water Conservation and Waste Land Development Department, Punjab is entrusted with the responsibility of conserving soil and water which are most important but scarce resources of agricultural production. The total area of the district is 3.89 lacs hectares, out of which about two lacs hectares need various type of soil conservation treatment.

The land falling on the right of the Ropar-Pathankot road is called Kandi Area and most of the land is un-irrigated. Agriculture mainly depends upon rainfall. Though many small dams have come up in the district, but still agriculture is badly affected by choes.

The problem of soil erosion and water loss is more acute in the kandi area of the district where severe erosion occurred due to undulating topography and erratic behaviour of the rainfall. The total annual rainfall is about 1125 mm but 80 percent of this rain is received during three months of monsoon. This results in high runoff. The high velocity aggravates the problem of serious soil erosion.

Most of villages of Hoshiarpur district fall in kandi area and mountainous area. There is acute shortage of drinking water in these areas of the district. As per the survey carried out in 1992, 1102 villages were identified as scarcity villages having drinking water problems in which either the source of drinking water was more than 1.6 Km/having depth more than 15 metres, or the under ground water suffers from excessive salinity, iron, fluorides or other toxic elements hazardous to health.

The land holding of farming sector is reducing day by day. A few of the rural harijans and urban entrepreneurs have taken industrial activities in cottage and small scale sector, but the rural skilled youth prefer to go abroad to seek employment.

The rural settlements of the district are connected to the nearby towns by the mettled roads under the ‘Pardhan Mantri Gram Sarak Yojna but the condition of these roads is pathetic due to lack of periodic as well as regular maintenance by the concerned department.

Opportunities

The total geographical area of district of Hoshiarpur is 340 thousand hectare. Out of which 205 thousand hectare area is under cultivation. From the cultivated area 147 thousands hectare is under irrigation and 58 thousand hectare is rain fed. Area sown more than once is 145 thousand hectare & Gross cropped area is 348 thousand hectare. Cropping intensity is 171 percent.

Increase in production is feasible if disease resistant and high yielding variety seeds are used. Efficient water management, efficient use of Macro and Micro Nutrients, control of insect, pests & weeds, Sprinkler Irrigation and Drip Irrigation System is practiced. The Department of Agriculture by providing free of cost necessary training to the beneficiaries can help in increasing agricultural production.

The Hoshiarpur district being a sub-mountainous and Kandi area has sufficient fauna and flora which is pre-requisite for Bee-Keeping industry. Bee keeping as a village industry is of immense importance as it provides self employment to the agricultural labourer and side business for the small and marginal farmers. It also helps in increasing the yield of crops through cross pollination especially oilseed, fruit trees and vegetables.

Threats

The total average rain falls in district is 1125 mm in a year and 75 percent of the total rainfall is received during three months that is from July to September. Unpredictable rainfall with sporadic drought spells affects the yield which in turn makes it mandatory for the farmers to over exploiting of ground water for irrigation purposes.

This Kandi area of the district, due to steep slopes, is infested by choes causing flash-floods which in turn damage crops.

The broad structure of the District Human Development Report of Hoshiarpur is presented in the form of six chapter including introduction. The chapters relate to Infrastructural Facilities, Education, Health, Economy and Livelihood, and the Way Ahead. The data used for preparing the present report is based both on primary and secondary sources.

Infrastructural Facilities

Socio-economic growth of the region to a large extent is determined by the topography of the region and growth of infrastructure and amenities. In this chapter the urban infrastructure of the district and availability of amenities at the village level has been discussed. Apart from this the focus is on agricultural markets, rural credit agencies, irrigation facilities and so on.

Education

Literacy is the most important indicator to measure human development of a region. Hoshiarpur is the most educationally advanced district of Punjab. The literacy rate is 81.02 percent as against 69.7 percent for the state. Female literacy is also the highest in the state. A detailed analysis of education infrastructure and teacher pupil ratio has been done in the respective chapter of the education. Apart from school education, availability of college and technical institutions has been discussed.

Health

For improving the health of the people, the health system should be given a priority as there are major changes occurring in morbidity and mortality patterns of the people. The physical infrastructure of hospitals, Community Health Centres, Primary Health Centres and Sub-Centres is lacking on many fronts in terms of inadequate equipment, medicines and manpower. Rural and poor people are the worst affected as better health facilities are available in urban areas. Some of the blocks lag behind the others in achieving the goals of National Rural Health Mission. A full chapter has been devoted to issues relating to health.

Economic and Livelihood

The economy of Hoshiarpur district has remained predominantly agrarian. Over time there has been a decline in share of agricultural and allied activities. The increase in secondary and tertiary sector has been marginal. The economy of the district has experienced a rate of growth which is much below the standard norm of economic development. Similarly the per capita income of the district is one of the lowest in Punjab. The work force participation rate has improved over the last one decade in Hoshiarpur district. The proportion of workers was nearly 29 per cent and the proportion of non workers was 71 per

cent in the year 1991, whereas this proportion increased to 34.7 per cent in the year 2001. The proportion of marginal workers increased by nearly 6 percent points between the period 1991 and 2001.

The chapter also focuses on the area under cultivation, cropping intensity and yield of major crops in the district. Apart from this, agricultural and allied activities like dairy farming, fisheries, beekeeping, etc. have been discussed in the chapter. Thus, it is indicative that Hoshiarpur district is way ahead on education front but lots need to be done for improving the health sector and economy of the district. One of the major handicaps of this district is that quite a sizeable area of this district falls under Kandi area.

CHAPTER II

INFRASTRUCTURAL FACILITIES

In Asian sub-continent, India is a vast geographical entity with large population base and huge infrastructure like largest network of railways, roads, water ways, telecommunications, ports, airports, etc. In India with the emerging rural-urban dichotomy, the provision, improvement, and management of infrastructure in rural as well in urban areas has acquired significant place for sustainable development in the recent years.

The recent literature provides substantial evidence related to stagnation in the growth rate of agricultural production during last two decades although, there has been large allocation of government expenditure in agriculture sector and allied services and huge investments to develop facilities like irrigation, roads, electricity, drinking water supply, co-operative societies/rural credit agencies, and watershed programme since the first five year plan. In addition to this, the focus also has been to develop rural infrastructure like village level street pattern and lighting, drainage system, panchayat ghar, janj ghar, dharmsala, etc. in all districts of India.

In this part of the study a detailed analysis has been made to assess the (in) adequacy and condition of existing infrastructure both in rural and urban areas of Hoshiarpur district. It has also underlined the determining factors such as physical terrain, economic, socio-cultural, technological, institutional, etc. which hinder the expansion of infrastructure. At the outset, it is important to mention that the infrastructure related to health and education has been discussed in detail in two separate chapters of this report.

On the whole, the provision of infrastructure in the “initial set-up” is a prerequisite for socio-economic growth process. Further, to provide impetus and to maintain consistency in the growth, the expansion of infrastructure is essential. It follows, however, functionally, the operation and maintenance of infrastructure primarily depends on the immediate short-term strategies being pursued for sustainable growth. The continuous exploration of ‘innovative approaches’ to adopt new technologies for improvement of infrastructure have immense potential for growth and diversification of the economy. Above all, it has been observed that the in case of sudden breakdown and failure, the replacement of infrastructure (e.g. irrigation infrastructure) is possible only with the institutional intervention to overcome the crisis situation

within shortest possible time, because its replacement is beyond the reach of small and marginal farmers.

In the early 1990s, there has been a notable shift in the focus of development planning from mere economic growth to enhancement of human well-being. There exist very few studies examining the two-way link between economic growth (EG) and human development (HD) on the basis of development experience of different regions within a country. This type of study is useful to learn about the performance of a country at the national and regional levels. This is more so particularly in the context of a developing economy like India (Ghosh, 2006).

An analysis of the pattern of infrastructural investment, as also the level of basic amenities, including those pertaining to education, brings out the sharp disparity across size class of urban centres. Class I cities have been able to attract private investment from the national, as also the global capital market, particularly during the past decade and a half resulting in a significantly higher level and quality of infrastructure facilities (Kundu et al., 1999).

Another study (Census of India-Occasional Paper 1986) concludes that the population size of the habitation or village seems to have a direct bearing on the network of infrastructural amenities. The existence of infrastructural amenities also depends on factors like physical terrain involving such aspects as nature of landscape, topography favouring or hindering transportation, the availability of water, power, technological know-how, etc. Besides, the exogenous factors like extent of allocation of finance, labour force, equipment, machinery, etc. also play an important role in the overall development.

About the District

Location and Topography

Hoshiarpur district is located in the north-east part of the state of Punjab. The district is sub-mountainous and stretches from river Beas in the north-west to river Satluj in the south-east. It encompasses the entire western watershed and to some extent the eastern watershed of the Katar Dhar or Solasinghi ranges of the Shivalik hills. It lies between north latitude 30- 57° and east longitude 75 -32° and 76- 31°.

The district can be divided into four physiographic units:

(1) The hilly tract: It is traversed by Katar Dhar or Solasinghi, which extends up to 128 kms. in length and 3 to 8 kms. in width within the district. It is broader on the northern fringe as both sides of its watershed falls within the district. There are large number of hill torrents locally called choes emanating from this range. A few of these have now been provided with dams to minimize their vagaries and utilize flood waters for irrigation purposes.

(2) The foothill plain: This adjoins the Shivalik hills on their western slopes and has an elevation varying between 275 to 428 meters. This plain is dissected with choes which are found every 1.5 kilometres on an average. It is widest at 24 kms. in Hoshiarpur tehsil, whereas in the Balachaur and Dasuya tehsil, it narrows down. This fine textured foothill plain is covered with a mixture of sand, gravel and loam in varying proportions and is locally known as 'Kandi'.

Beh Dullo- Village of Kandi Area

(3) The flood plains of Beas and Satluj: This lies in the north western and southern peripheries of the district and is locally called as 'Bet'. This comprises of wide strips of alluvial land; which are covered by flood waters of rivers - Beas and Satluj. The flood plain of Beas is also marked by number of 'chhamb' or 'jhils'. These 'chhambs' have shrunk both as a result of silting up and reclamation of land after construction of Pong dam. There are two Beins (streams) in the district which are main tributaries of the Beas river. One is called 'Kali Bein' or the western Bein and the other is called 'Sufed Bein' or the eastern Bein.

Villagers of Mehtabpur cross the river Beas

(4) The Upland Plain: The upland plain is juxtaposed with the flood plain of the Beas in the Dasuya tehsil where it is fairly wide and with choe infested foothill plain in the Hoshiarpur and Balachaur tehsils, which covers only a few square kilometres of land traversed by the lower sections of the choes.

The physiographic silting of the Hoshiarpur district is, thus, characterized by hills along the eastern and north eastern margins and intensely dissected foothill plain adjoining the hills, flood plains along the Beas and Satluj and an upland plain immediately next to the foothills.

Rainfall

The pattern of seasons in the district is similar to other districts of the state except slight variations in the terminals. Broadly speaking 75 percent of the rainfall is experienced in the period July to September, whereas 15 percent rainfall is experienced in the winter months of January and February. The remaining 10 percent rainfall is experienced in the remaining seven months of the year.

Rivers and Drains

The district is not traversed by any perennial river. However, its northern, north-western and southern peripheries are washed by the Beas and Satluj rivers respectively.

Beas River: It rises from Beas Kund near Rohtang Pass in the Kullu district of Himachal Pradesh. It enters Hoshiarpur district near Talwara after cutting through the Solasinghi range of the Shivaliks. Near Talwara, dam has been constructed and a vast reservoir known as Pong Dam impounds its water for irrigation and power. A little down stream, this is joined by its tributary called Sawan. A barrage has been constructed on Beas river little upstream near Talwara to divert its waters in Mukerian hydel channel, partly for Kandi canal, which takes out from the Mukerian hydel channel below Talwara, but mainly for generation of electricity in the four power stations on the Mukerian hydel channel. The Mukerian hydel channel merges into Beas once again after serving its purpose of power generation.

Satluj River: It rises from Mansarover lake in Tibet (Chuia) and touches Hoshiarpur district near Ropar head works, from where Bist Doab canal has been taken out from its right bank, which irrigates land in the Doaba region, comprising Hoshiarpur, Jalandhar and Kapurthala districts. A seasonal rivulet namely Sawan Nadi which drains out rain water of Chintpurni dhar (in Himachal Pradesh) and eastern Katar Dhar watershed (falling in Hoshiarpur district) into river Beas (Census of India, 1991:4-5).

Growth and Distribution of Urban Infrastructure

Hoshiarpur district has 14,78,045 population covering an area of 3365 sq. kms. with an average density of 439 persons per sq. kms. (Census of India, 2001). The district has in all twelve urban centres. Hoshiarpur the only Class I city, and also the district headquarter. The remaining eleven town's size-class ranging between III to VI is serving their respective rural hinter lands, and these are termed as 'Mandi Towns' in the district as well as in the state. The emergence of small mandi towns and mechanization of agriculture has induced 'step migration' especially consisting of rural commercial and artisan classes. In general, the district is least urbanised. Even the Class I city has been growing at snail pace since last three decades- its population has increased from 57671 in 1971 to 1,49668 in 2001. In spatial terms the district is unevenly urbanised. Except Hoshiarpur tehsil (32.78 percent), all the remaining three tehsil's urban population ranges from 7.97 percent to 16.01 percent, significantly below the state's average (33.92 percent) and marginally below the district's average urban population (19.72 percent).

Table 1: Distribution of Cities/ Towns by Population Size-Class (2001)

City/Town	Civic Status	Population (%)	Size-Class
Dasuya	MC	20118 (6.9)	III
Garhdiwala	MC	6263 (2.2)	V
Urmar Tanda	MC	22115 (7.6)	III
Mukerian	MC	21379 (7.3)	III
Hajipur	CT	5366 (1.8)	V
Talwara	CT	22580 (7.8)	III
Hariana	MC	7814 (2.7)	V
Chohal	CT	7433 (2.6)	V
Hoshiarpur	MC	148243 (51.0)	I
Sham Chaurasi	MC	4244 (1.5)	VI
Mahilpur	NP	10019 (3.4)	IV
Garhshankar	MC	15094 (5.2)	IV
Total District	---	290668 (100.0)	19.72 percent
Total State Punjab	---	8,245566	33.92 percent

Source**:** Census of India- Punjab**,** Director of Census Operations, Punjab (Paper-3 of 2001).

In the country as a whole, more than four-fifths of the cities and towns comprising 90 per cent and more urban population, have been treated as urban by virtue of their civic status alone (Occasional Paper, 1986:62). Data presented in the Table 1 shows that in the whole district, 66.7 percent (8 towns) of the towns have municipalities which accounted for 84.4 percent of the district's urban population in 2001. There is only one town having Nagar Panchayat (NP) - Mahilpur, and the remaining three towns (Hazipur, Talwara and Chohal) have been treated as non-statutory (Census towns) places as urban.

In 2001, there were seven small towns in the size-class IV, V, and VI and these accounted for 58.3 percent of the urban settlements, and 19.3 percent of the total urban population of the district. The population living in four medium towns in the size class III consists of 29.7 percent of the urban population, and only one class I city is having 51.0 percent share of the total urban population of the district. The trends in the concentration of urban population in different size-class of cities/towns in the district more or less conform to the national level trends which have shown continuous increase since 1901.

Recreational, Sports and Cultural Facilities

The analysis on the basis of the limited data on amenities, a study (COI, Occasional Paper 1986) supports the view that the small towns which have diversified economic and other activities are more developed in terms of infrastructural amenities and services than the large

villages of corresponding size and are, therefore, appropriately put under the urban realm. In district Hoshiarpur there is conspicuous absence of large size villages. Data show that the small towns have sufficient educational (higher secondary schools, colleges etc.), medical (CHCs, hospitals etc.), Post and Telegraph (P&T) offices, recreational and cultural (cinema halls, play grounds/stadium etc), drinking water, electrification, and banking and other public credit facilities.

Data presented in Table 2 shows that there is no paucity of P &T offices in the urban areas of the district and their number varies not according to the size-class of the city/town. For instance, there are 20 P&T offices in Hoshiarpur city, 14 in Sham Chaurasi (Class VI), and only 3 in Talwara town (Class III). In the remaining urban centres the differential was, however, marked in case of P&T offices ranging from 2 in Choral town to 18 in Dasuya town. It has also been observed that the Post offices combined with Telegraph offices are few in numbers in all the urban centres.

In 1991, all the eight cinema halls, three video halls in the district were located in the urban areas. Interestingly, the number of cinema halls has declined to seven in 2001, and five in 2007. In Dasuya, Garhdiwala, and Talwara towns all the cinema halls have stopped functioning. The number of cinema/video halls in Hoshiarpur, and Mukerian towns have declined which may be because of the increasing popularity of electronic media i.e. Television with satellite or cable network.

Table 2: Distribution of Post &Telegraph, Recreational and Cultural, Sports/ Stadium in Urban Areas (2008)

City/Town	Post & Telegraph			Cinemas/Video Halls			Stadiums/Auditoriums		
	1991	2001	2007	1991	2001	2007	1991	2001	2007
Choral	2	2	2	-	-	-			
Dashy	21	21	18	1	1	-			1
Garhdiwala	10	10	10	0/1	-	-			
Garhshankar	10	10	10	1	1	1			
Hajipur	7	7	7	-	-	-			
Hariana	5	5	5	-	-	-			
Hoshiarpur	20	19	19	3/1	3	2		2	2
Mahilpur	2	2	2	1	-	-			1
Mukerian	8	8	8	1	½	1			
Sham Chaurasi	14	14	14	-	-	-			
Talwara	3	3	3	0/1	-	-			
Urmar Tanda	13	13	13	1	1	1			
Total	115	114	111	8/3	7/2	5/0	-	2	4

Source**:** Department of Post & Telegraph (India), Department of Excise & Taxation, Department of Sports, 2008

At Hoshiarpur district headquarter, both outdoor and indoor stadiums are located. In addition, a swimming pool has been constructed by the District Olympic Association (DOA). A playground of DAV College is being used to train football players. Whereas, in the coaching sub-centres, schools playgrounds are the main venues for arranging day-to-day sports activities. At these coaching sub-centres the students and non-students are being trained for hockey, football, wrestling, and athletics. At Mahilpur town, a Football Academy has been established by the Department of Sports, Punjab. Apart from training, the academy gives free education to the players. In addition, Rs. 50 per day/per student is being spent on the diet of the players.

The coaches for providing the training in numerous games have been engaged by the Sports department. These coaches give regular training to the players at Hoshiarpur town. The coaching sub-centres at Tanda, Dasuya, Garhdiwala, Mahilpur towns and Chabbewal village also impart training to the players.

Sewerage Facilities

Under the Rashtriya Sam Vikas Yojana (RSVY) two proposals for extension and augmentation of sewerage schemes for Dasuya and Mukerian towns have been prepared and implemented. In Hoshiarpur district, Dasuya is a Tehsil headquarter. It is situated on the Grand Trunk road/railway line from Jalandhar to Pathankot road at a distance of 60 kms. from Jalandhar towards Pathankot. In the town, about 60 percent of the population has been covered under the existing sewerage scheme. There exists disposal work comprising of screening chamber, collecting tank and pump chamber. Nearly 14.34 kms. branch sewer line and 0.94 Km intercepting/ fallout sewer are existing. The project for extension and augmentation of sewerage scheme for Dasuya, has been prepared and stand approved by Housing and Urban Development Corporation Limited (HUDCO). The work under the project is in progress. The 1.26 kms main sewer, and 17.96 kms. branch sewer, has been prepared in the project. The area beyond railway line has been covered in HUDCO project and rest of the area is covered in this project.

Mukerian town is a Tehsil headquarter, and it is situated on Grand Trunk road/ railway line from Jalandhar to Pathankot at a distance of 75 kms. from Jalandhar towards Pathankot. In the town about 75 percent of the population has been covered with sewerage. There exist

disposal work comprising of screening chamber, collecting tank and pump chamber. The 24.02 kms. branch sewer line and 3.53 kms. intercepting/fallout sewer are existing. The sewer laid at site against the project extension and augmentation of sewerage scheme for Mukerian is under HUDCO. For rest of the area, the project for extension and augmentation of sewerage for Mukerian (for the remaining area) is under RSVY which has been prepared to provide the basic facility of underground sewer. The funds against the work shall be provided by the Government of India under the Rashtriya Sam Vikas Yojana (RSVY). Thus, the sewerage in urban areas has partially covered the population in Hoshiarpur city, Dasuya and Mukeria towns and the remaining urban centres are devoid of underground sewerage system.

Village Level Infrastructure

A glance at Table 3 reveals that in Hoshiarpur District, out of 1386 inhabited villages, 11.7 percent were in the population size-class of 'less than '200' followed by 25.6 percent in '200-499' and, 33.2 percent villages in the size-class of '500-999'. In other words, nearly 70.5 percent villages were having population below '1000' (Census of India, 2001).

In brief, apart from topography, availability of water, electricity, road, etc. the village level infrastructure may also be varying according to the size class, whereas more than half of the villages in the country (55.35 per cent), were having less than 500 population. The villages with small population tend to have less infrastructural facilities as compared to the larger one

Table 3: Distribution of Inhabited Villages by Population Size Class (2001)

District Hoshiarpur				Punjab		
Pop Size class	No. of Villages	Percentage of Villages	Percent population	No. of Villages	Percentage of Villages	Percent Population
<200	162	11.7	1.5	1103	9.0	0.7
200-499	355	25.6	10.7	2106	17.2	4.7
500-999	460	33.2	27.5	3318	27.5	15.5
1000-1999	307	22.2	34.7	3405	27.7	29.7
2000-4999	90	6.5	20.3	1979	16.1	35.9
5000-9999	12	0.9	5.3	281	2.3	11.3
>10,000	Nil	-	-	26	0.2	2.2
Total	1386	100.0	100.0	12278	100.0	100.0

Source**:** Statistical Abstract of Punjab, 2007 Govt. of Punjab, Economic and Statistical Organization.

The villages in the state of Kerala which are equivalent to small towns in size in other states are observed to be leading in infrastructural amenities as was to be expected (Census of India-Occasional Paper, 1986).

The information on availability of services, facilities and utilities at village level has been presented in the following tables on the basis of the primary survey conducted in 40 villages in district Hoshiarpur.

Electricity

In context of rural infrastructure, rural extension services, agro-based and food processing industries and urban-industrial infrastructure, the ever increasing use of energy especially hydro-electric power has acquired pivotal role. The wide spread use of electric power even in agriculture as well in non-agricultural pursuits in rural areas has boosted the demand for electricity manifold in post-independence period. For instance, the electric operated tubewells in the district has increased from 15535 in 1981 to 33044 in 2001, and further increased to 38135 in 2006 (ESO, 2006). Data further shows that for the district, in the year 2005-06 the sale of electricity per consumer is highest in public lighting and bulk (276945 kwh) followed by industries (71313 kwh), and agriculture (6832 kwh). The sale of electricity per consumer is the lowest in domestic use (1121 kwh) next to commercial use (1228 kwh). The average consumption for the district (2340 kwh) is significantly lower than the states' average consumption (4009 kwh).

In the early stages, the emphasis in rural areas was on the domestic electrification. The serious drought in the country during mid-sixties focused the attention of government on stabilisation of agriculture through exploiting ground water resources. This led to a change in the emphasis of rural electrification to the energisation of water pump sets. The creation of Rural Electrification Corporation helped to accelerate the supply of electricity, particularly in drought prone and backward areas in an organized manner (COI, Occasional Paper 1986). On the contrary, in green revolution areas the rural electrification was intensified to attain self sufficiency at least in food grains. Consequently, even the 1971 census data shows that 49.10 percent of the villages were electrified in Punjab, whereas in the country as a whole only 17.7 percent villages were electrified. The rural electrification process has been intensified after 1971. In this regard, data shows that by March 2006, in Hoshiarpur district, 99.7 percent households had domestic connections, while, 86.7 percent households were electrified in the state as a whole (ESO, 2006). The district has exceptionally high proportion of small size villages, i.e. more than 70.0 percent of the villages having less than 1,000 populations. In spite of small size

(population) of villages in Hoshiarpur district, at present all the villages are found to be electrified.

Data presented in Table 4 relates to the regularity in the supply of electricity for domestic as well as for agriculture and non-agricultural purposes. Survey results show that in 32.5 percent of the villages the supply of electricity was regular, whereas, for the remaining, 67.5 percent villages, the supply was erratic.

Table 4: Electricity Supply

Regularity of electricity supply	Number	Percent
Regular supply	13	32.5
Erratic supply	27	67.5
Total	40	100.0

Energy Sector: Future Prospects

The rapidly growing economies especially in third world countries have enhanced aggregate demand for energy. Consequently, the energy deficit has increased to a great extent. It has been realized that to maintain the tempo of growth there is a dire need to explore the future potential in the energy sector to meet the growing demand and to overcome the energy deficit. Sustained economic growth in India, a study noted requires significant investment in energy infrastructure over the coming decades. Development of new energy infrastructure requires the country to tackle several key challenges at the same time (Chikkatur and Chakravarty 2008).

Among the conventional sources of energy, the "opposition to new, big projects was gathering force in the early 1970s". The scientists in India also realized that, the small scale multi-purpose hydro-power projects are the better option to keep the ecological equilibrium intact. At the same time, the location of thermal power projects shall follow the 'rational planning process' meaning thereby that these need to be located near the coal fields instead of carrying the fuel to distant places.

India has the potential to generate energy from non-conventional sources which are primarily environment friendly. Among the alternative sources of energy, the renewable non-conventional sources are the better options such as wind mills, tidal energy, solar photo-voltaic (SPV) cells, bio-mass and bio-fuels. The commissioning of these projects at the community or household level requires institutional support both technical as well as financial. It follows,

however, that non-conventional sources such as solar system, windmills, tidal energy, and bio-gas plants require “initial investments, but have low or negligible operational and maintenance costs”. All these deliver reliable performance through out its life cycle, unequivocally are pollution free sources.

In Hoshiarpur district-region the potential for energy sources such as wind mills, tidal energy, bio-fuels etc. does not exist. Whereas the sources such as solar energy, bio-mass, small hydel power projects etc. has been explored and tapped to some extent. Some of these projects are in pipe line. These have been discussed briefly as follows.

Bio-Gas Plants

The animal husbandry including the dairy farming in the state as well as in the district Hoshiarpur is an important allied activity of the farm sector. A majority of the households in rural areas use cattle dung as organic manure and dry dung cakes as cooking fuel. The bio-gas has been playing pivotal role as it provides energy for cooking, lighting, and for running of gas engines on one hand, and saves dung to use as organic manure on the other.

According to the recent information provided by the agriculture department, the biogas plants were introduced in the district in the year 1974-75 in which 39 plants were established, and thereafter gained momentum. The Punjab Energy Development Agency (PEDA) has been providing incentive in the form of subsidy to install biogas plant. The estimated cost of a medium size (4 cubic meters) plant is Rs 20,000. But 1999 onwards the PEDA has not been providing subsidy for the plant. The average life of the plant varies from 10-15 years. In the district, by 2008-09, about 2968 biogas plants have been installed out of which nearly 60 percent at present are in working condition. Data also show that during last five years the progress is quite slow. The PEDA has made extensive arrangement for facilitating the installation of plants, its repair and providing training to the beneficiaries in its operation and maintenance.

Solar Energy

The prospects of solar energy in tropical countries could be seen as a viable alternative source of energy especially in remote villages. Among various alternative sources of energy, solar power considered to be the most viable source owing to its flexibility in location, and

minimum operation cost. The installation of solar system needs institutional support both technical and financial.

The PEDA has installed 388 solar panels in Hoshiarpur district in 2007. The cost of a solar panel is around Rs 24,600 out of which Rs 9600 has been given in the form of subsidy. The average life span of the solar system varies from 25-30 years with batteries having only 6-7 years life span. In practice, there are 240 lighting systems, 138 solar water pumping systems, 455 solar lanterns and 227 solar cookers working with the help of these solar panels. The PEDA has been arranging training for operation and maintenance, and has facility for installation and repair of solar panels. Solar energy is a good source of energy tapped from sun. It could be used in industrial, commercial and agricultural sector for lighting and heating purposes.

Among the non-conventional energy sources, wind mills' energy has not been tapped in the state may be because of its topography which determines the 'location' aspect of the wind mills. The thermal and hydro-power projects are also absent in the district. The PEDA has been exploring the potentials to harness energy from viable sources. A 10MW biomass waste (paddy straw) power plant would be set up in village Binjon in tehsil Garhshankar. The PEDA has also explored the possibility of establishing a 750 KW small size run-off hydel power plant in village Terkiana on holly Bein (down stream of river Beas).

Drinking Water Supply

The district can be divided into three broad regions mainly on the basis of 'soil crop-climate complex'- The flood plains, Bet area, and Kandi area. The Kandi area covers more than half of the geographical area of the district. The district throughout the year receives moderate rainfall mainly during the rainy season in the months of June to September. The "surface water source" is partly available in some parts of the district. Consequently, there is absolute dependence on ground water sources and some parts of the district such as Kandi area has acute shortage of water. With the launching of rural drinking water scheme in late 1990's a majority of the problem villages have had the benefits of the scheme.

According to 1991 census, in Hoshiarpur district, there were 1429 villages, out of which 30 villages are uninhabited. And, after 1991 Census, 4 more villages were found uninhabited and another 4 villages merged in the municipal areas of different urban centres. In all, out of 1391 inhabited villages, 26 villages have "no problem" of drinking water and the remaining 1365

villages are counted as “problem villages”. Out of these 1365 inhabited “problem villages”, 1020 villages have been provided portable water supply by 31st March, 2002.

There are at present 97 “problem villages”, out of these 90 villages are not covered (NC) under any water supply scheme in the District. The remaining 7 villages are proposed to be covered (PS) under portable drinking water supply scheme. These 7 villages fall in the Kandi Area.

Table 5: Problem Villages Identified Not Covered in Any Water Supply Scheme

Area	Number of Villages			Population		
	NC*	PC**	Total	NC	PC	Total
Kandi Area	30	7	37	22083	2604	24687
Plains	60	-	60	57026	-	57026
Total	90	7	97	79109	2604	81713

Source: www.hoshiarpur.nic.in RSVY Scheme

* NC=Villages Not Covered in any water supply scheme, ** PC=Villages Proposed to cover

A glance at Table 5 further reveals that among the 90 “problem villages” not covered so far under any water supply scheme, 30 “problem villages” fall in the Kandi region. The remaining 60 “problem villages” fall in the plains, having a total population of 81713 in 2004.

Water Supply and Sanitation Department (WSSD) is the designated nodal department for the implementation of rural water supply schemes in Punjab at the district level. In the rural areas of the district, the drinking water supply has been provided to “cluster of villages” because of the relative small size of the villages in the district. The operation and maintenance of scheme can be made self-sustainable to some extent due to additional generation of revenue from private water connections at individual household level. As per the official records, about 50 percent of the households in the villages prefer private connections, balance 50 percent mostly landless labourers, are prepared to continue drawing water from public stand posts.

Data presented in Table 6 relates to the potable drinking water. The survey results show that 65 percent of the sampled villages are getting tap water supply and for the remaining villages the main source of supply is either hand pump or tube well. When asked about the quality of water, the respondents disclosed that for nearly 32 percent of the villages, the water for drinking purposes is not suitable.

Table 6: Potable Water Supply in Rural Areas

Sources of Drinking Water			Tap- whether supply is regular			Water Quality		
Source	**Number**	**Percent**		**Number**	**Percent**	**Quality**	**Number**	**Percent**
Tap	26	65.0	Regular	15	37.5	Unsafe	13	32.5
Tube well/ Hand Pump	14	35.0	Erratic	17	42.5	Safe	27	67.5
			Hand Pump-NA	8	20.0			
Total	40	100.0		40	100.0		40	100.0

Note : NR=Not Reported

These results show that about 35 percent of the villages are getting water supply from sources such as hand pumps and tubewells. In other words the tap water supply is certainly suitable for human consumption. Further, when enquired about the routine supply of drinking water, respondents ascertained the fact that 37.5 percent of the villages get regular supply, while in 42.5 percent villages supply is erratic. In case of remaining 8 villages (20 percent) hand pump was used as a source of drinking water. Hence, the question on regularity of water supply was not asked.

In Hoshiarpur, rural water charges are levied in all the covered villages in case of private connections. The Water Supply and Sanitation Department has been able to generate enough resources to meet their establishment and operating costs. However, they can not make the investments necessary to keep the infrastructure in good condition. Consequently, the water supply in most of the cluster villages has come to stand still as a majority of the private households have not paid the water charges because of erratic supply of drinking water.

An individual household to get a private connection has to deposit Rs 1000 and Rs 60 as fee and security, respectively, and, Rs 50 to 60 per month water charges are levied for each private connection. On the other hand in Kandi area, for every 150-200 population one public Stand Post is being installed and in Plains for every 200 population a Public Stand Post is being provided to fetch water free of cost.

Sanitation

Data pertaining to streets and sanitation conditions in the villages have been presented in Table 7 and 8. The survey results show that among sampled villages, only one-fifth (8) of the

villages have pucca/paved streets. A majority (77.5 percent) of the villages have semi-pucca streets, and only one village has kutcha streets. Provision of street lightening is available only in 3 villages (7.5 percent).

Table 7: Type of Village Streets and Street Lighting

Type of Streets			Provision of Street Lighting		
	Number	Percent	Response	Number	Percent
Pucca	8	20.0	Yes	3	7.5
Semi-Pucca	31	77.5	No	36	90.0
Kutcha	1	2.5	NR	1	2.5
Total	40	100.0		40	100.0

Regarding proper drainage for waste water, only one village has underground drainage with outlet. Seven out of ten villages have pucca drainage system with open outlet and in 7.5 percent (2) villages kutcha drainage system is there with outlet. Surprisingly, 20 percent of the sampled villages have open drainage for waste water that too without outlet.

Open Drain in a Village

In case of solid waste disposal, a majority, i.e. 80 percent (30) villages have rudies (heaps of cow dung) in the periphery of the villages and only in 5 percent (2) villages the solid waste is being disposed off within the household premises. In 15 percent (6) villages the solid waste is being disposed off in the fields. In, nutshell, in each village solid waste is being disposed off in a

uniform way. It has been observed that in a majority of the villages solid waste pollutes the village environment more than the grey water.

Table 8: Sanitation Condition

Type of Drainage			Disposal of Garbage		
	Number	Percent		Number	Percent
Under ground with outlet	1	2.5	Rudis (heaps) periphery	32	80.0
Pucca Open with Outlet	28	70.0	In household premises	2	5.0
Kutcha open with outlet	3	7.5	In Fields	6	15.0
Open without Outlet	8	20.0			
Total	40	100.0		40	100.0

Other Infrastructural Facilities

With the advent of the green revolution, modern agricultural inputs such as pesticides, insecticides, fertilizers, seeds etc. have become a necessity. These inputs are either available in the villages or in the nearby towns/road junctions. Data presented in Table 9 has been discussed in the following relevant sections in the chapter.

Table 9 shows that the fertilizer and pesticide shops are located in nearly 35 per cent of the sampled villages. Out of the remaining 26 villages, 53.8 percent (14), 34.6 percent (9), and 3.8 percent (1) villages buy these agricultural inputs from a distance of 1-2 kms, 3-4 kms, and 5-6 kms. respectively. And, 7.7 per cent villages have access to these shops beyond 9 kms.

Similarly, 45 percent (18) villages have market located within the village for daily needs such as fruit, vegetables, sweets etc. For the inhabitants of 55 percent (22) of the villages the distance covered to reach the market for daily needs ranged between 1-8 kms.

Data in Table 9 shows that ration depot is available within 60 per cent (24) sampled villages. The villages without ration depot have to travel to the adjoining villages to avail the facility- for 75 percent and 25 percent villages the ration depot is located within a distance of 1-2 kms. and 3-4 kms. respectively.

Table 9: Other Infrastructural Facilities

Facility	Availability		Distance (in kms)					
	N-40							
	Yes	No	1-2	3-4	5-6	7-8	9+	NR
Bus Stand	31 (77.5)	9 (22.5)	5 (55.6)	4 (44.4)	-	-	-	
Railway Station	1 (2.5)	39 (97.5)	1 (2.6)	7 (17.9)	5 (12.8)	5 (12.8)	21 (53.8)	
Post office	20 (50.0)	20 (50.0)	13 (65.0)	7 (35.0)	-	-	-	
Bank	6 (15.0)	34 (85.0)	12 (35.2)	14 (41.2)	7 (20.6)	1 (2.9)	-	
Agricultural cooperative Society	16 (40.0)	24 (60.0)	16 (66.7)	7 (29.2)	1 (4.2)	-	-	
Veterinary Hosp/ Dispensary	14 (35.0)	26 (65.0)	15 (57.7)	8 (30.8)	3 (11.5)	-	-	
Fertilizer/Pest Shop	14 (35.0)	26 (65.0)	14 (53.8)	9 (34.6)	1 (3.8)	-	2 (7.7)	-
Ration Depot.	24 (60.0)	16 (40.0)	12 (75.0)	4 (25.0)	-	-	-	-
Market- Fruit, Vegetable, etc.	18 (45.0)	21 (55.0)	14 (63.6)	5 (22.7)	2 (9.1)	1 (4.5)	-	-
Presence of Money lender	14 (35.0)	26 (65.0)	5 (19.2)	4 (15.4)	1 (3.8)	1 (3.8)	4 (15.4)	11 (42.3)

According to Table 9, the survey results show that in rural areas of the district, the Post office is located in half of the villages. The villages where post office facility is not available, majority (65 percent) of them are availing the facility with in a short distance of 1-2 kms. and for the remaining villages (35 percent), the Post Office is located within a distance of 3-4 kms.

Data presented in Table 9 relates to the bus-stands, and railway stations. In this context, the survey results show that for 77.5 percent (31) villages the bus stand is located in the village itself while for the remaining 9 villages the bus stand is located at a distance ranging from 1 kms. to 4 kms. However, in case of railway station the network seems to be sparse. An overwhelming majority i.e. 97.5 percent of the villages do not have railway station. In this case for 54 percent (21) villages the railway station is located at a distance of more than 9 kms. Almost for an equal

proportion of villages, i.e., 13.5 percent, the railway station is located at a distance of 5-6 kms. and 7-8 kms., and in the remaining villages (8) it is located within 4 kms.

The availability of Post and Telegraph Offices in the villages for the district presented in Table 10 shows that only 25 percent of the villages have this facility and has insignificantly declined from 347 in 1991 to 343 in 2007. It has been observed that the number of villages with Post Offices combined with Telegraph offices is negligible though separate data is not available.

Table 10: Block Level Distribution of Post and Telegraph Offices in Rural Areas

Block	Villages with P&T facility			Villages without P&T facility		
	1991	2001	2007	1991	2001	2007
Bhunga	30	30	30	169	169	169
Dasuya	25	25	22	164	164	167
Garhshankar	56	56	56	95	95	95
Hajipur	-	-	14	-	-	-
Hoshiarpur-1	50	50	50	130	130	130
Hoshiarpur-II	53	53	53	76	76	76
Mahilpur	50	50	50	106	106	106
Mukerian	25	25	22	132	132	135
Talwara	30	30	20	66	66	76
Tanda	28	28	26	98	98	100
Total	347	347	343	1036	1036	1054

Source: Department of Posts (India), Hoshiarpur (2008)

Rural Link roads

The roads connecting the villages either with the highways or with the nearby urban centers are necessary for market inter-dependency, exposure to the outside world, and to check short distance migration. It has been observed that in the district under the 'Pardhan Mantry Gram Sarak Yozna' all the small rural settlements are connected by the metalled roads and these link roads in the district are being planned according to the terrain.

Table 11: Total Length of Roads (kms.) in the District Hoshiarpur 2005-06

Type of Road	kms
National Highways	109.63
State Highways	485.80
Rural Link Roads	3041.00
Number of inhabited villages linked	1386

Source: www.hoshiarpur.nic.in (other statistics)

The Public Works Department (PWD) is entrusted in the works of construction of roads, bridges, and public buildings. The repair and maintenance of infrastructure within the district including the public buildings is the sole responsibility of the PWD. The 'link roads' connecting the villages are also constructed by the PWD. The link roads are being repaired after every six years.

Data presented in Table 12 relates to the village roads. The survey results show that 90 percent (36) of the villages are connected with pucca roads, and only 10 percent (4) villages have semi-pucca roads. Further, data in this regard shows that the condition of roads for 35 percent (14) of the villages has been found to be good. While, in case of half of the villages (20) the condition of roads is moderate. But the condition of roads for 15 percent (6) villages has been found to be worst. The terrain with steep gradient usually damages the roads especially during the rainy season mainly in the Kandi areas. An inference suggests that there is conspicuous absence of periodic and regular monitoring of conditions of public buildings and roads.

Table 12: Type and Condition of Rural Link Roads

Type	Number	Percent	Condition	Number	Percent
Pucca	36	90.0	Good	14	35.0
Semi-Pucca	4	10.0	Moderate	20	50.0
Kutcha	-	-	Worst	6	15.0
Total	40	100.0		40	100.0

The road connectivity partly does matter when it provides efficient bus service at the convenience of public in general.

Agricultural Markets

The regions having relatively better infrastructural facilities depends on numerous factors. Apart from settlement size, the factors like physical terrain involving such aspects as nature of landscape, topography favouring or hindering transportation, availability of water, power, technological know-how, etc. are also important factors Besides, the exogenous factors others factors like extent of allocation of finance, labour force, equipment, machinery, etc. also play an important role in the overall development (Census of India, Occasional Paper 1986).

Data presented in Table 13 relates to the agricultural markets in the district Hoshiarpur. In the district there are five principal agricultural markets (regulated) as on 31st March 2007.

These are located in five towns, and their number remained constant during last three years. Interestingly, in the post-harvest period to facilitate the procurement of agricultural produce, out of total 40 sub-yards, there are 33 sub-yards attached with regulated markets and number of these sub-yards also remained unchanged during last three years. The average numbers of villages served per regulated market are 277 which cover nearly 673 sq. kms. area.

Table 13: Availability of Agricultural Markets

Block	Town	Market Centres (Regulated) 2007*	Sub Yards 2006**	Purchase Centres 2006	Focal Points 2006
Hoshiarpur-I	Hoshiarpur	1	3	3	5
Hoshiarpur-II			8	8	5
Bhunga			2	2	6
Dasuya	Dasuya	1	5	5	5
Tanda Urmur	Tanda Urmur	1	8	8	4
Mukerian	Mukerian	1	4	6	4
Talwara			1	1	2
Hajipur			2	2	4
Garhshankar	Garhshankar	1	5	5	5
Mahilpur			2	2	6
Total		5	40	42	46

Sources: Statistical Abstract of Punjab, 2007 Govt. of Punjab, Economic and Statistical Organization. http//punjab.gov.in.

During post-harvest period, 42 purchase centres start functioning during peak seasons at these sub-yards (two more in Mukerian) for the convenience of farmers in terms of distance. In the remaining blocks only eight purchase centres were established in 2005-06. It is, therefore evidently clear that the rural hinterlands of these five principal markets contribute maximum marketable surplus produce. These purchase centres function at least twice during Rabi and Kharif seasons.

The principal markets and purchase centres also provide various facilities to the farmers such as shelter to sit, drinking water, electricity supply, etc. In the district, in addition, five co-operative marketing societies have been formed to facilitate procurement of agricultural produce, supply of fertilizer to the farmers and supply other essential inputs to the rural co-operative societies. At present these co-operative marketing societies are functioning at principal agricultural market centres.

Rural Credit Agencies

Over the years the institutional credit agencies in Punjab as well as in district has witnessed existence of well developed infrastructure and have widespread network in terms of coverage. Ever since the beginning of the green revolution, the introduction of new technology and modern in-puts have brought about significant structural changes in the farm sector. Consequently the role of co-operatives and commercial banks has increased tremendously over the last five decades. In the first three decades since the advent of green revolution the demand for long as well as for short-term loan was there. In the recent past, the demand for credit in the farm sector has increased significantly because of the diversification of agriculture which has made a beginning though on small scale in the district. The immediate replacement of the irrigation infrastructure owing to fast depletion of ground-water source has also enhanced the demand for long-term credit though it is confined to the medium and big farmers.

The survey results (Table 9) reveal that only 6 (15 percent) villages have commercial banks. Among the villages without bank, for 35.2 per cent and 41.2 per cent villages bank was located within a distance of 1-2 kms. and 3-4 kms. respectively. Nearly one-fifth of the villages availed the facility located at a distance of 5-6 kms. whereas, only one village is depending on the facility located beyond 7 kms.

The main thrust of the department is to arrange agriculture finance to the rural masses in the shape of cash, fertilizer, insecticides and agricultural implements etc. through a network of village agricultural co-operative societies. The findings (Table 9) show that the network of co-operative societies in terms of coverage is located in 40 per cent of the villages. It has also been observed that most of the adjoining villages have common agricultural societies. That is why a majority of the societies are located with in a distance of 1-2 kms (66.7 percent) and 3-4 kms (29.2 percent) from their respective villages.

Besides advancing short-term loans, medium term loans are also advanced through four Primary Agricultural Development Banks in the district located at Garhshankar, Hoshiarpur, Dasuya, and Mukerian. Co-operative loans are advanced to the villages through the agency of Central Co-operative Bank Ltd. Hoshiarpur which has 65 branches spread in the whole district. The recovery work of their loans as on 31st March, 2002 is 88 percent whereas it was 83 percent

on 28th February, 1997. The assigned target of advancement of loans for short term through the network of co-operative societies shows that there are 950 societies in total, out of which 295 societies are service societies, 417 societies are milk producers societies, 21 co-operative house building societies, 39 labour and construction societies, 39 thrift credit societies, 5 transport societies,, 92 industrial co-operative societies, and 5 Primary Agriculture Development Banks.

To provide more services to the masses, the Central Cooperative Bank Hoshiarpur, has started advancing loans to the non-farm sector. The Primary Agricultural societies are also distributing essential commodities. In the district, there are four offices of assistant registrars located at Dasuya, Garhshankar, Mukerian and Hoshiarpur accompanied by one office of the deputy registrar at district headquarter to control the whole movement of co-operation administratively. In addition, to above, integrated co-operative development project has been sponsored by National Cooperative Development Corporation (NCDC) for the betterment of cooperative movement.

Numerous empirical studies relating to rural credit at national as well as at state/regional level reveal that an overwhelming majority of the rural households depend on both formal as well as informal sources. The cooperative banks are mainly providing loans to the rural households followed by commercial banks. In case of formal credit, the households utilize significant proportion of the credit for productive purposes, and sometimes indirectly for consumption purposes. In case of informal sources there is no such restriction on utilization of credit.

The survey results (Table 9) show the presence of money lender in the rural areas. In all, 35 percent (14) of the sampled villages are having money lender in the village itself. Interestingly, out of the villages without money lender, 42 percent (11) of the villages either did not disclose the presence of money lender in the area or were unaware of them. Almost one-fifth of the villages have access to the money lender within a distance of 1-2 kms. and another 15 percent within 3-4 kms. whereas, for 23 per cent villages the facility is available beyond the distance of 5 kms.

A recent study entitled Farm Accounts in Punjab (ESO, 2004-06) has underlined the ever increasing role of the formal and informal sector financial institutions extending credit to the farm sector. The study noted that with the launching of the general development schemes in

agricultural sector in the late sixties a keen trend for the purchase of tractor was witnessed. This development was due to cultivator's consciousness about the utility of the tractor on the one hand and liberal credit policies to purchase agricultural implements i.e. tractor etc. on the other hand.

Table 14: Distribution of Borrowed Funds (percent) 2004-05 for Purchase of Tractor

Holding Size Group (in Hectares)	Co-operative institutions	Commercial banks	Money Lenders & Commission Agents	Relatives	Others	Total
<5.00	16.67	58.33	8.33	16.67	-	100.00
5-10.00	33.33	40.00	13.33	6.67	6.67	100.00
10-20.00	50.00	25.00	-	25.00	-	100.00
20 +	-	-	-	-	-	100.00
Over all	29.03	45.16	9.68	12.90	3.23	100.00

Source: http// pbplanning.gov.in

Table 15: Distribution of Borrowed Funds (percent) 2005-06 for Purchase of Tractors

Holding Size Group (in Hectares)	Co-Operative Institutions	Commercial Banks	Money Lenders & Commission Agents	Relatives	Others	Total
<5.00	26.67	33.33	13.33	27.67	-	100.00
5-10.00	33.33	13.33	26.67	26.67	-	100.00
10-20.00	14.29	42.85	14.29	28.51	-	100.00
20 +	-	-	-	-	-	-
Over all	27.03	27.03	18.91	27.03	-	100.00

Source: http// pbplanning.gov.in

Data presented in Table 14 shows that out of total funds borrowed to purchase the tractor 29.03 percent share was advanced by the co-operative institutions, 45.16 percent by commercial banks, 9.68 percent by money lenders/commission agents, and 16.13 percent by relatives and other sources.

A cursory glance at Table 15 shows that out of total funds borrowed to purchase tractor, 27.03 percent share was advanced by co-operative institutions including the land mortgage banks, almost an equal share i.e. 27.03 percent by commercial banks, 18.91 percent by money lender/commission agents, and the remaining 27.03 percent by relatives.

A comparative analysis of the above tables (14 and15) reveals that the role of commercial banks has declined significantly, while that of co-operative institutions have declined marginally

in one year period. On the contrary, the role of informal credit sources, i.e., of money lender/commission agents and relatives/other sources have increased significantly.

A recent study reveals that only 20 percent (NSSO data) of the credit was used for so-called consumption purposes (Gill and Singh, 2006 cit. in Sukhpal, 2006). In fact, the non-availability of consumption loans from formal institutions leads farmers to use productive loans for consumption purposes (called "misuse of credit"). A classic example of that is the bank loans funded new tractors being disposed off in second hand markets immediately after purchase to arrange cash for other family needs like marriage, paying of old debts etc. (Ibid, 2006). This also leads farmers to resort to obtaining credit from money lender who charge exorbitant rates and under value and overprice farmer's out-put and inputs, respectively due to interlocking of these markets.

Milk Cooperative Societies

The department is also playing a specific role for bringing white revolution through 417 milk producers societies. There are two chilling centres of milk plants at Dasuya, and Padrana. There are 29302 members who supply milk to these centres. Dairy farming in the district it seems to be well developed. Apart from network of milk co-operatives, there are 35 per cent villages where either veterinary hospital or dispensary is located (Table 9). While, out of the remaining, 57.7 per cent (15) villages avail the veterinary facility located within a distance of 1-2 kms. For another 30.8 percent and 11.5 percent villages, the facility is located within a distance of 3-4 kms. and 5-6 kms. respectively.

Irrigation Infrastructure

The most important source of irrigation in the district is ground water. The number of tubewells owned by the individual farmers in these areas have increased manifold owing to increase in "cropping intensity/double cropping" and state subsidy being provided to electric power driven tubewells during last two decades. Nevertheless, the ensured eight hours continuous electric power supply per day could not keep up for making the subsidized tariffs worth obtaining.

Another recent problem in the district relates to the fast depletion of groundwater resulting into deepening/fall of water table level. Consequently, the massive replacement of

shallow water tubewells into deep tubewells (submersible pump-sets) has influenced the agricultural economy of the district in general and of marginal, small, and medium farmers to a great deal. The replacement of redundant bores is beyond the reach of the marginal and small farmers and even to some extent the medium farmers. In other words, institutional intervention for immediately replacing the ground water irrigation infrastructure has become essential to take an overwhelming majority of the farmers out of crisis situation.

In the district, there were 438 deep tubewells installed by the Punjab State Tube well Corporation almost in all the blocks. At present out of these, 68 tubewells have become redundant over 25 years continuous working. Now, there are 370 deep tubewells which are in working condition. These tubewells have brought nearly 65,000 acres of agricultural land under irrigation. The department is also responsible for operation and maintenance of these tubewells. The 'user committees' usually allocate the working hours for irrigating the fields among farmers in the command area of each tube well.

In addition, the Punjab State Tube well Corporation (PSTC) has prepared a scheme for installation of one deep tube well at Majari village to provide irrigation and drinking water facilities in the Bet area and four tubewells in Selenium toxicity affected areas of Garhshankar block under Rashtriya Sam Vikas Yojana (RSVY).

A proposal under RSVY scheme is to install 4 deep tubewells in village Simbli, Panam, and Najarpur to irrigate 415 hectares, 215 hectares, and 85 hectares respectively. In these villages, 200 hectares of fertile agricultural land contains selenium contents more than the permissible limit. The proposal will benefit a population of 4862 and will generate 6944 man days' employment and create sustained employment for 5 persons.

In the flood plains and Bet area, there exist extensive ground water irrigation facilities. In the hilly upland areas of the district, there is very little irrigated agricultural land either by surface or by ground water. Ground water levels are low and a few deep tubewells are there for community drinking water supply. Over 80 percent of the population is still rural and over 70 per cent population is dependent upon sustenance agriculture and live stock rearing. There is very little non- agriculture activities including industrial and the entire economy of the area depends either on out migration or on live stock rearing. In the recent years, in the foot hill plains under the Kandi Area Development Project the first foremost step has been taken for constructing

multipurpose earthen check dams to start the community-based rainwater harvesting and water shed development project.

The excessive extraction of ground water has lead to rapid fall in water table. With the result, a majority of the shallow water tubewells have stopped working. In order to revive the irrigation infrastructure, deep tubewells are being installed by the PSTC and individual farmers. The old canal system comprised of Shah Nahar, which is taken out from Beas and irrigates land in Dasuya tehsil. The second is Bist Doab canal, which is taken out from Satluj from the Ropar head works. At present, where ever possible to assist the revival process; water availability and use from 'surface source' has also been added through the construction of Kandi Canal.

The construction, operation, maintenance and management of canals have been under taken by the Irrigation Department's Kandi Canal Project wing. The irrigation infrastructure in the command area Kandi Canal stage-I has been developed by the Project wing of the Irrigation Department.

The construction of Kandi canal stage-I was started in 1979-80 and have been completed by July 1998. The Kandi canal originates from Mukerian hydel channel near Talwara and flows through the foot hill plains of Shivalik range. Kandi canal stage-I runs from Talwara to Hoshiarpur covering a distance of 59.50 kms. This canal will carry 242 cusecs water and irrigate nearly 49072 acres (19867 hectares) of agricultural land in 215 villages of Bhunga, Dasuya, Hajipur, Hoshiarpur-I, and Talwara blocks of the district.

The Project wing has proposed the Kandi canal stage–II to extend the tail end of the stage-I from Hoshiarpur to Balachaur, and will cover a total distance of 130 kms. The stage–II will carry 258 cusecs of water to irrigate 72932 acres (29527 hectares) of agricultural land in 218 villages of Bajwara, Mahilpur, Garhshankar, and Balachaur blocks.

Integrated Watershed Development Project (Hills II), Hoshiarpur

Hoshiarpur district is known for choes, the hill torrents, which are identifiable from their sand beds. There are about 108 such choes which emanates from the western watershed of the Katar Dhar. The World Bank Assisted Project is currently on going for the Integrated Development of Hill tracts called "Kandi Area", which is characterized by seasonal run-off water forming 'Choes' and causing soil erosion & deposition of land. In addition, for watershed

protection etc. the development works bear an integrated approach for Rural Infrastructure development and augmentation of drinking water supply in Villages of 'Kandi Areas'.

Integrated Watershed Development Project (Hills II) has been assigning utmost importance to the organization of people, their empowerment, capacity building, and to ensure means of their sustained livelihood keeping in mind the demography of the area and socio-economic conditions of the people of the Shivaliks ecosystem.

In 'Kandi Area' under the Integrated Watershed Development Project (Hills II), a series of multipurpose Earthen Check-Dams on some of the important seasonal choes are being constructed to control floods during monsoon season, and to supply water for irrigation and drinking purposes. A brief description of some of these dams has been presented as follows:

Dholwaha Dam: is located on the Hoshiarpur-Dasuya road on Kooka-Neit and Bahera gorge (Valley) on the Dholwaha seasonal Choe. This Dam irrigates 9363 Acres (3747 Hectares) of agricultural land of 22 villages of the command area.

Jnaurhi Dam: is also located on the Hoshiarpur-Dasuya road on the Jnaurhi seasonal choe. In the command area, six villages are being benefited from this dam.

Damsal Dam: is constructed on the Damsal Gorge (Valley) and is located 20 kms away from the Hoshiarpur town in Kandi area. This dam irrigates 1920 hectares of agricultural land along the left bank of the Kandi canal. In the command area 9 villages are benefited from this dam.

Melli Dam: This dam is constructed on the Melli seasonal choe, and it is located at a distance of 10 kms from Mahilpur town on Hoshiarpur-Chandigarh road. The dam benefits 6 villages in the command area and irrigates 914 hectares of agricultural land.

Saleran Dam: is located about 15 kms from Hoshiarpur city and 3 kms up stream from village Saleran. This has provided irrigation facilities to 365 hectares of land.

The proposed Patiari and Thana dams on Patiari Khud and Khawaja Khud will irrigate 730 hectares and 1160 hectares of agricultural land.

Resource Flow in the District

At the district level various concerned departments are entrusted with the task of carrying out works related to utilities, services and facilities including provision, expansion, replacement

and maintenance of infrastructure. The allocated funds flow from state nodal agency to various departments at district level are under three main heads "Plan Schemes (PSs), Non-Plan Schemes (NPs) and Centrally Sponsored Schemes (CSSs) and these have been described as follows:

According to Table 16, the district public health and sanitation department has installed Hand Pumps and bore wells in the district - urban as well as rural areas under PMAP (Hand pump) scheme for supply of drinking water between the period 2003-2006. There are other schemes such as the Punjab Nirman (Rejuvation) and Minimum Needs Programme (MNP), the funds and duration of the schemes seem to be inadequate and short. Overall for the years 2002, 2003, 2005 and 2008 the expenditure exceeded the outlay. Whereas for the remaining years there was a short fall in expenditure which may be 'due to non-implementation of some of the components of the project'.

Among the centrally sponsored schemes (CSSs), the Accelerated Rural Water Supply Project (ARWSP) the district has constantly been receiving funds since 2002 onwards. Table 17 shows that after 2002, for two years (2003 and 2004) the revised outlay was reduced and for the year 2005 the outlay was enhanced. The Prime Minister Gramodoya Yojana (PMGY) envisages allocation of Additional Central Assistance (ACA) to states and UTs for selected basic minimum services. Under PMGY the Additional Central Assistance contains 30 percent as grant from Govt. of India (GOI) and 70 percent as loan to the State Govt. Table 17 shows that except for one year i.e. 2008, the district has received funds under the PMGY scheme.

Under Swajaldhara Scheme to augment drinking water supply, the district started receiving funds from the year 2004 onwards. But, the scheme was discontinued due to non-release of funds from the 2007 onwards.

The Backward District Initiative scheme under the Rashtriya Sam Vikas Yojana (RSVY), the district had started receiving funds from the year 2005 onwards. The main purpose of the scheme is to address the problem of low agricultural productivity, unemployment etc and to fill the critical gaps in physical and social infrastructure. However no funds have been received for the year 2007 and 2008.

Table 16: Budget Allocation and Expenditure on Public Health and Sanitation

(in lakhs)

Year		Nabard VI	Nabaard VIII	Nabard IX	Nabard XI	Nabard XII	Punjab Nirman	PMAP (handpump)	MNP	Total
2002	Funds allocated	50.66	207.66	0	0	0	0	0	0	258.32
	Expenditure	67.16	195.73	0	0	0	0	0	0	262.89
2003	Funds allocated	9.00	209.60	0	0	0	0	18.70	7.93	245.23
	Expenditure	10.86	224.35	0	0	0	0	10.89	5.94	252.36
2004	Funds allocated	0	185.38	50.0	0	0	0	100.00	0	335.38
	Expenditure	-5.17	185.10	53.73		0	0	84.43	0.79	329.22
2005	Funds allocated	4.14	33.12	29.46	60.50	0	0	2.00	0	129.22
	Expenditure	0	81.55	83.00	182.69	0	0	25.28	-0.86	372.70
2006	Funds allocated	0	26.72	65.70	196.98	0	126.24	0	0	415.64
	Expenditure	0	18.45	32.20	0	0	16.66	0.31	0	177.62
2007	Funds allocated	0	14.93	15.19	309.03	524.70	0	0	0	563.85
	Expenditure	0	-20.26	4.95	340.75	9.98	0.59	0	0.67	377.20
2008	Funds allocated	0	0	0	179.34	325.67	0	0	0	505.01
	Expenditure	0	0	-1.03	101.26	639.23	-0.48	0	0	742.0

Table 17: Budget Allocation and Expenditure on Public Health and Sanitation

(in lakhs)

		Centrally Sponsored Schemes						
Year		**ARWSP**	**Water quality effected Submission project**	**PMGY**	**12th Finance Commission**	**Swajaldhara**	**RSVY**	**Total**
2002	Funds allocated	148.09	0	0	0	0	0	148.09
	Expenditure	147.91	0	0	0	0	0	147.91
2003	Funds allocated	86.00	0	125.00	0	0	0	211.00
	Expenditure	83.36	0	124.42	0	0	0	212.78
2004	Funds allocated	92.88	0	114.86	0	30.11	0	237.85
	Expenditure	93.38	0	107.86	0	4.71	0	205.95
2005	Funds allocated	338.79	0	106.62	0	-9.98	226.10	618.49
	Expenditure	227.67	0	105.60	0	13.59	173.35	520.21
2006	Funds allocated	4.50	0	1.02	0	3.56	254.69	263.77
	Expenditure	51.06	0	131.55	0	1.06	225.40	409.07
2007	Funds allocated	15.00	60.43	151.38	151.37	0	390.00	768.18
	Expenditure	46.41	50.39	21.11	101.80	0	351.63	571.34
2008	Funds allocated	98.63	48.85	0	33.75	0	199.99	381.22
	Expenditure	98.72	58.89	7.29	54.51	5.47	160.10	384.98

Table 18: Budget Allocation and Expenditure of PWD (in lakhs)

Year		**Construction of Bldgs & Roads**	**Maintenance of Bldgs & Roads**	**PMGSY**	**Total**
2002	Funds allocated	-	-	-	-
	Expenditure	-	-	-	-
2003	Funds allocated	3.25	9.14	0	12.39
	Expenditure	3.24	9.12	0	12.36
2004	Funds allocated	70.97	50.86	1.00	122.83
	Expenditure	70.85	50.75	1.00	122.6
2005	Funds allocated	382.47	38.18	247.00	667.65
	Expenditure	381.97	38.10	246.90	666.97
2006	Funds allocated	354.00	331.65	418.06	1103.71
	Expenditure	353.80	330.95	417.80	1102.55
2007	Funds allocated	213.28	355.45	385.00	953.73
	Expenditure	212.96	354.96	384.12	952.04
2008	Funds allocated	380.19	525.70	300.96	1206.85
	Expenditure	379.97	525.62	299.82	1205.41

Table 19: Budget Allocation and Expenditure of PWD (in lakhs)

		Plan			**Non Plan**		**Centrally Sponsored Scheme**	**Total**
Year		**4202 General education NABARD**	**5054 C.O.L. R&B Plan NABARD**	**5054 C.O.L. R&B Plan RD1.2 Improvement and Widening/ Strengthening**	**2059 Non Plan**	**3054 Roads & Bridges Non Plan**	**5054 COL on roads7 bridges CRF**	
2002	Funds allocated	-	-	-	-	-	-	-
	Expenditure	-	-	-	-	-	-	-
2003	Funds allocated	-	-	-	-	-	-	-
	Expenditure	-	-	-	-	-	-	-
2004	Funds allocated	-	-	-	-	28.56	75.00	103.56
	Expenditure	-	-	45.94	-	35.50	56.52	137.96
2005	Funds allocated	-	212.20	-	-	-	-	212.20
	Expenditure	-	138.35	24.76	-	-	-	163.11
2006	Funds allocated	-	369.00	134.00	16.08	17.10	200.00	736.18
	Expenditure	-	395.76	118.66	19.88	18.78	227.65	780.73
2007	Funds allocated	-	100.16	-	65.00	350.00	40.75	555.91
	Expenditure	-	183.69	-	15.08	421.28	89.75	709.8
2008	Funds allocated	92.00	113.78	-	78.32	227.58	114.09	625.77
	Expenditure	36.51	64.41	-	85.86	156.51	36.19	379.48

PWD (Buildings and Roads) is a premier Agency of the State Govt. for construction, upgradation and maintenance of roads, buildings and bridges in the state. The department has finalized the policy on the roads development in Punjab for sustained roads infrastructure development in a planned manner. A glance at Table 18 reveals that under the Plan schemes the funds started flowing from the year 2003 onwards. The district received enhanced outlay between the period 2005 to 2008 and one finds no shortfall in the expenditure in relation to outlay. Table 19 shows that another plan scheme in the district related to NABARD assisted project for construction/widening of roads construction of bridges and building infrastructure (RIDF). Data show that although there was no outlay for years 2004 yet the scheme has shown an expenditure of about 46 lakhs for this purpose. Whereas, for the year 2006, the outlay as well as the expenditure increased to a great extent and also for the year 2007 the expenditure exceeded the outlay However for the year 2008 the expenditure was less than the outlay.

At Community Development Block level, the Rural Development and Panchayats Development (RDPD) department is responsible for the implementation of various schemes like poverty elevation, employment generation, sanitation, Animal Husbandry, Fish culture and Dairy Development etc. In addition, the schemes also focus on the capacity building, women's social and economic empowerment apart from provision of basic amenities and services. Community Development block have been allocated funds for implementation of different schemes- plan , non plan and centrally sponsored schemes.

Summary

District Hoshiarpur in relative terms is least urbanised- according to 2001 Census only 19.72 percent of the District's total population is urban. There are seven small towns accounting for 58.3 percent of the urban areas, and contains 19.3 per cent of the urban population. While, four medium size towns consist of 29.7 percent of the urban population. The only class 1 city is having 51.0 per cent share of the urban population. In the District, nearly 70.5 per cent of the rural settlements are of small size having population ranging from below 200 to 1000.

In case of urban infrastructure, the District has sufficient facilities such as educational, medical, post and telegraph offices, recreational & cultural, drinking water supply,

electrification, banking and other public credit facilities. The sewerage system in urban areas has partially covered the population in Hoshiarpur city, Dasuya, and Mukerian towns, and the remaining urban centres are devoid of under ground sewerage systems.

The small rural areas are connected with the mettle roads and these link roads are being planned according to the terrain. In majority of these small rural settlements except road network, all other infrastructure facilities such as educational, medical, post & telegraph, drinking water, recreational and cultural etc. are consequentially missing.

In addition to settlement size, the existence of infrastructure also depends on the physical terrain such as nature of landscape, topography, availability of water etc. In the district, three broad regions namely the fertile Flood Plains, the Bet Area, the Kandi Area based on the 'soil crop-climate complex' have visible differentials in the type, level and growth of infrastructure. In context, for instance, the Kandi area is located on the sub-mountaneous undulating Plains, and are highly dissected by the number of seasonal choes (Rivulets) flowing from Shivalik ranges. It constitutes nearly 53.0 per cent of the area in the District where 50.0 per cent of the arable land is sown under rain fed conditions. The region has acute shortage of water.

It follows, however, that the marketing infrastructure for agricultural produce has been concentrated in and around five principal Agricultural Market Centres located at Hoshiarpur, Mukerian, Tanda Urmur, Dasuya and Garhshankar towns. Whereas, the rural credit Agencies have fully developed infrastructure and widespread network in terms of coverage through rural co-operative societies.

In rural areas the drinking water charges are levied in all the cluster villages having private connections. The Department, however, could not make the investments necessary to keep the water supply infrastructure in good condition. Consequently, the water supply in most of the clusters have come to stand-still as a majority of the individual households have not paid the water charges because of erratic water supply either due to power failure or lack of timely repair/maintenance. Importantly, to obtain water from public stand post no water charges are being levied.

The irrigation infrastructure has remained under utilized because of various operational problems. The deep tubewells run by the PSTC, the main source of irrigation for fragmented holdings because of high operational costs, poor maintenance, and erratic water supply are

unable to provide the desired services to the farmers. On the other hand, the tubewells owned by the individual farmers have increased manifolds during last three decades because of increasing cropping intensity and State subsidies being provided to the electric driven pump-sets. Nevertheless, the ensured eight hours continuous power supply could not keep up which make the subsidy worth obtaining.

The rapid and wide spread fall in groundwater table levels has made large number of pump-sets redundant in a short span. Consequently, the immediate and massive replacement of shallow water tubewells has unequivocally been beyond the reach of small and marginal farmers. The institutional intervention is essential for replacing the groundwater irrigation infrastructure to take the agricultural operations back on the rails.

Keeping in view the rapid depletion of ground water source, in the District the availability and use of 'surface water source' has been added by constructing Kandi Canal. The Canal stage-I irrigates 49072 hectares of agricultural land in 215 villages of Bhunga, Dasuya, Hajipur, Hoshiarpur-I and Talwara Blocks.

In the recent years, in the foot hill plains of Kandi Areas, eight Earthen Check Dams have been constructed to start the community based rainwater harvesting and watershed development projects. In brief, the development of rural areas assumes special importance from the point of view of integration of economic, social, administrative, marketing and processing activities. Such integration is possible by involving people in various ongoing development projects. In this direction concerted efforts have been made in the District in all the development activities.

The above presented detailed analysis has pinpointed the prerequisite and necessary infrastructural facilities for the sustainable socio-economic growth process. The development process under the liberal economic regimes has attracted private investment which has Government policy implications. Needless to say, for instance the growth of Peri-Urban areas have been the result of lack of industrial infrastructure in urban areas. The leaf-frog growths of Peri-urban areas have drastically influenced the ecology of the region/district. The conspicuous absence of 'perspective physical planning' for potential urban centers has proved to be formidable barrier for the growth of adequate urban infrastructure especially for industrialization.

It has been observed that diversification of the economy especially the agricultural production the much emphasized issue has serious policy implications. Precisely, the

diversification derive which includes dairy farming/ animal husbandry, aquaculture, horticulture, vegetable cultivation, all perishable commodities require extensive rural infrastructure such as cold storage, roads, communication, electrification, marketing, irrigation, extension and research services etc. These infrastructural facilities require large allocation of public funds, which is at present not there in the district and even in the state as a whole.

In brief, from above analysis an inference suggests that in both rural and urban areas the provision, management, operation, maintenance/repair, replacement and improvement of infrastructural facilities are important for out-put growth, diversification of economic activities, and regional integration, in general, and to overcome the crisis situation, in particular.

Above all, in this globalized world human development has been encircled by the information technology. Precisely, in the era of 'cybernetics revolution' the intensity of interaction in a shrinking 'physical space' has not only facilitated the free and uninterrupted flow of information but also has immense scope for socio-economic and cultural integration of regions at national as well as at the global level. While, on the other end of the continuum, it has "created distancing" and restricted face-to-face communication by which the 'social space' of man/woman is shrinking towards margins.

The plan and Centrally Sponsored Schemes at the district level mainly focused on Roads/Bridges and Buildings, upgradation/maintenance, infrastructure, augmentation of drinking water supply schemes, sanitation etc. whereas, the social sector in general has received little attention in the at district level.

Notes

Note 1. The farming in Punjab has made rapid strides during the last 4-5 decades or so. The role of a pair of bullocks is being progressively taken over by the tractor as its use has made farming relatively more profitable. The "Farm Accounts" studies were taken in three zones of Punjab:

Zone 1- Submountaious and Plain region comprising of Gurdaspur, Nawanshaher, Hoshiarpur, Roop Nagar districts.

Zone II- Central Plain region comprising of Amritsar, Jalandhar, Kapurthala, Ludhiana, Patiala, and Fatehgarh Sahib Districts.

Zone III- Western region comprising of Sangrur, Bhathinda, Fridkot, Mansa, and Mukatsar, Moga, and Ferozepur districts.

CHAPTER III
EDUCATION

Education is key to sustainable development. Education and literacy are prerequisites for economic growth, poverty elimination and social development. Education should provide the skills for "learning to know, learning to live together, learning to do and learning to be" (UNESCO)[1]. Thus, education is the primary agent of transformation towards sustainable development and increasing people's capacities to transform their visions for society into reality. Education not only provides scientific and technical skills, it also provides the motivation, justification, and social support for pursuing and applying them. Education for sustainable development has come to be seen as a process of learning how to make decisions that consider the long-term future of the economy, ecology and equity of all communities. Building the capacity for such future-oriented thinking is a key task of education.

Literacy in India is an indispensable means of effective social and economic participation, contributing to human development and poverty reduction (UNESCO). The right to education is a fundamental right. India is one of the countries where literacy levels are still below the threshold level of 75 percent, but rigorous efforts are being made to achieve the desired levels. The knowledge and decision making skills gained during the course of attaining education improve understanding. Since independence, a number of programmes have been taken up to formulate education policies to eradicate illiteracy. The Directive Principles of State Policy, Article 45 laid emphasis on free and compulsory education for children upto 14 years of age.

To enhance universal education in India, National Policy on Education (1986) was formulated. The focus of the policy was to provide education to all with special reference to marginalized groups. After the launch of National Literacy Mission (NLM) in 1988 the efforts were made to consolidate earlier centre based programmes to make its implementation more effective through campaigned based approach.

[1] http;//www.unesco.org/en/literacy

In addition to opening new educational institutes, changes in curriculum and textbooks were made to meet the demands and needs of modern day developments. New schemes were launched and incentives were introduced to attract more children to schools particularly girls and those belonging to backward castes. To achieve universal primary education is one of the objectives of Millennium Development Goals (MDGs).

Education Scenario in Punjab

Punjab has a long history and rich cultural heritage. The state has been a pioneer in agricultural development. In addition, development of small manufacturing units has added to the economic growth of the state. Though, one of the economically progressive states, Punjab has been rather slow in achieving universal literacy. According to Census 2001, Punjab occupies 10^{th} position among the states and 16^{th} among states and Union Territories in terms of literacy rates (See Appendix). Nearly seven out of ten persons in the state are literate. Three-fourths of the males in Punjab are literate. Ranking-wise, male literacy rate of the state is low and stands at 25^{th} position. Male- female differentials are high (12 percent points) as only 63.6 percent of the females are literate. Female literacy in Punjab occupies 14^{th} position at national level. In urban areas of Punjab 79.1 percent of the population is literate while in rural areas the proportion is only 65.2 percent.

Over the five decades after independence the state has recorded gradual increase in the proportion of literate population both males and females. However, the increase has been more sharp among females.

Inter District Education Scenario

Hoshiarpur is a small and a quiet district in the Doaba region of Punjab. The people of the district are adventurous, and were the first to take a lead as emigrants to foreign countries in the nineteenth century. Consequently, with a sense of patriotism they brought with them new ideas about education and sufficient funds to start a number of educational institutions.

Formal primary education in Hoshiarpur district started as early as the beginning of nineteenth century, i.e., in year 1805 (DEO, Hoshiarpur, 2007). Another available source of information indicates that a Government High School in Hoshiarpur was established in June

1848. The school was placed under the Education Department in 1856. Later on, in August 1859, teaching of English subject was also started. The Christian missionaries had discovered long before 1901 that Hoshiarpur was a wholesome place to serve as a foothold for the spread of their mission. They set up a number of educational institutions in the district and became pioneers for the propagation of Western type of education[2].

Though Hoshiarpur is an economically backward district, yet in the field of education it is one of the most advanced districts of the State. In 1901, the proportion of literate persons in the district was 4 per cent (7.3 males and 0.2 females). The number of pupils receiving instruction was 4,813 in 1880-81, 9,794 in 1890-91, 9,639 in 1900-1 and 10,772 in 1903-4. The district stood twelfth among the twenty-eight districts of the then Punjab Province in respect of literacy[3].

The literacy rate in the district has been increasing since 1947 which may be due to the opening of a number of primary, middle, high, senior secondary schools and colleges. According to the 1971 census, the literacy rate of the district was above the state level. It was 40.88 per cent of total population of the district (50.21 for males and 30.51 for females) as against 33.67 per cent (40.38 for males and 25.90 for females) of the Punjab state. The figures for literacy rate were 28.8 per cent for Hoshiarpur and 24.2 per cent for state in 1961.

Table 1: Literacy in Punjab and Hoshiarpur

	Hoshiarpur			Punjab		
Year	**Persons**	**Male**	**Female**	**Persons**	**Male**	**Female**
1971*	40.9	50.2	30.5	33.7	40.4	25.9
1981	50.1	58.2	41.2	43.4	51.2	34.4
1991	72.1	80.2	63.3	58.5	65.7	50.4
2001	81.0	86.5	75.3	69.7	75.2	63.4

Sources: Registrar General of India, Census 2001, 1991.
Statistical Abstract of Punjab, 1974, 1985, 1995 Economic and Statistical Organization, Punjab

Note: - Exclude children in the age group 0-6 who were treated as illiterates in the 2001 and 1991 Census.

* Total literates

The district of Hoshiarpur has the distinction of having the highest literacy rate for consecutive decades. Census 2001 recorded a literacy rate of 81 percent for the population. In

[2] http://punjabrevenue.nic.in/gaz_hsp17.htm
[3] http://punjabrevenue.nic.in/gaz_hsp17.htm

1991, seven out of ten residents of Hoshiarpur district were literate. An increase of 9 percent points has been recorded over the decade. The state has recorded higher increase in the literacy level (11.2 percent points).

According to latest District Level Household Survey (DLHS-3, 2007-08) which covered 1073 households, 86.3 percent of the population age 7+ was literate in the district and 85.5 percent of rural residents were literate. As many as 90.5 percent males were literate in the population and 89.9 percent in rural areas. The percentage of literate females was 82.2 in the district and 81.1 in rural areas.

Table 2: Rank of Districts by Literacy Rates in of Punjab - Census 2001

State/District	Rural	Urban	Total	Male	Female
Gurdaspur	7	3	7	5	8
Amritsar	11	10	10	10	10
Fatehgarh Sahib	6	7	6	7	6
Firozpur	14	11	14	11	15
Ludhiana	5	9	5	6	3
Jalandhar	4	6	3	4	2
Kapurthala	8	8	8	8	7
Hoshiarpur	1	1	1	1	1
Mansa	17	16	16	17	17
Moga	10	13	11	13	11
Muktsar	16	15	17	16	16
Nawanshar	2	4	4	3	5
Rupnagar	3	2	2	2	4
Patiala	9	5	9	9	9
Sangrur	13	17	15	15	13
Bathinda	15	12	13	14	14
Faridkot	12	14	12	12	12
Punjab	65.16	79.13	69.95	75.63	63.55

Source: Census of India- Punjab, 2001, Primary Census Abstract Director Census Operation, Punjab.

Note: - Exclude children in the age group 0-6 who were treated as illiterates in the 2001.

Other districts of Punjab lag behind in literacy rate (See Appendix). Among other districts, literacy rates ranged between 78.5 percent (Rupnagar) to 50.67 percent (Muktsar). A gap of 30 percent points in literacy rates between Hoshiarpur and Muktsar has been recorded.

Gender Scenario

An important indicator of human development is female literacy. The district has highest female literacy rate in the state, 75.6 percent (Census of India, 2001) and ranks 44th among all the districts (N-593) of the country[4].

The gap between the male female literacy rates in Hoshiarpur has narrowed down from 16.9 percent point to 11.2 percent points over the decade 1991-2001- difference of a little less than 6 percent points. In Punjab, gender gap in literacy has narrowed down only by 3.5 percent points, i.e., from 15.3 percent to 11.8 percent. The increase in female literacy rate is more sharp in Hoshiarpur. Between the two censuses, female literacy rate has increased by 12 percent points whereas male literacy has increased only by 6.3 percent points. Higher increase in literacy rates among females is a positive indicator of development.

Rural Hoshiapur has also recorded highest literacy level – 79.8 percent, whereas for the state as a whole the figures are 64.7 percent (Census of India, 2001). Differentials in the urban literacy rates of the state and district Hoshiarpur are to the tune of 6.7 percent points – as 85.8 percent of the urbanites of the district were literate compared to 79.1 percent of the state. Significantly, among rural females as many as 73.7 percent were literate in Hoshiarpur and among urban females this proportion was 81.8 percent. In terms of literacy rate, rural females of Hoshiarpur are ahead by 16 percent points and urban women by 7 percent points from women of Punjab in rural and urban areas.

Table 3: Decadal Changes in Rural and Urban Literacy Rates: Hoshiarpur and Punjab 1991-2001

State/Dist.	Rural			Urban			Total			Decadal Increase		Gender Gap
2001	**P**	**M**	**F**	**P**	**M**	**F**	**P**	**M**	**F**	**M**	**F**	
Hoshiarpur	79.8	85.7	73.7	85.8	89.4	81.8	81.0	86.5	75.3	7.2	13.8	11.2
Punjab	64.7	71.0	57.7	79.1	83.0	74.5	69.7	75.2	63.4	9.5	13.0	11.8
1991												
Hoshiarpur	70.6	78.3	59.4	79.2	84.6	73.1	72.1	80.2	63.3	-	-	16.9
Punjab	52.8	60.7	43.9	72.1	77.3	66.1	58.5	65.7	50.4	-	-	15.3

Source: Census of India- Punjab, 2001 and 1991, Primary Census Abstract Director Census Operation, Punjab.

Note: Percentages have been calculated on the population aged 7 years and above.

[4] Ram, F. and Chander Shekhar, 2006, Ranking and Mapping of Districts Based on Socio-Economic and Demographic Indicators, IIPS Mumbai.

Intra-district Scenario

Within the district literacy rates range between 85.4 percent (Hoshiarpur II) to 78.2 percent in CD blocks. Garhshankar block has the lowest literacy rate (78.2 percent). In female and male literacy rates also Garshankar is at the lowest end of the ladder. Talwara block has highest male as well as female literacy level.

Table 4: Literacy Rates in Blocks of Hoshiarpur

Block	Male	Rank	Female	Rank	Total	Rank
Bhunga	87.3	4	75.6	8	81.7	5
Dasuya	86.4	8	75.8	6	81.1	8
Garhshankar	85.0	10	70.9	10	78.2	10
Hajipur	85.9	9	75.2	9	81.3	7
Hoshiarpur 1	89.3	2	78.2	4	83.5	3
Hoshiarpur 2	87.3	4	79.6	2	85.4	1
Mahilpur	86.5	7	78.9	3	80.7	9
Mukerian	87.3	4	75.8	6	81.5	6
Talwara	91.3	1	82.6	1	83.6	2
Tanda	88.0	3	78.0	5	82.5	4
Total	**86.5**		**75.3**		**81.0**	

Source: Sarva Shiksha Abhiyan Authority Punjab, District Elementary Education Plan, 2006-07

Overall, on the literacy front Hoshiarpur is a developed district.

Enrollment Rate

For the analyses of literacy levels, enrolment rate is a crucial indicator. Various social and economic factors play an important role in deciding whether child should be sent to school or not and if yes to which school.

Gross and Net enrollment rates among child population in age groups 6-11 years and 11-14 years have been analysed from the information provided by DISE Data (2008-09). The GER in the district (R) in the age group 6-11 years is 79.81 percent and NER is 65.05 percent.

Table 5: General Enrolment Ratio (GER), Net Enrolment Ratio (NER), Cohort Drop Out (CDO) and Repetition Ratio (RR) – Rural Blocks

(Percentage)

Block	Children of 6-11 Age group				Children of 11 -14 Age group			
	GER	NER	CDO	RR	GER	NER	CDO	RR
Bhunga	110.39	89.97	6.45	4.82	106.53	72.74	8.59	17.64
Dasuya	62.66	51.80	9.19	4.63	59.30	43.11	10.78	18.24
Garhshankar	77.27	62.12	6.27	6.17	70.34	50.28	10.51	19.82
Hajipur	84.23	71.44	5.54	1.63	45.65	31.80	6.13	19.90
Hoshiarpur-I	80.41	65.23	2.21	7.77	95.06	66.22	7.23	18.38
Hoshiarpur-II	74.51	60.87	4.59	5.52	73.92	50.17	7.37	18.50
Mahilpur	76.52	60.85	4.39	6.31	63.96	42.66	6.71	21.65
Mukerian	69.51	56.37	6.82	4.99	61.83	44.42	7.33	18.80
Tanda	109.46	89.13	1.31	2.78	104.15	73.14	9.81	14.16
Talwara	89.82	74.40	7.34	7.20	85.98	62.72	10.83	20.95
Total	79.81	65.05	5.26	5.59	73.91	51.83	8.47	18.91

Source: DISE Data (2008-09)

Within the blocks, Bhunga (R) and Talwara (R) recorded highest GER – nearly 110 percent while NER was 89 percent. Dasuya block (R) recorded lowest GER (63 percent) and NER (52 percent). A variation of 48 percent points and 38 percent points was recorded in highest and lowest GER and NER respectively among the blocks. Analysis indicates that rigorous efforts are required to motivate the young children and their parents to bring the school-age children to the alters of education.

Enrollment Rate: Scheduled Caste Children

Within the district there are variations in the children belonging to scheduled castes attending school. In Hoshiarpur I and Hoshiarpur II blocks the number of children from this social group is much higher as compared to some other block like Tanda, Talwara, Hajipur and Mukerian, but the enrollment rate is lowest in Mukerian, Dasuya and Hoshiarpur-I. Nearly 95 percent of children from scheduled castes social group were attending schools in Talwara followed by Tanda (86 percent), Hajipur (82 percent) but only 62 percent of children in Hoshiarpur-I were attending schools. Overall enrollment rate of 70 percent in the district is low when compared to nearly 80 percent for the general population. The drop out rate for this social group also varies from a low of 1 percent to a high of 16 percent. The overall situation is better is case of Tanda block where drop out is lowest among all the block and enrollment rate of 86 percent is higher as compared to many other areas of the district. (Table 6).

Table 6: Block wise Number of Scheduled Caste Children in the age group 6-11 years and their General Enrolment Ratio (GER)

Block	SC children Population	Children Enrolled	Enrollment in Percent	Drop Out in Percent
Bhunga	6593	5356	81.24	6.30
Dasuya	6736	4167	61.86	4.98
Garhshankar	9838	7031	71.47	9.23
Hajipur	2404	1979	82.32	7.12
Hoshiarpur-I	16626	10306	61.99	8.36
Hoshiarpur-II	10928	6979	63.86	2.54
Mahilpur	8123	5624	69.24	5.32
Mukerian	5496	3355	61.04	10.35
Tanda	1576	1489	94.48	15.60
Talwara	5029	4331	86.12	1.14
Total	73349	50617	69.01	6.33

Source: DEO, Hoshiarpur, 2008-09.

Evidence shows that enrollment rate is declining in government elementary schools as parents are sending their children to private schools. One of the possible reason for the decline in enrollment rate is the poor quality of education being imparted in government schools.

With the introduction of multi grade system in government primary schools there is suppose to be only one teacher if the school strength for all the primary classes is less than 40 where one teacher manages students of Class I to Class V together. On the other hand in private schools there is one teacher for every class irrespective of the strength of the school, salary and qualification of the teacher.

The members of the district planning Committee suggested that moral and religious education should be imparted to the children in schools so that the knowledge of the children can be enhanced and for this at least one period everyday should be devoted for imparting moral and religious education.

Education Infrastructure in Hoshiarpur

It is well documented that schooling is one of the most powerful instruments for reducing poverty, unemployment and inequalities as well as improving health and nutrition, and promoting sustained human development. A good quality basic education equips pupils with literacy skills for life and further learning.

Development in education can be measured through the process of availability of educational facilities, their infrastructure, staffing and amenities within the school, accessibility within easy reach and achievements in terms of literacy levels.

Primary Schools

History of the establishment of primary schools in the district can be traced back to as early as the beginning of nineteenth century and by the beginning of twentieth century as many as 33 primary schools came into existence. At the time of independence there were 199 primary schools in Hoshiarpur district (DEO, Hoshiarpur, 2007).

Efforts of consecutive governments in spreading elementary education are visible. In post independence period, a substantial increase in the number of schools has been recorded. A threefold increase in the number of government primary schools has been registered in a little more than half a century, i.e., from year 1951 to 2008. There are 1284 government primary schools in 2008 (DEO, Hoshiarpur, 2008) compared to 399 in 1951. Private sector has also shown keen interest in the expansion of elementary education. The motive may be different - income generation, but the net result is spread of knowledge and education thereby extending a helping hand in removal of illiteracy. The number of private schools has also multiplied manifolds during same period, from approximately less than thirty (1951) to 615 (2007).

Primary School in Kandi Area

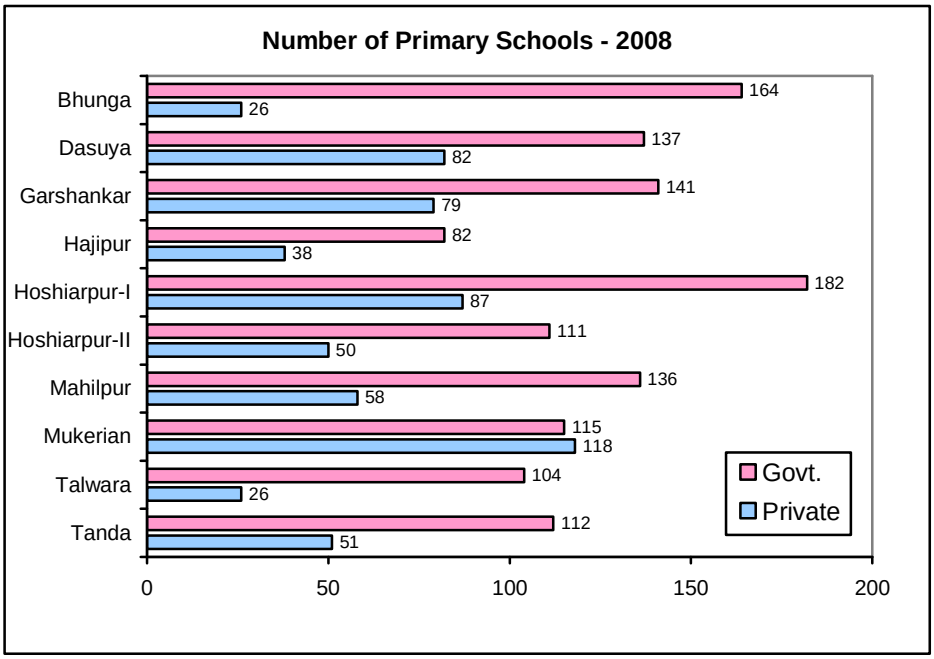


Table 7: Government Primary Schools in District Hoshiarpur

Block	**1971**	**1991**	**2001**	**2008**
Bhunga	101	133	162	164
Dasuya	99	154	154	137
Garhshankar	38	141	141	141
Hajipur	24	43	59	82
Hoshiarpur-I	106	179	180	182
Hoshiarpur-II	107	111	111	111
Mahilpur	76	133	135	136
Mukerian	38	84	157	115
Talwara	35	68	68	104
Tanda	49	71	109	112
Total	**673**	**1117**	**1276**	**1284**

Source: DEO, Hoshiarpur, 2008

Within the district, some blocks namely Hoshiarpur-I, Garhshankar and Dasuya have significantly higher number of both government and private primary schools. Bhunga also has a good network of government primary schools, second best in the district, but has least number of private schools.

Growth in the number of primary schools during last five decades shows that Hajipur has recorded nearly sixteen times increase in the number of government primary schools whereas Mukerian recorded around fourteen times increase. Dasuya and Hoshiarpur II recorded lowest increase in the number of primary schools (less than two times). The district as a whole has experienced about three times increase in government schools.

Interestingly, there has been a mushroom growth of private primary schools – twenty-one times. Tanda and Mahilpur blocks have recorded a very high growth in spread of private schools (51 and 29 times respectively). Significantly, private primary schools in Hajipur started late, but recorded a very high growth during last two decades (38 times).

Table 8: Private Primary Schools in District Hoshiarpur

Block	**1971**	**1991**	**2001**	**2008**
Bhunga	3	4	10	26
Dasuya	4	17	60	82
Garhshankar	12	63	87	79
Hajipur	1	8	29	38
Hoshiarpur-I	35	39	63	87
Hoshiarpur-II	11	47	48	50
Mahilpur	3	30	54	58
Mukerian	10	43	111	118
Talwara**	-	10	18	26
Tanda	4	11	31	51
Total	**83**	**272**	**511**	**615**

Source: DEO, Hoshiarpur, 2008.

On an average there is one government primary school for a population of 1151. The number of government primary schools per lakh population is about 86 in district Hoshiarpur.

Table 9: Coverage of Primary Schools in District Hoshiarpur

Schools	**Population per School**	**Population per Govt. School**	**Schools per Lakh Population**
Primary	778	1151	86.8

Analysis on availability of schools per lakh population indicates that there were between 34 to 94 primary schools in the districts of Punjab state. Among the districts (See

Appendix) Hoshiapur ranks 2nd with 86 primary schools per lakh population after Rupnagar with 94 primary schools (Statistical Abstract of Punjab, 2007).

Infrastructure of Primary Schools

Buildings

Buildings and other equipments are important indicators of the quality of education and also the environment provided in the schools. Dilapidated and poorly constructed buildings act as deterrent in attracting children particularly the young ones to schools, while school buildings which are in good condition and well maintained are source of attraction. Availability of furniture and other teaching materials are additional assets. Information on infrastructure was collected from two sources – DEO and household survey conducted in 40 villages of Hoshiarpur district.

Infrastructural facility in terms of own government building was available for almost all the schools (99.4 percent) except a few in Talwara; Hoshiarpur–I and Hoshiarpur –II CD blocks (DEO, Hoshiarpur, 2007). On an average a primary school had 3.2 rooms instead of minimum one room for each class. It indicates shortage of rooms in all the schools. Considering the peak weather conditions in both summer and winter in the region, adequate rooms are required.

Toilets were available in all the schools. It was informed that under Sarv Shiksha Abhiyan separate toilets have been provided for boys and girls. Play ground was not available in 17 percent of the primary schools. Blackboards were available in all the classrooms.

Teacher-Pupil Ratio

The teacher-pupil ratio is another indicator of the quality of education. The Teacher-pupil ratio (TPR) is the number of students per teacher. In crowded classrooms with a high number of pupils per teacher, the quality of education suffers. For pupils it is difficult to follow the course and teachers can dedicate less time to the needs of each individual student. This reflects the personalized attention that a teacher can devote to her/his pupils. It is also

considered to be a good proxy for the quality of education. However, the ratio does not reflect the quality of teachers and how well they teach.[5]

One of the available sources on teacher-pupil ratio in different states of the country indicates that in Punjab state TPR is 38 in primary schools, 18 in middle schools and 25 in secondary schools (cited from http// gov.ua.nic.in/Nscheduleddata/ns304.pdf).

In Hoshiarpur district the teacher-pupil ratio (TPR) in government primary schools was 28 (DEO, 2007). Dasuya had the highest teacher-pupil ratio, i.e., 46 while Garhshankar had the lowest. (Table 8). On an average, primary schools had 2.4 teachers. Only Hoshiarpur-II had more than three teachers per school. It is obvious that government primary schools do not have required number of teachers, i.e., a minimum of one teacher for each class. Over the years (2001-08) the number of teachers has declined, probably due to retirement of old teachers the positions have fallen vacant and new recruitments have not been made so far.

Table 10: Teacher Pupil Ratio (TSR) and Teachers per Primary School (TPS) in Govt. Schools

Block	TPR	TPS
Bhunga	30	2
Dasuya	46	2
Garhshankar	18	2
Hajipur	33	2
Hoshiarpur-I	28	3
Hoshiarpur-II	23	3
Mahilpur	26	2
Mukerian	24	2
Talwara	22	2
Tanda	31	2
Total	28	2

Source: DEO, Hoshiarpur, 2007.

Teacher pupil ratio in private schools comes to 20. On an average, each school had 4.7 teachers (teacher-school ratio). It is obvious that in private primary schools more accommodation and teachers were available as compared to public schools.

Sanctioned and Vacant Positions of Teachers

Schools either without teachers or with less than required number of teachers affect the quality of education. Information on sanctioned and vacant position of teachers in

[5] International Education Statistics, 2008.

primary schools reflects that there were 4284 sanctioned positions including 3307 positions of JBT/ETT, 829 of Head teachers (HT), 148 of Centre head teachers (CHT) existed in schools of the district (SSA, Hoshiarpur, 2006-07) and out of these 2520 (59 percent) were occupied, indicating thereby that 41 percent of the positions were vacant. A little less than 3 percent of the teachers were contractual.

Table 11: Sanctioned and Filled Positions of Teachers in Primary Schools of Hoshiarpur as on 30-09-2005

Block	JBT/ETT		HT		CHT		Contr.	Total	
	Sanct.	Filled	Sanct.	Filled	Sanct.	Filled	Filled	Sanct.	Filled
Bhunga	392	203	99	76	18	9	13	509	301
Dasuya	365	199	95	64	16	9	12	476	284
Garhshankar	382	142	96	74	17	12	25	495	253
Hajipur	144	66	31	17	7	5	12	182	100
Hoshiarpur-I	454	349	122	89	20	13	-	596	451
Hoshiarpur-II	344	212	78	62	14	10	14	436	298
Mahilpur	323	168	89	73	15	12	17	427	270
Mukerian	324	149	101	59	19	7	21	444	236
Tanda	280	200	76	46	13	8	-	369	254
Talwara	165	65	42	37	9	6	6	216	114
Sub Total	3173	1713	829	597	148	91	120	4150	2520
New Teachers	134	-	-	-	-	-	-	134	-
Total	3307	1713	829	597	148	91	120	4284	2520
Percentage		51.8		72.0		61.5	2.8		58.8

Source: SSA, Annual Work Plan 2006-07, Hoshiarpur.
Note: HT- Head Teacher, CHT- Centre Head Teacher, Contr. - Contractual.

At primary level the shortage of teachers was alarmingly high and efforts were needed to fill all the positions. In fact, knowledge and education obtained at young age helps in strengthening the foundation of better life.

Trained Teachers

Quality of education is determined by the quality of teachers providing education and learning skills. Trained teachers are asset to the education system and society as a whole as they contribute in strengthening the foundation of new entrants in schools. All the teachers at primary level were trained teachers

Middle Schools

The growth of upper primary schools commonly known as Middle Schools reflects that there were 9 middle schools in year 1911. Their number increased from 11 in year 1951 to 179 in year 2007 indicating manifold increase, i.e., 16 times since independence. Growth of middle schools in some of the CD blocks namely Dasyua, Mukerian and Hajipur started

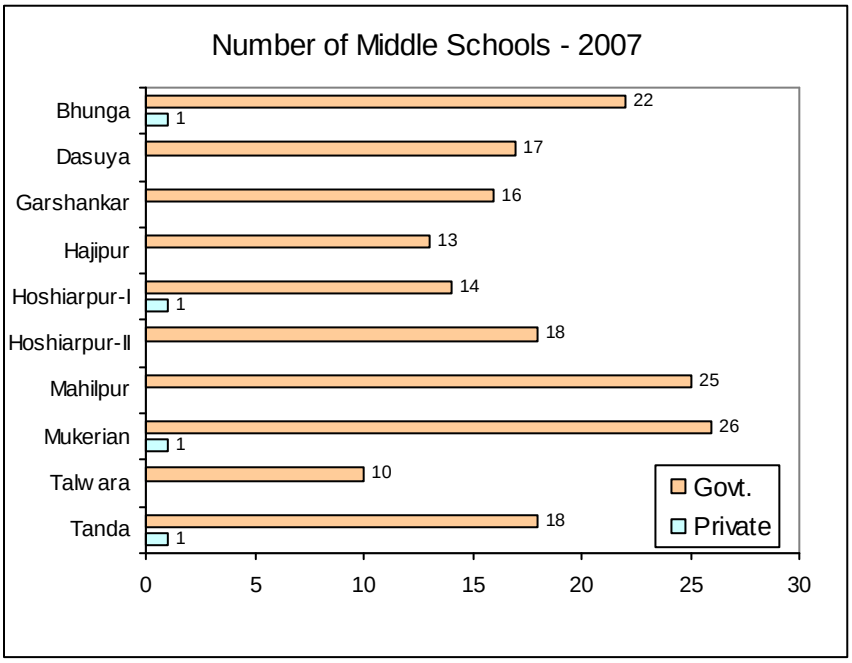
late. Within the blocks Bhunga has recorded highest growth in government middle schools. (Refer to Table 14). However, private sector has not contributed much towards the growth of middle schools, only four private middle schools were there.

Table 12: Number of Government Middle schools

Block	Govt. Schools				
	1951	1971	1991	2001	2007
Bhunga	1	3	1	16	22
Dasuya	-	-	3	16	17
Garhshankar	-	2	8	19	16
Hajipur	-	-	-	13	13
Hoshiarpur-I	7	7	19	14	14
Hoshiarpur-II	-	3	6	13	18
Mahilpur	3	7	12	18	25
Mukerian	-	-	3	17	26
Talwara	-	4	8	10	10
Tanda	-	3	6	18	18
Total	11	29	66	154	179

Source: DEO, Hoshiarpur, 2007.

On an average there is one middle school for a population of 8272 persons. For a population of one lakh there are 12 middle schools in district Hoshiarpur.



Secondary Schools

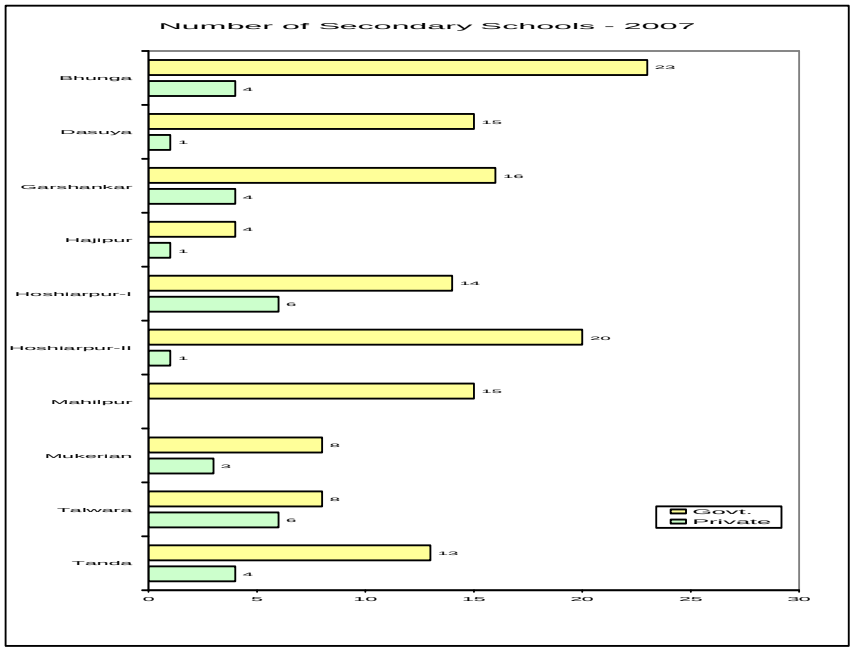
Demand for higher education in terms of secondary and higher secondary schools has also increased. There were only four secondary schools in 1951 and within two decades the

number rose to 32. The number of government secondary schools has increased to 136 (2007) reflecting a thirty-four times increase over more than five decades.

Table 13: Number of Government Secondary Schools

Block	Govt. Schools				
	1951	1971	1991	2001	2007
Bhunga	-	3	9	19	23
Dasuya	1	1	7	13	15
Garhshankar	1	6	13	16	16
Hajipur	-	-	4	4	4
Hoshiarpur-I		8	8	14	14
Hoshiarpur-II	2	4	10	20	20
Mahilpur	-	2	10	15	15
Mukerian	-	2	2	8	8
Talwara	-	-	5	8	8
Tanda	-	6	12	12	13
Total	4	32	80	129	136

Source: DEO, Hoshiarpur, 2007



Garhshankar and Dasuya blocks have recorded sharp increase in the number of government secondary schools. However, Hoshiarpur II and Mahilpur have also witnessed relatively higher increase in the number of secondary schools whereas in Hajipur no increase has been recorded and the number of schools has remained static (N-4) since 1991.

There has been more than eight times increase in the number of secondary schools during two decades (1951-1971) and 34 times increase till date (See Table 10). There are 12 secondary schools per lakh population.

Senior Secondary Schools

The expansion of senior secondary schools in government as well as private sector is more recent. In 1971 there were only 9 senior secondary schools and by the year 2007 their number increased to ninety-nine. After the year 1971 an eleven fold increase has been noted in the number of government schools. Growth of private senior secondary schools has remained rather sluggish.

Block level analysis reveals that Dasuya has recorded the highest growth. On an average there are 7 senior Secondary schools per lakh population.

Table 14: Number of Government Senior Secondary Schools

Block	Govt. Schools				
	1951	1971	1991	2001	2007
Bhunga	-	1	2	8	8
Dasuya	1	1	4	10	11
Garhshankar	-	-	3	12	12
Hajipur	-	1	2	6	6
Hoshiarpur-I	-	-	3	8	7
Hoshiarpur-II	-	-	2	9	10
Mahilpur	-	-	5	10	11
Mukerian	-	-	3	19	14
Talwara	-	2	4	5	4
Tanda	-	4	9	11	16
Total	1	9	37	88	99

Source: DEO. Hoshiarpur, 2007, 2008.

Growth of government schools over a period of more than five decades indicates that government Middle schools have multiplied 16 times and Bhunga block has recorded the highest growth. An increase of 34 times was recorded in Secondary schools and Senior Secondary schools have increased from one to hundred. Garhshankar block has recorded highest increase in Secondary schools while Dasuya block in Senior Secondary schools.

The total number of middle and above schools in the district Hoshiarpur are presented in Table 14. In short, there is one middle school for a population of 8272 persons. There is one secondary and one Senior Secondary school for a population of 10888 and 14929

respectively. In other words, there are 12 Middle, 9 Secondary and 8 Senior Secondary schools per lakh population in District Hoshiarpur (DEO, Hoshiarpur,2007).

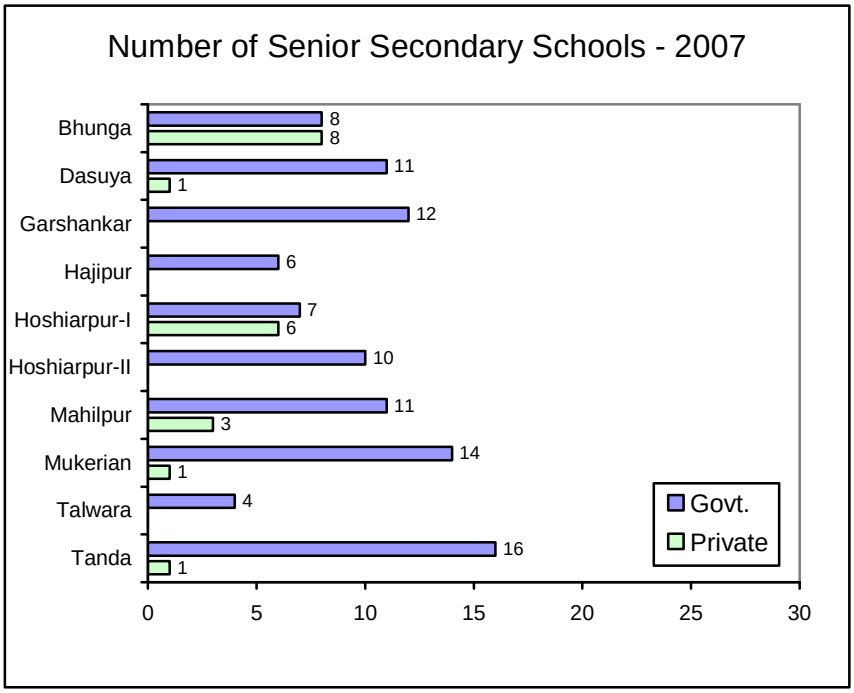
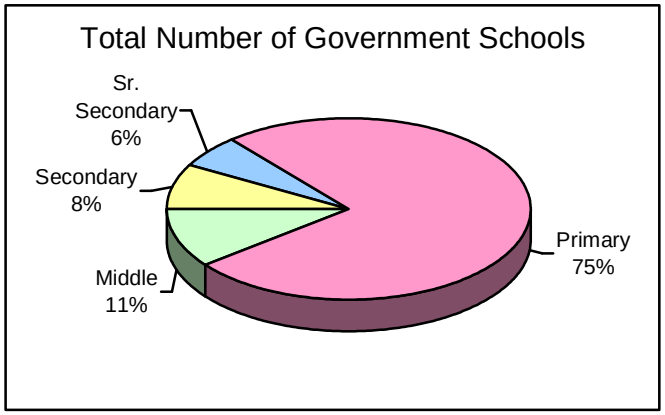
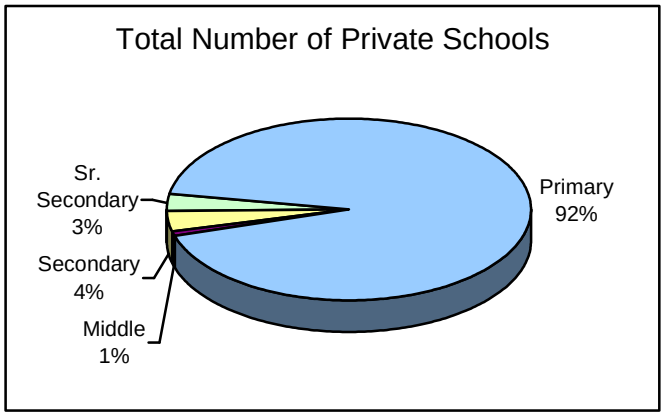


Table 15: Total Number of Schools in District Hoshiarpur

Schools	Govt.	Private	Total	Population per School	Population per Govt. School	Schools per Lakh Popu.
Middle	179	4	183	8092	8272	12
Secondary	136	25	161	9197	10888	9
Sr. Secondary	99	20	119	12420	14929	8

Source: DEO, Hoshiarpur, 2007, 2008.





Analysis on availability of schools per lakh population indicates that the number of Middle Schools ranged between 7 to 16 per lakh population in the state and Hoshiarpur ranks 3rd, while, Secondary schools per lakh population were between 7–14 and Hoshiarpur with 12 schools ranks 2nd. The number of senior secondary schools serving a population of one lakh was rather low – between 6 – 9 and Hoshiarpur ranks 4th. In short, Hoshiarpur has a wide spread network of schools.

Infrastructure

Middle Schools

Infrastructural facilities indicate that all the middle schools are functioning in their own building. Average number of class rooms is 3.3 which indicate that each class had a separate room. Except 2.5 percent of the schools all others had a play ground.

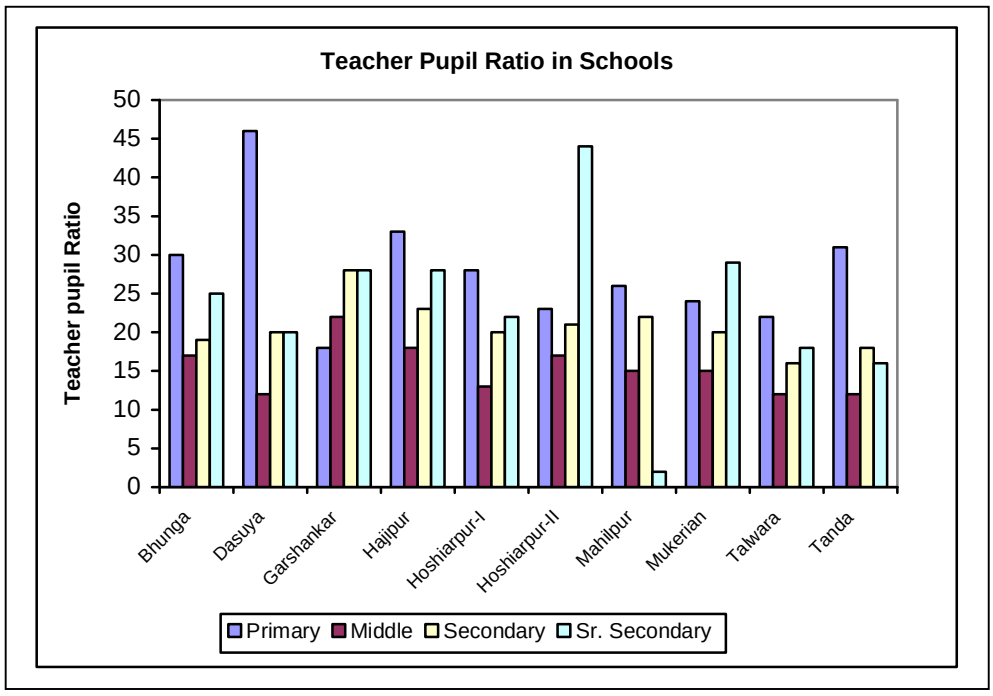
The findings of the primary survey reveal that 40 percent of middle schools are functioning with three and four class rooms.

Secondary and Senior Secondary Schools

All the government secondary and senior secondary schools had their own building. On an average there were 7.9 rooms in secondary schools and 14.7 in senior secondary schools. Space-wise senior secondary schools of Hoshiarpur II had maximum number of rooms (23.7) while Dasuya had the minimum (8.7). Among secondary schools Hajipur had maximum rooms (15) whereas Tanda and Mukerian had least – 2.4 and 3.1 respectively.

Teacher-Pupil Ratio

The Teacher- pupil ratio (TPR) is the number of students per teacher. One of the available sources on teacher -pupil ratio in different states of the country indicates that in Punjab state TPR is 18 in middle schools and 25 in secondary schools (cited from http// gov.ua.nic.in/Nscheduleddata/ns304.pdf).



Teachers School Ratio (TSR) reveals that the average number of teachers in government middle schools was 5. In middle schools TPR was better - 15 students per teacher. TPR ranged between 12 to 22. Among CD blocks, Talwara and Hoshiarpur schools have the highest number of teachers (TSR) while Mahilpur block has the least. In government secondary schools TPR was 20 students (DEO, 2007). There were on an average 12 teachers in a school although the number ranged between 5 to 23. Mukerian CD block has lowest number of teachers in secondary schools while Hajipur has the highest.

Private schools had more students per teacher (35), although the number of teachers in private schools was almost same as that of government school. A senior secondary school

on an average had 23 teachers. Talwara CD block has highest and Mukerian has lowest number of teachers in senior secondary schools. TPR in senior secondary schools was 23.

Table 16: Teacher Pupil Ratio and Average Number of Teachers in Schools

Block	Middle School		Sec. School		Sr. Secondary	
	TPR	TSR	TPR	TSR	TPR	TSR
Bhunga	17	5	19	9	25	23
Dasuya	12	6	20	12	20	17
Garhshankar	22	6	28	9	28	15
Hajipur	18	6	23	23	28	25
Hoshiarpur-I	13	8	20	20	22	37
Hoshiarpur-II	17	5	21	13	44	16
Mahilpur	15	3	22	9	2	20
Mukerian	15	4	20	5	29	15
Talwara	12	9	16	19	18	38
Tanda	12	5	18	12	16	34
Total	**15**	**5**	**20**	**12**	**23**	**23**

Source: DEO, Hoshiarpur, 2007.
Note: TPR- Teacher Pupil Ratio, TSR-Teacher School Ratio

Lack of basic infrastructural facilities in terms of separate room and a teacher for each class reflects that quality education cannot be imparted in government primary schools as students of one class get neglected when the teacher is attending to the students of other class.

Sanctioned and Vacant Positions of Teachers

Schools with less than required number of teachers affect the quality of education. In upper primary schools, of the 4527 sanctioned positions of teachers in government schools 3912 (86 percent) were filled and 615 (14 percent) were vacant (SSA, Hoshiarpur, 2006-07).

An Assessment of School Infrastructure in Hoshiarpur District based on the Findings of Primary Survey

To obtain additional information and supplement the existing one on various aspects, household survey was conducted in 40 villages of Hoshiarpur. Household survey collected information at various levels- literacy level of family members, children of school going age attending school, opinion of parents regarding schooling facilities etc. Additionally, 81 schools located in the villages surveyed were visited to assess the infrastructure facilities and school strength. Among these schools 57 were government schools, 3 governments aided and

21 private schools. In all, 45 primary schools, 14 middle schools, 10 higher secondary and 12 senior secondary schools were covered.

School Infrastructure

Information on infrastructure of schools visited during field survey was provided either by school in-charge or teacher(s). The number of schools covered in each block and the type of school is presented in table below.

Primary survey findings related to infrastructural facilities of schools in terms of classrooms in primary schools indicate that majority of primary schools, i.e., 74.4 percent government and 83.3 percent private primary schools had two to four rooms- not even one room for one class. One-fifth of the government and one-third of private primary schools have two rooms only which highlights the shortage of class rooms in primary schools.

Table 17: Block wise Schools Covered in Survey and Level of School

Blocks	Govt. Schools					Private Schools					Total
	PS	MS	HS	SSS	Total	PS	MS	HS	SSS	Total	
Bhunga	4	-	1	1	6	1	2	-	-	3	9
Dasuya	3	1	1	-	5	1	-	-	-	1	6
Garhshankar	3	2			5	-	1	-	-	1	6
Hajipur	2	-	1	1	4	1	1	-	-	2	6
Hoshiarpur I	4	-	1	1	6	1	1	-	1	3	9
Hoshiarpur II	4	-	1	1	6	-	1	-	-	1	7
Mahilpur	4	1	1	1	7	-	-	1	1	2	9
Mukerian	4	-	-	1	5	2	1	-	-	3	8
Talwara	7	-	1	1	9	-	2	1	1	4	13
Tanda	4	1	1	1	7	-	-	-	1	1	8
Total	39	5	8	8	60	6	9	2	4	21	81
Average No. of class rooms	3.8	8.6 (7.3)	6.6	22.8 (18.7)	3.1	3.3	8.6	13.5	14.0	8.6	4.5

Note: PS – Primary school, MS – Middle School, HS – High School, SSS – Senior Secondary School
Percentage in parenthesis indicates average number of rooms after excluding the government aided schools.

Importantly, the three government aided schools (one middle and two senior secondary) had more accommodation - between twenty to forty rooms Satisfaction with the number of classrooms was reported by all the school authorities of middle schools, 61.5 percent of primary schools, half of the high schools and 87.5 percent of senior secondary schools. Demand for additional rooms required is indicated by the responses of those schools which reported classrooms are not sufficient. Importantly, the expectations of

primary school in-charge are not high as majority of them in spite of having insufficient class rooms have not reported the same.

Table 18: Block wise Percentage of Schools Where Rooms is Not Sufficient (As reported by School Incharge)

	Primary Schools		**Secondary Schools**		**Senior Sec. Schools**		**Total Schools**	
	Total Schools	**% Schools**	**Total Schools**	**% Schools**	**Total Schools**	**% Schools**	**Total Schools**	**% Schools**
Bhunga	4	1(25.0)	1	-	1	1(100.0)	6	2 (33.3)
Dasuya	3	2 (66.7)	1	-	-	-	4	2 (50.0)
Garhshankar	3	1 (33.3)	-	-	-	-	3	1 (33.3)
Hajipur	2	-	1	1(100.0)	1	-	4	1 (25.0)
Hoshiarpur I	4	1 (25.0)	1	-	1	-	6	1 (16.7)
Hoshiarpur II	4	3 (75.5)	1	1 (100.0)	1	-	6	4 (66.7)
Mahilpur	4	2 (50.0)	1	1(100.0)	1	-	6	3 (50.0)
Mukerian	4	-	-	-	1	-	5	-
Talwara	7	2 (28.5)	1	-	1	-	9	2 (22.2)
Tanda	4	3 (75.0)	1	1(100.0)	1	-	6	4 (66.7)
Additional Rooms Required	39	15 (38.5)	8	4 (50.0)	8	1 (12.5)	55	20 (36.4)

All the Primary schools need additional rooms. However, the school in-charge of 38.5 percent of primary schools, half of the secondary schools and 12.5 percent of senior secondary schools specified that additional rooms are required. In all, nearly four out of ten primary schools required additional rooms.

Infrastructure facilities such as separate staff room for teachers, library, science laboratory and computer laboratory are also not available in majority of the schools as is evident from table.

Table 19: Availability of Staff Room, Library, Science Lab and Computer Lab in Government Schools

Block	Primary Schools		Middle Schools				Secondary Schools				Senior Sec. Schools			
	N-39		N-5				N-8				N-8			
	SR	LB	SR	LB	ScL	CL	SR	LB	Sc L	CL	SR	LB	Sc L	CL
Bhunga	-	-	-				1	1	1	1	1	1	1	1
Dasuya	1	1	1				1	1	1	1	-	-	-	-
Garhshankar	1	-	1	1	1	1	-	-	-	-	-	-	-	-
Hajipur	-	1	-				1	1	1	1	-	1	1	1
Hoshiarpur I	1	1	-				1	1	1	1	1	1	1	1
Hoshiarpur II	1	1	-				-	-	-	1	-	-	1	1
Mahilpur	2		1				1	1	1	1	1	1	1	1
Mukerian	2	1	-	-			-	-	-	-	-	1	1	1
Talwara	3		-				1	1	1	1	1	1	1	1
Tanda	2		1			1	1	-	1	1	1	1	1	1
Total	**13**	**5**	**4**	**1**	**1**	**2**	**7**	**6**	**7**	**8**	**5**	**7**	**8**	**8**
% of schools	**33**	**13**	**80**	**20**	**20**	**40**	**88**	**75**	**88**	**100**	**63**	**88**	**100**	**100**

Note: SR - Staff Room, LB - Library, ScL - Science Lab, CL - Computer Lab

Separate staff room for teachers is still a luxury in primary schools. Two-thirds of primary schools have no staff room. Where as in other schools staff room was available to a large extent. However, nearly 40 percent of senior secondary schools and 20 percent middle schools and 12 percent Secondary schools did not have a staff room. Library was not available in majority of the middle schools- nearly four out of five schools.

Computer Lab at Government Senior Secondary School, Lambra

Higher proportion of high schools and senior secondary schools had a library. Importantly, all the government schools did not have library facility. Science and computer labs were available in all the senior secondary schools. In secondary schools computer laboratory was available in all the schools while science laboratory was available in 88 percent of the schools.

Private schools lacked in providing computer labs, library and science lab as half of the senior secondary schools reported having these facilities. However, higher proportion of private middle schools have facilities of library, science and computer lab in comparison to government schools.

Table 20: Availability of Library, Science Laboratory and Computer Laboratory in Private Schools

	Middle Schools	**Secondary Schools**	**Senior Sec. Schools**
Library	5 (55.6)	1 (50.0)	2 (50.0)
Science Lab	5 (55.6)	1 (50.0)	2 (50.0)
Computer Lab	6 (66.7)	2 (100.0)	2 (50.0)
Total Pvt. Schools	**9**	**2**	**4**

Separate toilets for males and females were available in eight out of ten primary schools, in all the middle schools and in 88 percent of secondary and senior secondary schools.

Table 21: Availability of Toilets in the Schools

	Primary Schools			**Middle Schools**			**Secondary Schools**			**Sr. Sec. Schools**		
	N-39			**N-5**			**N-8**			**N-8**		
Govt. Schools	SM/F	Com	No Faci.	SM/F	Com	No Faci.	SM/F	Com	No Faci.	SM/F	Com	No Faci
Toilet for Students	31 (79.5)	8 (20.5)	-	5 (100)	-	-	7 (87.5)	1 (12.5)	-	7 (87.5)	-	1 (12.5)
Toilet for Teachers	14 (35.9)	6 (15.4)	19 (48.7)	2 (40)	1 (20)	2 (40)	5 (62.5)	3 (37.5)	-	5 (62.5)	-	3 (37.5)

Note: SF/M: Yes Separate for male/female, Cm: Common, No faci: No facility.
* Percentages are in parentheses

In a large number of schools separate toilets for teachers were not available and they shared the facility with the students.

Education is important not only for the full development of one's personality, but also for the sustained growth of the nation. Elementary education is the foundation on which the development of every citizen depends. Therefore, it is important to assure the quality of

education by providing individual attention and making it more relevant. The teacher pupil ratio at primary level should not exceed 20.

Enrollment Ratio

Various social and economic factors particularly in rural areas play an important role in deciding when to send the child to school. Household survey collected information on school enrollment and also provides insight into the socio-economic status of the people in the district. The survey covered 519 households and a population of 2683 persons in different age groups with a total of 682 children in the age group 6-18 years. Out of these 55 percent children were males while 45 percent were females. Forty percent children were in the age group 6-11 years, 22 percent were in 12-14 years, 17.4 percent were in 15-16 years and 20.2 percent were in 17-18 years age group.

VOICE OF PEOPLE

Informal discussions with Block Development Officers (BDOs), members of various block samitis, Sarpanches, panchayat members and other activists revealed in-depth information. Education-wise the district as a whole is more developed compared to others as due to lack of agricultural and industrial development people of the area joined army and immigrated to other countries. They preferred to educate their children so that the children could join better jobs. However, there was a demand for improvement in education system, quality of education and better infrastructure in general and at primary school level in particular. Education in the initial years of schooling is the foundation on which the development of every individual depends. There is shortage of class rooms, teachers and proper furniture in government primary schools. Most of the primary schools have 3 rooms and 2 teachers. Shortage of teachers leads to lack of individual attention to students and poor quality education. Children get discouraged to attend government primary schools due to non availability of separate teachers. Absenteeism among teachers is an additional problem. As a result there is a shift towards private schools. Most of the government primary schools lack proper lights and functional fans. Midday meal scheme is not required in the schools of the district. Firstly, people can afford to feed their children and secondly the quality of the food served is poor. Importantly, teachers spend a lot of time on the distribution of food which can be utilized for study purposes. Dry food is better than cooked food, if the scheme is to continue.

Middle, secondary and senior secondary schools are usually at a distance - varying from one to eight kilometers. Children go to schools either by foot or by cycles. Infrastructural facilities are better in these schools. Shortage of science teachers in +2 level schools was reported. Girls are attending schools and higher educational institutions. Rather girls are studying more than boys. Drug abuse is very high among boys above the age 15 years. Immigration is also high among boys. Usually teachers are staying in nearby towns/villages and do not come to schools regularly.

Availability of higher education in terms of colleges and technical institutes was reported to be satisfactory. No suggestions were received about higher education.

The survey revealed that out of the total child population in the age group 6-18 years, a total of 85.7 percent were attending educational institutions. According to the 43rd amendment of the constitution education is free and compulsory for children in the age group 6-14 years. The survey findings reveal that 95.5 percent were attending schools in the age group 6-14 years.

The detailed analysis on school attendance in different age groups revealed that 96 percent of the children were attending schools in the age group 6-11 years, 94 percent in the age group 12-14 years and 82.4 percent in the age group 15-16 years. But the school enrolment declined to 59 percent in the age group 17-18 years. The reason may be that children left the school due to poverty and involved themselves in gainful activities which will add to the income of the family or they were not interested to pursue the studies. Importantly, the school attendance is more among females in higher age group compared to their male counterparts.

Table 22: Age wise distribution of the children attending school

Age Group	No of Children			Attending Class		
	Total	**Male**	**Female**	**Total**	**Male**	**Female**
6-11	273 (40.0)	152 (55.6)	121 (44.3)	263 (96.3)	147 (96.7)	116 (95.8)
12-14	152 (22.2)	86 (56.5)	66 (43.4)	143 (94.0)	82 (95.3)	61 (92.4)
15-16	119 (17.4)	55 (46.2)	64 (72.2)	98 (82.4)	49 (89.1)	49 (76.6)
17-18	138 (20.2)	81 (58.7)	57 (41.3)	81 (58.7)	42 (51.9)	39 (68.4)
Total	**682 (100.0)**	**374 (54.8)**	**308 (45.1)**	**585 (85.7)**	**320 (85.5)**	**265 (86.0)**

* Percentages are in parentheses

An interesting fact revealed that school attendance was cent percent at the age of six, However, among children in age group 7 to 10 years school attendance varied between 94 percent to 98 percent. Data reveals that nearly 4 percent children in 6-11 year age group – 3 percent boys and 4 percent girls were not attending school at the time of survey. Efforts are needed to make these out of school children to attend schools. Motivation of parents and family members is required. In fact, it should be the social responsibility of the parent and the community to send their children to school or educate them

Gender Gaps

The compulsory Elementary Education Act, 1960, has made it obligatory on parents to send their girls above the age of 6 years to schools. The realization of the importance of educating girl child has led to improvement in the literacy level and school attendance. The Beijing World Conference on Women (1995) gave a new definition to women's education – enabling them to be more empowered by having increased choices, taking their own decisions and making improvements in their lives.

Overtime, the literacy rates have increased significantly among females – 13.8 percent points for Hoshiarpur whereas among males increase was only by 7 percent points. (1991-2001).

Table 23 : Gender Gaps in Literacy Level

	Rural			Urban			Total		
	M	**F**	**Variation M/F**	**M**	**F**	**Variation M/F**	**M**	**F**	**Variation M/F**
Punjab									
2001	71.0	57.7	13.3	83.0	74.5	8.5	75.2	63.4	11.8
1991	60.7	43.9	16.8	77.3	66.1	11.2	65.7	50.4	15.3
Hoshiarpur									
2001	85.7	73.7	12.0	89.4	81.8	7.6	86.5	75.3	11.2
1991	78.3	59.4	18.9	84.6	73.1	11.5	79.3	61.5	17.8

Source: Census of India, 2001 and 1991.

Gender gaps in the provisions of literacy have narrowed down both in the state as well as district. Male –female differentials in literacy levels in the district have reduced by six percent points over the decade whereas in the state it was less than four percent points. In rural areas of Hoshiarpur the decline in gender gap is more sharp compared to urban area.

Among children attending school percentage of girls is low at all levels except for secondary schools. Overall, there are less number of girls as compared to boys in schools which may be due to socio-economic reasons and shortage of female children.

In school enrollment, it was found that at primary school level there were 87 girls per hundred boys in government schools and 75 girls in private schools. However, at higher level, i.e,. in senior secondary schools the ratio of girl students in government and private schools was 96 and 54 respectively. It is obvious that more boys are sent to private schools.

Out of the total school going child population (86 percent), almost an equal proportion of girls (86 percent) and boys (85.5 percent) were attending school. Thus, it has been observed there were no disparities as far as education is concerned in all the age groups of children in district Hoshiarpur.

Table 24: Percentage of Girl Students in Schools of Hoshiarpur

Block	Primary School	Middle School	Secondary School	Senior Secondary
Bhunga	45.3	51.3	47.4	52.1
Dasuya	47.6	45.8	57.5	48.2
Garhshankar	47.1	53.3	48.2	43.5
Hajipur	45.5	46.2	48.0	38.2
Hoshiarpur-I	47.3	48.1	52.3	62.4
Hoshiarpur-II	47.4	47.6	49.6	35.3
Mahilpur	44.5	51.2	64.8	50.1
Mukerian	43.9	46.9	49.6	48.2
Talwara	44.8	52.8	46.8	52.7
Tanda	49.5	46.9	48.3	51.7
Sub Total	46.5	49.2	51.3	49.0

Source DEO, Hoshiarpur, 2007.

DLHS-3 results reveal that 99.7 percent of the girls in 6-11 age group were attending school while all the boys were attending school (DLHS-3, 2007-08).

Higher Education

In India, higher education refers to education beyond school (12^{th} standard). The objectives of higher education may range from primary objectives such as employability, enhancing the earning potential, seeking and advancing knowledge and wisdom, research and experimentation to more serious secondary objectives like attaining mental and spiritual growth, facilitating better lifestyle and developing scientific outlook.

Higher education in India has evolved in distinct and divergent streams with each stream monitored by an apex body, indirectly controlled by the Ministry of Human Resource Development and funded by the state governments. It takes 3 years for completing graduation (after 12th standard) with different streams, i.e., arts, science, commerce, etc. The main constituents of the higher education are universities and its allied colleges.

In Punjab there are 232 Arts/Science/commerce/Home science colleges, 39 Engineering, Technology and Architecture colleges, 6 Medical Colleges, and 47 teachers

training colleges (Statistical Abstract of Punjab, 2007). However, as per Statistical Abstract of Punjab, 2007 there are 19 Arts/Science/commerce/Home science colleges and two teachers training colleges in Hoshiarpur district. The first college was established in year 1926 at Hoshiarpur and there were 3 colleges by the time India became independent. In 1951, there were 4 colleges in the district Hoshiarpur and their number rose to 11 by 1975. Each college in the state is serving a population of 87,308 persons (Statistical Abstract, 2007).

The information provided by the Panjab University, Chandigarh (2007) specifies that there are a total of 31 colleges in Hoshiarpur - 25 Arts/Science/Commerce colleges (80.6 percent) including one for the degree of Prabhakar and 6 teachers training colleges (19.4 percent). Among these colleges, 11 colleges have only Bachelor of Arts classes (35.5 percent), one has both Arts and science courses (3.2 percent) and 12 have Arts, science and commerce courses (38.7 percent). Out of these colleges, 11 colleges (35 percent) are exclusively for female students. One College of Education and 11 Arts colleges undertake Post Graduation courses also.

On an average there is one college for 47,765 population in Hoshiarpur. There are a total of 2 colleges per lakh population - 1.7 Arts colleges and 0.4 Teacher Training colleges (Panjab University, 2007).

The number of students varies in different streams. Majority of the students who are studying in colleges pursue arts/science/commerce courses (96 percent). Out of the total strength of students, three-fourths of the students belong to general category, 16 percent from Scheduled Castes and approximately 9 percent from Backward castes. A small proportion of students are physically handicapped.

Table 25: Number of Students in Different Colleges in Hoshiarpur

Faculty	General	Scheduled Caste	Backward Castes	Total Students	Physical Handicap
Arts/Science/Commerce	18418	4008	2145	24571	28
Education	822	154	36	1012	5
Prabhakar	2	1	-	3	-
Total	**19242**	**4163**	**2181**	**25586**	**33**
Percentage	**(75.2)**	**(16.3)**	**(8.5)**	**(100.0)**	**(0.13)**

Source: Panjab University, Chandigarh, 2007.

It has been noted that out of the total students enrolled in different Arts/Science/ Commerce and Education colleges girl students outnumber boys (66 percent).

The strength of the teachers depends upon the number of the students, as different colleges run different courses like under-graduation as well as post-graduation in different streams. On an average there are about 47 teachers per lakh population in Arts/Science/ Commerce colleges and 6 in education/teacher training colleges.

Table 26: Number of Colleges and Teachers in Punjab and Hoshiarpur

Faculty	Punjab*		Hoshiarpur*		Hoshiarpur**		Teachers Per Lakh Population		
	No. of Colleges	No. of Teachers	No. of Colleges	No. of Teachers	No. of Colleges	No. of Teachers	Pb*	Hsp*	Hsp**
Arts, Science & Commerce	232	7613	19	553	25	689	31.3	37.3	46.5
Education	47	423	2	28	6	89	1.8	1.9	6.0
Total	**279**	**8036**	**21**	**581**	**31**	**778**	**33.0**	**39.2**	**52.5**

Source:*Statistical Abstract of Punjab, 2007 Govt. of Punjab, Economic and Statistical Organization.
** Panjab University, Chandigarh.
Note: Pb – Punjab, Hsp – Hoshiarpur.

It was noted that 65 percent of teachers in arts/science/commerce colleges and 63 percent in education colleges are regular while rest are part time teachers (Table 27). Overall 65 percent teachers in colleges are on regular posts. On an average there are 29 teachers in colleges of arts/science/commerce and 15 in teacher training colleges.

Table 27: Regular and Part time Teachers in Different Colleges in Hoshiarpur

Faculty	**Regular Teachers**		**Part Time Teachers**		**Total Teachers**	**Average Teachers**
	No.	**%**	**No.**	**%**	**No.**	**No.**
Arts/Science/Commerce	447	65.0	239	35.0	686	28.6
Education	56	62.9	33	37.1	89	14.8
Prabhakar	2	66.6	1	33.3	3	3.0
Total	**505**	**64.9**	**273**	**35.1**	**778**	**25.1 (25.8)***

Source: Panjab University, Chandigarh
Note: * Excluding teachers of Prabhakar.

Technical Education

The department of Technical Education, Punjab, controls and co-ordinates the technical education in public and private sectors to ensure uniformity in its standards. A

number of technical colleges/institutions and Industrial Training centres/institutions (both for boys and girls) are being run in the State. These institutions prepare students for degree/diploma courses in Civil, Mechanical and Electrical Engineering and for various trades/crafts, such as welding, carpentry, fitting, turnery, black smithy, stenography, radio and television mechanics course, refrigeration mechanics course, electrician course, wireman's course, draftsmanship, etc. The girl students are taught crafts, such as tailoring, cutting, hand-embroidery, needlework, machine-embroidery, etc. The Industries Department Punjab, is also running separate industrial training centres for the students belonging to the Scheduled Castes and Backward Classes.

The first industrial school was founded at Hoshiarpur in 1877 with the objective of developing the industry of carpet and durrie-making. It was maintained by the Municipal committee, Hoshiarpur. There are four government institutes – 3 polytechnic and one Pharmacy in Hoshiarpur district.

Table 28: Number of Technical Education Institutes in Hoshiarpur

Institutes	Number	Per lakh population
Government		
Polytechnic	3	0.02
Pharmacy	1	0.07
Private		
ITC	10	0.67
ITI	2	0.14
Arts and Craft	1	0.07
Computer Technology	1	0.07

Source : Department of Technical Education, Punjab, 2007.

Spread of technical institutions by private sector is higher than public sector. There are 10 Industrial Training Centres (ITCs) in Hoshiarpur.

Importantly, there is no Architecture and Medical college in Hoshiarpur district.

Regional Centre Panjab University

In order to expand the quality technical education Panjab University has started a Regional centre at Hoshiarpur with a motive to provide quality education to young generation of Punjab. The present campus was taken over by Panjab University in the year 2006 and so started Bachelor of Engineering (BE) courses with effect from the session 2006-

07. Originally, the centre was started by Dr Lajpat Rai Munger a citizen of United States of America who belonged to Village Nagal Sadhian Hoshiarpur. Dr. Munger adopted Swami Sarvanand Gir Maharaj as his Guru. He bought 10.5 acres of property in the name of his Guruji in village Bajwara on Una Road, 5 kms. from the court of Hoshiarpur and constructed the building of the campus. Afterwards, he handed over this institute to Panjab University. In February 2006, the present campus was taken over by Panjab University as Regional Centre and first academic session for four year Bachelor of Engineering was started. LLB and MCA courses were introduced from 2008.

Vishweshavaranand Vishva Bandhu Institute of Sanskrit and Indological Studies (VVBIS&IS)

They have the collection of about 2685 manuscripts of different North and south Indian languages and scripts pertaining to different subjects of Indology i.e Veda, Upanishades, Puranas, astrology, astronomy, Ayurveda etc. on the material as Bich-Bark, palm leaf and hand made papers. They have a traditional method for the preservation of these valuable manuscripts. So many old and important manuscripts have already been edited and published and some are in process of publication by the institute. The latest being Asvalayana srauta in three volumes. This is an important manuscripts collection of north-west zone of the country.

Special Schemes

Sarva Shiksha Abhiyan (SSA)

SSA is a Government of India's programme for achievement of Universalization of Elementary Education (UEE) in a time bound manner, as mandated by 86th amendment of the Constitution of India. SSA is being implemented in partnership with State Governments to cover the entire country. The programme seeks to open new schools in those habitations which do not have schooling facilities and strengthen existing school infrastructure through provision of additional class rooms, toilets, drinking water, maintenance grant and school improvement grants. Existing schools with inadequate teacher strength are provided with additional teachers, while the capacity of existing teachers is being strengthened by extensive training, grants for developing teaching-learning materials and strengthening of the academic support structure at a cluster, block and district level. SSA seeks to provide quality

elementary education including life skills. SSA has a special focus on girl's education and children with special needs.

The objectives of Sarva Shiksha Abhiyan are: all Children complete five years of primary schooling by 2007 and complete eight years of elementary schooling by 2010. The focus on elementary education of satisfactory quality with emphasis on education for life, bridge all gender and social category gaps at primary stage by 2007 and at elementary education level by 2010 and universal retention by 2010 (cited from punjabgovt.nic.in)

Sarv Shiksha Abhiyan Library at Chalopur

Procurement, Finance, Management Information System (MIS), Education guarantee scheme (EGS), Integrated Education for the Disabled (IED), Early Child care and education-(ECCE), HR/BRP-DRP, Pedagogy, Civil Works, Administration, Teacher Training, Media, and Coordination (cited from ssapunjab.org).

Hoshiarpur and Faridkot were the first two districts where Total Literacy Campaign was initiated. In Hoshiarpur district out of 1,10,501 identified learners 77,000 sustained learning and 70,000 illiterates completed the norms fixed by National literacy mission since 1.8.1995 (Sarva Shiksha Abhyan Authority, Punjab, 2006-07).

Under SSA scheme different types of the funds are allotted every year for various components. Even some international agencies like World Bank are also providing additional funds for speeding up the process of universalization of elementary education. SSA aims at bringing structural changes that involve creation of new management structures to facilitate decentralization of powers and revamping of the education system. The school buildings, which were in dilapidated condition, have been improved. New class rooms along verandas and sanitary blocks separately for boys and girls have been constructed. Under the scheme the grant to those schools which do not have their own building have been released.

Overtime, the fund allocation under SSA has increased manifolds from year 2002 to 2008.

Table 29: Fund Allocation and Expenditure under Centrally Sponsored Scheme SSA

Years	Allocation	Expenditure
2002-03	75,000	37,628
2003	4,03,960	1,30,455
2004	23,88,085	23,63,383
2005	1,03,48,210	55,57,415
2006	53,20,007	51,69,890
2007	42,11,202	39,95,748
2008	10,65,19,900	9,40,43,300

Source: DEO, 2009.

Mid Day Meal (MDM)

MDM Programme has been one of the earliest supplementary nutrition programs in the country. The program has nutritional as well as educational objectives. It was initiated in 1963 as a part of Applied Nutrition Program in the State of Karnataka for school children, aged 6-11 years with the assistance of the Co-operative for American Relief Everywhere (CARE) as an incentive program for 2 lakh beneficiaries (cited from indianpediatrics.net). Under the program each beneficiary is expected to receive a supplement providing 330 calories and 7 to 12 grams of protein. The cost of the food was borne by the `CARE' while the overhead charges were borne by the State Government. To start with the CARE provided

corn meal and skimmed milk powder and later switched over to Bulgar wheat and soya oil. The CARE support however, is being withdrawn in a phased manner from 1993-94 onwards.

National Programme of Nutritional Support to Primary Education commonly known as the Mid-Day Meal Scheme was launched as a Centrally-sponsored Scheme on 15th August, 1995. Its objective was to boost "universalisation of primary education by increasing enrolment, retention and attendance and simultaneously impacting on nutrition of students in primary classes". It was implemented in 2408 blocks in the first year, and covered the whole country in a phased manner by 1997-98. The programme originally covered children of primary stage (Classes I to V) in government, local body and government-aided schools, and was extended in October, 2002, to cover children studying in Education Guarantee Scheme (EGS) and Alternative & Innovative Education (AIE) Centres also (cited from education.nic.in).

Welfare Schemes

To encourage children from lower socio-economic strata to attend school regularly various welfare schemes were initiated and funds allocated. For Scheduled caste students stipend to girl students for primary education was introduced. A significant number of girl students (18236) attending primary school from scheduled caste are receiving stipend. The grant received and distributed by district authorities has been presented below.

Table 30 : Grant Received and Expenditure under Welfare Schemes

	Rural		Urban	
Name of Scheme	**Grant Received**	**Expenditure**	**Grant Received**	**Expenditure**
Stipend for SC girl Students	31,87,200	31,87,200	6,000,00	6,000,00

Source : Social Welfare Deptt., 2010

Summary

District Hoshiarpur has the highest literacy rate within the state. Eight out of ten persons in the district are literate (Census of India, 2001). Three-fourths of the females are literate and at all India level Hoshiarpur district ranks 44th in female literacy. Rural and urban literacy rates are also highest in the district. Within the district, Hoshiarpur II CD block

ranks first and Garhshankar ranks at the bottom of the literacy ladder. To achieve universal literacy rigorous efforts are required.

The number of schools have multiplied manifold in post independence period. There are 86 primary, 12 middle, 9 secondary and 8 senior secondary schools per lakh population in Hoshiarpur district and within the state district occupies a very high position in terms of availability of schools per lakh population.

Infrastructural facilities in terms of government buildings for schools was highly satisfactory. However, average number of class rooms in primary schools were 3.2 which reflects there was not even a separate room for each class. The number of teachers per primary school ranged between 2 to 3. There is a need to increase the number of class rooms and teachers to ensure quality education by providing separate class room and teacher for each class in all the primary schools. In fact, elementary education is the foundation for future learning and good quality basic education equips pupils with literacy skills for life.

Infrastructure facilities for middle, secondary and senior secondary schools were better. Average number of class rooms were 3 for middle, 8 for secondary and 15 for senior secondary schools.

Primary survey results highlight that all the schools did not have the facility of staff rooms and library. Eight out of ten middle schools and nearly one-tenth of secondary schools lacked science laboratory facility. Computer laboratory was not available in six out of ten middle schools. Basic infrastructure to provide quality modern education and technical guidance at school level is a pre- requisite for the development of the state as well as nation at large.

Gender gaps in terms of school attendance were noted at all levels of schools, i.e., percentage of girls attending schools was less than boys. The reasons can be socio- economic and shortage of girls in general.

For higher education a total of 25 arts/science/commerce colleges and 6 teacher training colleges are available in the district. For a population of one lakh there are 2 colleges. On an average there are 52 teachers per lakh population in these colleges. To provide technical education four government institutions - 3 polytechnics and 1 pharmacy

college's are available. However, a significant number of private institutions also provide technical education. There are 10 Industrial Training Centres (ITCs), 2 Industrial Training Institutes (ITIs), 1 Arts and craft centre and one Computer Technology centre.

The district of Hoshiarpur is a fore-runner on the literacy front in the state of Punjab, however, rigorous efforts are required to further enhance its status at national level.

APPENDIX

EDUCATION

Literacy Rates in Punjab and other Indian States/Union Territories

States/Union Territories	Literacy Rates (Percentage) and Ranking					
	Persons	Rank	Males	Rank	Females	Rank
INDIA	**65.38**		**75.85**		**54.16**	
Kerala	90.92	1	94.20	1	87.86	1
Mizoram	88.49	2	90.69	3	86.13	2
Lakshadweep	87.52	3	93.15	2	81.56	3
Goa	82.32	4	88.88	5	75.51	5
Delhi	81.82	5	87.37	7	75.00	7
Chandigarh	81.76	6	85.65	11	76.65	4
Pondicherry	81.49	7	88.89	4	74.13	8
Andaman & Nicobar Island	81.18	8	86.07	9	75.29	6
Daman & Diu	81.09	9	88.40	6	70.37	9
Maharashtra	77.27	10	86.27	8	67.51	11
Himachal Pradesh	77.13	11	86.02	10	68.08	10
Tripura	73.66	12	81.47	14	65.41	12
Tamil Nadu	73.47	13	82.33	13	64.55	13
Uttaranchal	72.28	14	84.01	12	60.26	18
Gujarat	69.97	15	80.50	15	58.60	21
Punjab	**69.95**	**16**	**75.63**	**25**	**63.55**	**14**
Sikkim	69.68	17	76.73	21	61.46	16
West Bengal	69.22	18	77.58	19	60.22	19
Manipur	68.87	19	77.87	17	59.70	20
Haryana	68.59	20	79.25	16	56.31	23
Nagaland	67.11	21	71.77	28	61.92	15
Karnataka	67.04	22	76.29	23	57.45	22
Chhattisgarh	65.18	23	77.86	18	52.40	25
Assam	64.28	24	71.93	27	56.03	24
Madhya Pradesh	64.11	25	76.80	20	50.28	28
Orissa	63.61	26	75.95	24	50.97	27
Meghalaya	63.31	27	66.14	32	60.41	17
Andhra Pradesh	61.11	28	70.85	29	51.17	26
Rajasthan	61.03	29	76.46	22	44.34	29
Dadra & Nagar Haveli	60.03	30	73.32	26	42.99	31
Uttar Pradesh	57.36	31	70.23	30	42.98	32
Arunachal Pradesh	54.74	32	64.07	34	44.24	30
Jammu & Kashmir	54.46	33	65.75	33	41.82	33
Jharkhand	54.13	34	67.94	31	39.38	34
Bihar	47.53	35	60.32	35	33.57	35

Source: Census of India, 2001. Table downloaded from Census website

Literacy Rates in Districts of Punjab

	2001					1991				
State/ District	**Rural**	**Urban**	**Total**	**Male**	**Female**	**Rural**	**Urban**	**Total**	**Males**	**Female**
Punjab	65.16	79.13	69.95	75.63	63.55	52.77	72.08	58.51	65.66	50.41
Gurdaspur	70.96	83.43	74.19	80.44	67.31	58.44	73.69	61.84	69.55	53.53
Amritsar	60.65	78.37	67.85	73.58	61.41	49.73	73.94	58.08	65.07	20.10
Fatehgarh Sahib	71.71	80.22	74.70	78.85	68.60	60.31	73.85	63.25	69.45	56.13
Firozpur	55.75	77.22	61.42	69.55	52.33	41.60	68.16	48.03	45.89	38.13
Ludhiana	72.88	79.42	76.54	80.19	72.11	62.28	71.71	67.34	72.45	61.25
Jalandhar	74.41	81.74	77.91	82.37	72.93	61.48	76.54	68.93	75.11	62.05
Kapurthala	70.57	79.63	73.56	78.66	67.90	58.90	75.84	63.31	70.03	55.83
Hoshiarpur	**80.09**	**86.66**	**81.40**	**86.97**	**75.56**	**70.61**	**79.16**	**72.08**	**80.22**	**63.34**
Mansa	47.56	71.23	52.50	59.12	45.07	32.70	63.52	37.21	44.81	28.50
Moga	61.18	74.84	63.94	68.40	58.96	47.89	67.86	52.24	57.91	45.84
Muktsar	54.10	71.63	50.67	65.94	50.57	40.10	66.34	46.18	54.25	37.05
Nawanshahar	75.99	82.26	76.86	83.67	69.52	63.18	74.44	64.42	73.30	54.55
Rupnagar	74.51	86.60	78.49	84.43	71.74	63.59	81.15	68.15	72.45	61.25
Patiala	63.34	81.99	69.96	76.13	62.94	49.16	75.21	57.27	64.64	48.94
Sangrur	55.86	70.12	60.04	65.97	53.29	41.25	60.42	45.99	56.21	37.67
Bathinda	55.30	75.96	61.51	68.31	53.76	39.00	66.62	46.48	53.98	38.04
Faridkot	58.58	72.71	63.34	68.92	57.09	42.33	65.45	49.97	57.13	41.88

Source: Census of India, 2001. Table downloaded from Census website
Census of India, 1991, General Population tables and Primary Census Abstract Part II A and II B. Punjab

Number of Primary, Middle, Secondary and Senior Secondary Schools per Lakh Population in Districts of Punjab

Punjab	Population	pri	School /lakh	rank	middle	school/ lakh	rank	sec	school/ lakh	rank	sr. sec	School /lakh	rank
Nawanshahar	587468	427	73	5	92	16	1	70	12	2	53	9	1
Moga	894854	390	44	15	84	9	6	103	12	2	80	9	1
Muktsar	777493	360	46	13	79	10	5	87	11	3	67	9	1
Kapurthala	754521	485	64	6	113	15	2	88	12	2	62	8	4
Roopnagar	628846	588	94	1	80	13	3	67	11	3	51	8	4
Jalandhar	1962700	989	50	11	177	9	6	206	10	4	159	8	4
F.Sahib	538041	450	84	3	66	12	4	49	9	5	42	8	4
Hoshiarpur	1480736	1266	85	2	188	13	3	177	12	2	115	8	4
Sangrur	1473242	817	55	10	191	13	3	202	14	1	111	8	4
Gurdsapur	2104011	1685	80	4	249	12	4	186	9	5	156	7	5
Bathinda	1183295	542	46	13	108	9	6	133	11	3	86	7	5
Ludhiana	3032831	1027	34	19	200	7	8	222	7	7	214	7	5
Patiala	1633879	822	50	11	146	9	6	134	8	6	111	7	5
Faridkot	550892	227	41	18	90	16	1	58	11	3	36	7	5
Tarntaran	939057	547	58	8	95	10	5	97	10	4	61	6	6
Mansa	688758	299	43	16	84	12	4	60	9	5	43	6	6
Ferozpur	1746107	1063	61	7	206	12	4	147	8	6	105	6	6
Amritsar	2157020	905	42	17	172	8	7	156	7	7	125	6	6
SAS Nagar	698317	402	58	8	61	9	6	81	12	2	40	6	6
Barnala	526931	0	0		0	0		0	0	0	0	0	0

Source: Statistical Abstract of Punjab, 2007 Govt. of Punjab, Economic and Statistical Organization.

Children in Age Group 6-11 Attending School

Age Single Years	Total			Attending School		
	M	F	T	M	F	T
6	25	10	35	25 (100.0)	10 (100.0)	35 (100.0)
7	26	21	47	25 (96.2)	19 (90.5)	44 (93.6)
8	31	19	50	30 (96.8)	19 (100.0)	49 (98.0)
9	21	19	40	20 (95.2)	18 (94.7)	38 (95.0)
10	31	34	65	30 (96.8)	32 (94.1)	62 (95.4)
11	18	18	36	18 (100.0)	18 (100.0)	36 (100.0)
12	30	14	44	29 (96.7)	14 (100.0)	43 (97.7)
13	25	25	50	25 (100.0)	24 (96.0)	49 (98.0))
14	31	27	58	28 (90.3)	23 (85.2)	51 (87.9)
15	21	30	51	19 (90.5)	25 (83.3)	44 (86.3)
16	34	33	67	30 (88.2)	23 (69.7)	53 (79.1)
17	29	23	52	21 (72.4)	16 (69.6)	37 (71.2)
18	52	34	86	21 (40.4)	23 (67.6)	44 (51.2)
Age Group						
6-11	152	121	273	148 (97.4)	116 (95.87)	264 (96.7)
12-14	86	66	152	82 (95.3)	61 (92.4)	143 (94.1)
15-18	136	120	256	91 (66.9)	87 (72.5)	178 (69.5)

CHAPTER IV

HEALTH

Good health is one of the major components of human development. The progress of a society greatly depends on the quality of its people. Unhealthy people can hardly make any contribution towards development of family, society and nation. Health is not only basic to leading a happy life but it is also necessary for productive activities in the society. Poor health is associated with many factors – poor nutrition, living conditions, access to health facility, capacity to pay for the cost of health services, environment surroundings so on and so forth.

In India, the Government has built up a vast health infrastructure and manpower at primary, secondary and tertiary care levels to improve the health status of people. Enormous amount has been invested under the successive Five Years Plan in field of health, medical education, training and research. Apart from this, public sector has also implemented a number of centrally sponsored programmes relating to family welfare and disease control. There also has been rapid strides in private health sector manned by professionals and para medics over the last two or three decades.

Over the years considerable improvement has been made in various indicators of health such as increase in life expectancy, decrease in maternal and infant mortality and eradication of small pox. The access to improved sanitation and water has helped in improving the health standards in India. Nevertheless problems still persists and lot needs to be done to improve the health status of the people of this country.

The health system of India seems to be at cross roads with major changes occurring in the morbidity and mortality patterns. Some of these changes are consequent to the demographic transition, which is accompanied by changes in the age structure of the population but most of the changes are due to the control of major communicable diseases and emergence of other lifestyle diseases.

The health system of a country and for that matter even the state or district deserve the highest priority to improve the health of the population. Delivery of the health care is the responsibility of the state government. However the public health care system is not able to meet the growing demands for health care system.

In this chapter a range of health indicators covering longevity, mortality including infant and maternal mortality rate, nutrition, health care infrastructure, health services and utilization of public health services have been discussed.

PART A

Current Scenario

Life Expectancy

Life expectancy of an individual is the number of years a person is expected to live given the age specific mortality of population. In Punjab, one of the highest per capita income state, a child on an average has the probability of surviving up to the age of 65 years. (estimates of life expectancy at birth based on RCH data-2001). Over a period of two decades there has been an increase in life expectancy at birth by 4 years.

Table: 1 Ranking of Districts of Punjab by Life Expectancy at Birth, 1981 to 2002

District	1981*		2001$	
	Life expectancy	Rank	Life expectancy	Rank
Amritsar	62.4	3	63	16
Bathinda	61.6	8	66	7
Faridkot	61.6	8	61	17
Fatehgarh Sahib	61.7	7	67	5
Firozpur	62.1	5	64	14
Gurdaspur	61.4	12	67	5
Hoshiarpur	**60.9**	**15**	**65**	**11**
Jalandhar	62.3	4	72	1
Kapurthala	60.4	16	66	7
Ludhiana	64.2	1	65	11
Mansa	61.1	14	71	2
Moga	61.6	8	66	7
Muktsar	61.6	8	64	14
Nawanshahar	61.8	6	69	4
Patiala	61.4	12	71	2
Rupnagar	62.9	2	65	11
Sangrur	60.4	16	66	7
Punjab	**61.7**		**65**	
Highest	**64.2**		**72**	
Lowest	**60.4**		**61**	

Source * Estimates for 1981 are provided by Registrar General of India (1994), "Indirect Estimates of Fertility and Mortality at the District Level 1981", Occasional Paper No 4.
$ Human Development: Strengthening District Level Vital Statistics in India, F. Ram, Chander Sekhar, S.K. Mohanty, IIPS, UNDP, 2005. Estimates of Life Expectancy are derived from the data provided by Reproductive, Child and Health- 2002

In 2001, in district Hoshiarpur, there has been an increase of 4.1 years from 60.9 in 1981 to 65 in 2001 and was ranked at 11th position. Districts Jalandhar and Mansa have

made drastic change. They moved up to rank one and two in 2001 from 4th and 14th position in 1981 respectively. On the other hand the ranking of Ludhiana has dropped from first to 11th position. District Faridkot has the lowest Life expectancy of 61 years.

Mortality

Mortality statistics is a key health indicator to assess the quality of life and are of prime importance to health planners, health administrators and medical professionals. Overall, there has been a decline but the pace of decline is insufficient to achieve major development goals for infant mortality and maternal deaths.

Infant and Child Mortality

Infant Mortality Rate (IMR) is a sensitive indicator of socio-economic development of a country/state. Infant deaths are likely to influence reproductive behaviour of couples which in turn affect the fertility and growth of the population.

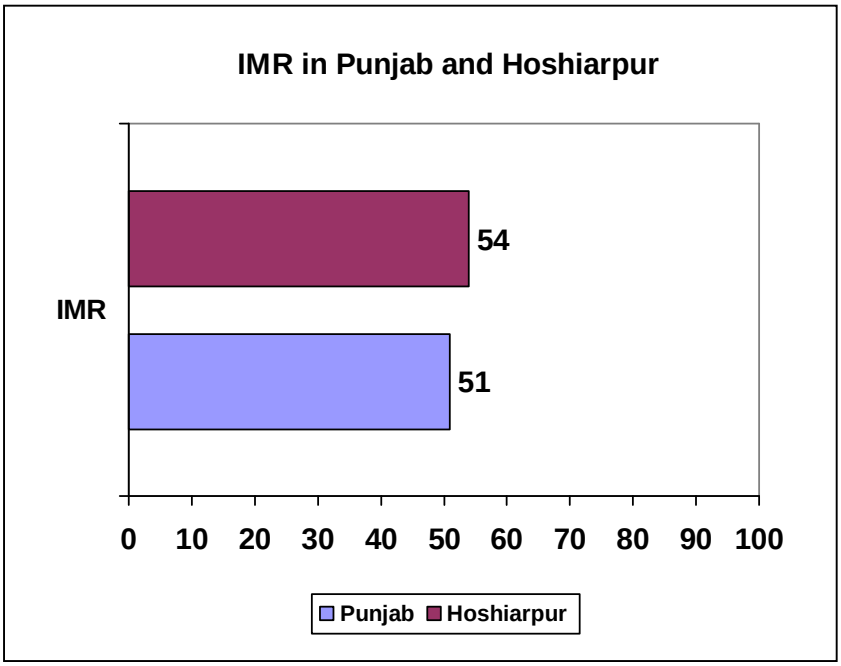
IMR is a regarded as the most important indicator of the health status of a community. Level of the living of people in general and effectiveness of maternal and child health services in particular are vital in bringing down infant deaths. Deaths during the first four weeks are largely preventable by good health care. Reducing IMR has been the major thrust of health care programme.

Overtime, IMR in Punjab has been declining. According to the various rounds of National Family Health Survey (NFHS), IMR in Punjab has declined from 54 per thousand live births during 1992-93 (NFHS-I) to 42 in 2006 (NFHS-III). While according to Sample Registration System (SRS) estimates, IMR for Punjab was 51 in 2001 (SRS, Bulletin, Vol. 36, No.2 October, 2002) and it was slightly higher in Hoshiarpur, i.e. 54.

Table 2 Infant Mortality of Punjab and District Hoshiarpur

	2002
Punjab*	51
District Hoshiarpur**	54

Source : *SRS, Bulletin, Vol. 36, No.2 October, 2002
** Rapid Household Survey-RCH-2, District Hoshiarpur, IIPS, 2002



Thus reduction in IMR is the most important Millennium Development Goal (MDG) as children are the most important assets of a nation. For the state of Punjab, the MDG is to reduce IMR by more than half from 51 to 20 by 2015 which will be a major challenge and a lot of efforts have to be made by health functionaries to bring it down. IMR can be reduced by improving institutional deliveries, identifying high risk pregnancies and promoting Integrated Management of Neo-natal and Child care (IMNCI).

Estimates based on RCH-District level Household Survey (2002) reveals that there were inter-district variations within the state. IMR for district Hoshiarpur has always been on higher side. In 1981(Table 3) it was ranked at 10th position among 12 districts of Punjab whereas it was ranked at 13th position among the 17 district of Punjab in 2002. The neighbouring districts of Hoshiarpur, i.e Jalandhar (21) and Nawanshahr (35) have much lower IMR, it implies that this district should be prioritized. According to estimates based on RCH data, two districts namely Patiala and Mansa had the lowest IMR – less than half of IMR of District Hoshiarpur, while district Faridkot had the highest IMR. Although over the period of two decades there has been a decline in IMR from 81 to 55 in district Hoshiarpur but the decline has been rather slow. However the IMR for the year 2007-08 was reported to be 42 according to the information provided by the Office of Civil Surgeon, Hoshiarpur.

Table 3: District-wise Infant Mortality in Punjab

District	IMR Census * 1981	IIPS estimates based on RCH data **
Amritsar	74	65
Bathinda	80	49
Faridkot	78	75
Firozpur	75	60
Gurdaspur	78	46
Hoshiarpur	**81**	**55**
Jalandhar	75	21
Kapurthala	92	52
Ludhiana	66	53
Patiala	78	23
Rupnagar	73	54
Sangrur	87	47
Nawanshahar	-	35
Mansa	-	23
Fatehgarh Sahib	-	45
Moga	-	48
Muktsar	-	60

* Human Development Report Punjab, Govt. of Punjab (2004),

** Human Development: Strengthening District Level Vital Statistics in India, F. Ram, Chander Sekhar, S.K. Mohanty, IIPS, UNDP, 2005

Furthermore it may be pointed out that neo natal mortality contributed to more than two thirds of infants death in Punjab whereas in district Hoshiarpur the proportion was very high , i.e., 76 percent. It is indeed a matter of concern and can be prevented by propagating institutional deliveries and providing quality post natal care to the mother and infant. In Punjab child Mortality was reported to be 10.8 while in District Hoshiarpur it was 10.2- marginally less than the state of Punjab.

Rural infrastructure can have a powerful influence on health outcome. For instance proper rural roads, access to safe drinking water, sanitation, access to electricity and also regularity of it are some of the factors which have significant association between IMR and access to infrastructure as it has been pointed out in NFHS-2.

Keeping in view the above findings in order to reduce IMR efforts must be made to provide safe drinking water to villages and provide regular supply of electricity. According to the Punjab Human Development Report-2004, District Hoshiarpur had the least access to safe drinking water in villages.

Maternal Deaths

Deaths due to pregnancy and child birth are common among women in reproductive age groups. Reduction of mortality of women has been an area of concern

and government has set targets to achieve it. Reduction of maternal mortality is one of the major challenges to improve the overall quality of life.

In India, level of maternal mortality varies across regions and there is general consensus that maternal deaths are declining. It is rather difficult to make precise estimates of level of maternal deaths as maternal deaths are a small percentage of total births in the country. Recently in India, an attempt has been made to provide the levels and trends in maternal mortality across the country (1997-2003) through the Sample Registration System (SRS).

A time series data depicts that maternal mortality ratio (MMR) has declined from 398 per 1, 00, 000 live births during 1997-98 to 301 (2001-03) for India. In case of Punjab the findings reveal that MMR has declined from 280 in 1997-98 to 178 in 2001-03.

Table 4: Maternal Mortality Ratio in India and Punjab

	1997-98	1999-2001	2001-03
India	398	327	301
Punjab	280	177	178

Source: Maternal Mortality in India: 1997-2003, Trends, Causes and Risk Factors, Registrar General India, New Delhi, Sample Registration System-2004.

As per the data available from the Office of Civil Surgeon, in Hoshiarpur district 25 maternal deaths occurred during the year 2007-08. There is no doubt that the MMR has declined, but the pace of decline has been slow so both the National Rural Health Mission (NRHM) goal of achieving MMR of 100 by 2012 and Millennium Development Goal (MDG) of 109 by 2015 may be difficult to achieve.

Nutrition- Anaemia

Status of Anaemia among Ever Married Women

Anaemia is found to be the most common micronutrient deficiency in India and is widely prevalent among women. Anaemia can result in maternal mortality, weakness, morbidity from infectious diseases, low birth weight, premature delivery, etc. Anaemia is characterized by low levels of haemoglobin in the body. NFHS-3 data reveals that in Punjab, nearly 40 percent (38.4 percent) of ever married women are suffering from anaemia- a slight decline when compared to NFHS-2 (41.4 percent).

In Hoshiarpur district one-third of ever married women were anaemic. Intra district variations were also observed. It may be mentioned that supply of IFA tablets has been irregular in the district. The probable reason attributed to high proportion of women suffering from anaemia is undernourishment. The proportion of anaemic ever married women was more than 50 percent in two health blocks namely Hajipur and Harta Badla which needs greater attention.

Table 5: Prevalence of Anaemia among Ever Married and Pregnant Women 2006-07

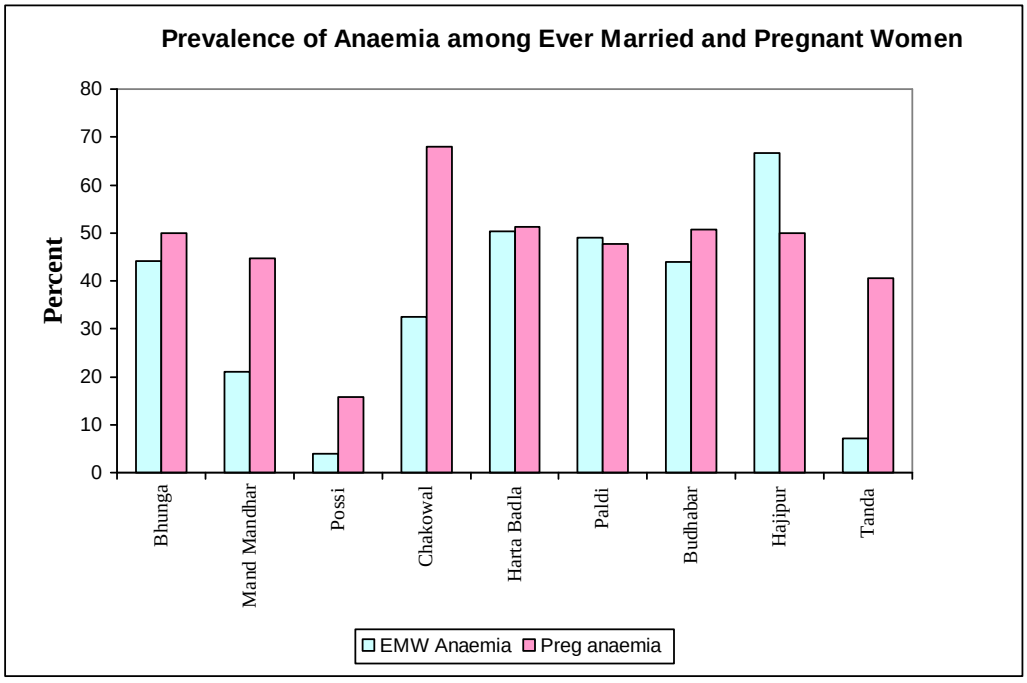
BLOCK PHC	% Ever Married Women 15-49 years	Percent Anaemia	No of pregnant women	Percent Anaemia Pregnant women
Bhunga	22685	44.1	2889	50.0
Mand Mander	22782	21.0	3221	44.7
Possi	27876	4.0	3148	15.8
Chakowal	42297	32.4	5396	68.0
Harta Badla	22310	50.4	2771	51.3
Paldi	23180	49.0	2360	47.7
Budhabar	25880	44.0	3154	50.7
Hajipur	17485	60.6	2156	50.0
Tanda	24217	7.1	2747	40.5

Source: Office of Civil Surgeon, Hoshiarpur

Anaemia among Pregnant Women

During pregnancy the intake of iron should increase as iron deficiency leads to pregnancy complications- premature birth and low birth weight babies. In other words, anaemia has important implications for the health of mother and also of the child.

In Punjab 41.6 percent of pregnant women are suffering from anaemia. (NFHS-3, 2005-06) However in Hoshiarpur district this proportion was relatively higher (47.4 percent) than the state. Substantial differences within the district were observed. Block Chakowal reported the highest proportion of anaemic pregnant women. Nearly half the blocks reported that more than half of the pregnant women suffered from anaemia. Shortage/non-supply of IFA tablets can be attributed as one of the reasons for high prevalence of anaemia.



Morbidity

The health of a population is measured in terms of levels of morbidity and the treatment seeking behaviour of its members. One of the major public health problems is re-emergence of Tuberculosis in many parts of the world including India. TB is a contagious disease and is a leading cause of death among people who are HIV positive. TB continues to be a serious health threat and is posed by poverty, high illiteracy and poor health and sanitation. In Punjab 201 persons per 100,000 population were suffering

Table 6: Block wise information on Tuberculosis 2006-07

BLOCK PHC	Suspected TB cases by sex		Patients diagnosed		Patient initiating treatment		Drop out		No of fully cured		Deaths	
	M	F	M	F	M	F	M	F	M	F	M	F
Bhunga	359	243	37	18	37	18	13	9	94	35	8	2
Mand Mander	705	490	115	50	194	80	26	5	157	57	18	6
Possi	367	203	20	12	21	12	1	1	16	10	2	0
Chakowal	898	727	272	262	271	262	15	6	11	12	0	0
Harta Badla	246	181	61	21	61	21	122	77	27	5	2	0
Paldi	375	281	109	49	109	49	10	6	18	10	-	-
Budhabar	2223	1263	Inf	not	Avail	able						
Hajipur	364	179	92	29	149	72	90	56	9	2	13	2
Tanda	950	550	71	38	63	36	5	3	53	34	5	2
Hoshiarpur City	1955	1312	260	166	404	250	133	73	10	1	11	9

Source: Office of Civil Surgeon, and TB Hospital, Hoshiarpur

from TB, while in Hoshiarpur district 37 persons per 100,000 population were reported to be suffering from TB (IIPS, RCH-RHS-2002).

In Hoshiarpur district PHC Chakowal had the highest number of patients suffering from TB followed by Hoshairpur City. The probable reason for high number of TB patients may be that there are large number of slum pockets in these area. Moreover in Hoshiarpur city a large number of patients are referred to TB hospital in Hoshiarpur both from rural and urban areas of the district. Number of drop outs was highest in Hoshiarpur City followed by PHC Harta Badla and Hajipur. The number of deaths were highest in block PHC Mand Mander.

Table 7: Block level Information on Leprosy

BLOCK PHC	**2006-07**		**2004-05**	
	M	F	M	F
Bhunga	3	1	5	1
Mand Mander	3	2	2	1
Possi	-	1	7	9
Chakowal	11	-	-	-
Harta Badla	7	-	1	-
Paldi	-	-	-	-
Budhabar	3	-	2	-
Hajipur	-	-	-	-
Tanda	4	1	-	-
Hoshiarpur City	32	6	43	12

Source: Office of Civil Surgeon, Hoshiarpur

Small numbers of people were reported to be suffering from Leprosy in Hoshiarpur district.

Malaria is another important public health issue. Water logging in the fields and poor sanitation in towns and slum leads to Malaria. Malaria is declining in Punjab. According to NFHS-II (1998-99) prevalence of Malaria was 1,082 cases per 100,000 persons. In Hoshiarpur district prevalence of Malaria was 121 per 100,000 population in 2002-04 (RCH-RHS, 2002-04). On the basis of information provided by Health Department for the year 2006-07, one can infer that prevalence of malaria has been rather low. In other words Malaria has been practically eradicated in Hoshiarpur district (Table: 8).

Table 8: No of Malaria cases reported in each Block

BLOCK PHC	2006-07	2004-05
Bhunga	5	-
Mand Mander	-	-
Possi	-	-
Chakowal	11	5
Harta Badla	-	-
Paldi	-	-
Budhabar	1	-
Hajipur	1	3
Tanda	-	-

Source: Office of Civil Surgeon, Hoshiarpur

HIV/AIDS has spread like an epidemic throughout the world. In India, National Aids Control Organization (NACO) estimated 5.21 million people are infected with virus (2005).[1] Latest estimates released by NACO in support of UNAIDS and WHO reveal that adult HIV prevalence in India is approximately 0.36 percent, i.e. approximately 2-3.1 million people.[2] Recent estimates for HIV prevalence for the state of Punjab are not available.

As per the information provided by CMO office, Hoshiarpur, it has been reported that a total of 6926 persons were getting tests done for HIV/AIDS at ICTC centre during 2007-08 as compared to 599 in 2006-07. Majority of them were females. The reasons may be that HIV/AIDS test is mandatory for the pregnant women. There is a manifold increase in the number of people visiting ICTC for HIV/AIDS. Out of these, 122 persons are taking treatment as compared to only six in 2006-07.

Table 9: Information about HIV/AIDS in District Hoshiarpur

Year	Number of persons getting tests done		Number of persons coming to ICTC		Number of persons taking treatment	
	Male	Female	Male	Female	Male	Female
2006-07	196	403	196	403	4	2
2007-08	2371	4555	2371	4555	72	50

Source: Office of Civil Surgeon, Hoshiarpur

Information of HIV/AIDS is scant as people still do not like to inform anyone that they are suffering from HIV/AIDS due to social stigma attached to it in the society. Moreover, there is no ART centre in Hoshiarpur District and people go to Jalandhar for treatment. Hence information on AIDS is not complete.

[1] http://timesofindia.indiatimes.com/articlesshow/1500736.cms
[2] http://www.who.int/mediacentre/news/releases/2007/pr37/en/index.html

Table10: Block wise Information of HIV/AIDS in District Hoshiarpur

BLOCK PHC	No of patients		No of patients taking ART	
	M	F	M	F
Bhunga	-	-	-	-
Mand Mander	2	1	-	-
Possi	6	-	-	-
Chakowal	87	60	16	9
Harta Badla	31	22	8	5
Paldi	5	5	-	1
Budhabar	-	-	-	-
Hajipur	6	1	2	1
Tanda	5	7	4	-

Source: Office of Civil Surgeon, Hoshiarpur

Prevalence of Diseases in the Villages – Based on the Findings of Primary Survey

Information on the prevalence of major diseases in the villages was sought from the ANMs of selected SCs. In the opinion of ANMs Tuberculosis (TB) was the most prevalent disease (97.2 percent) in the villages. The reason for the high prevalence of TB can be attributed to high proportion of floating population, unhygienic living conditions, poverty, unsafe drinking water, smoking, overpopulation, consumption of poor quality of alcohol, lack of awareness, and pollution, etc.

Table 11: Opinion of ANMs regarding Prevalence of Tuberculosis

Number of cases	2007-08	2006-07	2005-06
	No. of Villages		
Less than 5	8	10	7
5-10	16	12	14
11-15	4	1	-
More than 15	1	3	1

The second most common prevalent diseases was HIV (16.6 percent), anaemia (16.6 percent) followed by seasonal infection (11.1%). Other diseases, which are prevalent, are skin allergy, dental infection, worm infestation, diabetes, etc.

Table 12: Opinion of ANM regarding Prevalence of Diseases

Diseases*	Percentage
Tuberculosis	97.22
HIV	16.67
Anaemia	16.67
Seasonal Infection	11.11
Skin Allergy	8.33
Dental Infection	5.56
Worm Infestation	5.56
Others	5.56
Diabetes	2.78

* Multiple Responses

Most of the patients (95 percent) suffering from various diseases consult the health facility regularly. Among them 83 percent consult doctor in the preliminary stage, 14 percent in the second stage and 3 percent consult in the last stage.

In the primary survey, information was collected on self reported morbidity as reported by the respondent. Information on morbidity was taken for a reference period of one month prior to the survey. It includes incidence/spell of ailment/illness suffered by any member of the household. Similarly information on hospitalization was collected - whether any member of the selected household (indoor patients) was hospitalized within one year prior to the survey.

The findings reveal that prevalence of morbidity was reported to be 126 per thousand population in rural Hoshiarpur. According to 60th round (2004)[3] of NSS survey morbidity prevalence was 88 for rural India and 137 for rural areas of Punjab which was second highest in the country after Kerala. Gender differentials existed as proportion of females reporting sickness was higher than their male counterparts. The results reveal that the reported morbidity prevalence rate was higher among females (138 per thousand population) as compared to males (113 per thousand).

In this study the hospitalization rate was 43 per thousand population which is much higher than 23 per thousand population for rural India. (Ghosh and Arikoswamy, 2007).[4] Sex differences are observed in the hospitalization rate of males (40) and females (46) which are relatively much higher as compared to 23 for males and 22 for females at national level.

Age is an important determinant of morbidity. The prevalence of morbidity was highest (225) among the aged, i.e., 60 years and above, followed by those in age group 45-59 years (220) and among very young children prevalence was 158 and it was the lowest among 5-9 years age group. People aged 15-44 years were the healthiest having a low prevalence of 80 per thousand population. The findings show a J shaped relationship between age and morbidity and an indication that elders and children are susceptible to prevalence of illness as shown in other studies (Ghosh and Arokiaswamy, 2007).

[3] Health Care and Condition of the Aged, NSSo 60th Round (2006) . Ministry of Statistics and Programme Implementation, Govt. of India.
[4] Morbidity in India: Trends, Patterns and determinants. Paper presented at Union for African Population Studies. Fifth Population Conference , Tanzania, Dec 2007.

Table 13: Morbidity Prevalence by Age and Sex

Age Group	Male	Female	All
0-4	169	147	158
5-9	78	94	85
10-14	106	73	90
15-44	68	91	80
45-59	172	268	220
60+	219	231	225
Total	113	138	126

Age and sex differentials exist. Data reveal that prevalence of morbidity among males was higher among elderly, i.e., 60 years and above and in age group 45-59 years. In case of females, prevalence of morbidity was highest in age group 45-59 and 60 years and above. In fact, there is no consistent pattern in prevalence of morbidity among different age groups among males and females. More young male children in age group 0-4 and 10-14 years were found to be ill than females in the same age group.

Table 14: Hospitalization Rate by Age and Sex

Age Group	Male	Female	All
0-4	63	15	38
5-9	11	13	12
10-14	38	21	30
15-44	23	27	25
45-59	74	94	83
60+	73	115	94
Total	40	46	43

Age and sex differentials were evident in the hosptialized cases. Hospitalization rate was high among people in age group 45-59 years and 60 years and above, followed by very young children in age group 0-4 years and more so among males in age group 0-4 years. The probable reason for high hospitalization rates among young male children (0-4 years) could be that males are given preferential treatment in seeking health care than female children in the same group. Females have relatively higher hospitalized rate among elderly aged 60 years and above.

Type of Illnesses

Nature of morbidity includes a mixture of diseases. The ailments have been classified into 12 categories. The most common ailments reported by the respondents were allergy, fever, urinary disorder, sore throat, common cold, tonsillitis, cough, migraine, headache which may be attributed to seasonal variation, followed by ailments

related to stomach and heart. The data reveal that nearly 8 percent respondents mentioned having more than one health problem, i.e. co morbidity. Age and sex differences are observed in the nature of morbidity.

Table 15: Type of Illness by sex

Type of Illness	Male	Female	Total
Common Ailment	46 (37.4)	65 (45.1)	111 (41.6)
Stomach Ailment	17 (13.8)	19 (13.2)	36 (13.5)
Heart and related ailment	23 (18.7)	9 (6.2)	32 (12.0)
More than one ailment (BP& diabetes, BP & Arthritis, BP & Asthma	10 (8.1)	11 (7.6)	21 (7.9)
Joint and Muscle ailment	5 (4.1)	11 (7.6)	16 (6.0)
Infectious diseases	4 (3.2)	10 (6.9)	14 (5.2)
Chest Ailment	4 (3.3)	7 (4.9)	11 (4.1)
Neuro disorder	7 (5.7)	3 (2.1)	10 (3.7)
Others(Depression, Anaemia, Accident, Dog Bite, Piles)	4 (3.3)	3 (2.1)	7 (2.6)
Diabetes	1 (0.8)	4 (2.8)	5 (1.9)
Skin Problem	1 (0.8)	1 (0.7)	2 (0.7)
Eye Problem	1 (0.8)	-	1 (0.4)
Cancer	-	1 (0.7)	1 (0.4)
Total	**123**	**144**	**267**

(Percentage is given in the parenthesis)

The results indicate that among males common ailments are the most prominent as reported by 37 percent respondents. Another 18.7 percent mentioned heart related problems, 13.8 percent stomach related ailments. In case of females 45 percent of them reported that they suffered from common ailments – proportion reporting common ailments was higher among females than males. Another 13 percent suffered stomach related ailments and nearly an equal proportion, i.e, 7 percent each from infectious diseases and joint and muscle problems. A comparative analysis of nature of ailment reveal that higher percent of males suffered from heart and its related ailments whereas in case of females stomach related ailments.

Thus prevalence of morbidity continues to be high in rural areas of Hoshiarpur. Age and sex differentials are observed. Gender gap also exists. Young children and the aged 60 years and above suffers from illnesses. The most prominent ailments reported were common ailments like allergy, fever, sore throat, common cold followed by stomach ailments.

Drug Abuse

Incidences of alcoholism and drug abuse are increasing in the district leading to a number of social and economic problems. It is difficult to make an assessment of incidence of drug abuse in district Hoshiarpur. However during the field work it was observed that a large number of school children have fallen prey to drug abuse. The reason why school children have fallen prey to drug abuse is the fact that there are nuclear families and parents spend lesser time with their children and there is easy flow of money. Children leave their house to go to school but in reality never attend school and this is common among high school adolescent boys. Most of school children are getting hooked to drugs for the thrill of it and out of curiosity. At present there are two drug de-addiction centres in Hoshiarpur city which are being run by NGOs and there is a need to open more de-addiction centre at block level as there is an increase in proportion of drug addicts in the district.

To gauge the magnitude of Drug Abuse an extensive study was undertaken in 2001 by Institute of Development and Communication (IDC). The extent of drug abuse in Punjab is confined to a great extent to Doaba region with nearly 69 percent of households reporting drug addict while in Majha it was 64.7 percent followed by 61 percent in Malwa whereas alcohol consumption was highest in Majha and least in Malwa. Drug addiction was found to be more prevalent in rural areas. The study highlights that drug abuse was found to be more prevalent among educated youth. Farmers and labourers form a significant section of addicts. Chemists and drug peddlers are the major source of drugs. Major reasons for indulgence in drugs are peer group influence and distressing home environment. Also thrill seeking and curiosity have emerged as important factors especially among the youths.

Role of NGOs in Health

During the past two decades, relevance of the role of voluntary sector has been in focus in India. India has a large network of voluntary organisations working in the field of health and education, in both rural and urban spheres. A large number of such organisations are making significant contributions in this direction in the state of Punjab.

With the objective of associating voluntary organisations in development and social welfare activities in an appropriate manner, the State Government is providing sizeable monetary assistance to such organisations to enable them to play a notable role in

the development process. The target sectors for voluntary organisations are elementary and adult education, vocational training of adolescent girls and women from poor and needy families, Reproductive and Child Health Programme, National Health Programme and environmental improvement of urban slums and welfare of SCs/BCs, etc. The emphasis is on encouraging self employment through skill formation. Leading institutions in specific areas are suitably involved in providing gainful employment to the unemployed/under employed youth. While adopting the neglected segments of the society, the endeavour is to encourage community participation to the optimal extent both in planning and implementation with the help of mass based self-reliant organisations and to take up projects to sustain the achievements already made. The aim of the Government is to reach the most needy in the society through an innovation and experimentation of the NGOs.

The State Government took a major initiative to involve voluntary organisations in the field of Reproductive and Child Health Programme (RCH) through SOSVA.

The programmes of these field NGO's include:-

a) To develop network between government health personnel and NGO's with a view to take maximum advantage of government infrastructure.
b) Promotion of safe motherhood through ante-natal/natal and post-natal care
c) Child survival through immunization
d) Prevention and treatment of RTIs and STDs
e) Health sexuality and general information to adolescent boys and girls;
f) Effective referral system
g) Nutritional services to vulnerable groups
h) Women empowerment, skill development for poor girls through training in computer, cutting and tailoring etc.
i) Drug de-addiction projects.

There are host of Non Government Organizations (NGOs) who are working in the district to provide health related services to people. They organize health camps from time to time where patients are treated, undergo physiotherapy and provided treatment for rehabilitation of disabled persons with modern equipments to deal with various chronic disorders related to bones, joints, muscles, etc. One of them is Indian Red Cross Society which was established in 1920 under Act XV of Government of India. The district Red Cross branch Hoshiarpur was started in 1948. It is a voluntary organization providing

relief in times of disaster and emergencies. The main sources of income of the society are collection from Lucky Bag Funds, membership subscription, contributions and donations etc. The core areas of working of Red Cross are as:

- Promoting humanitarian principles and values
- Disaster response
- Disaster preparedness
- Health and care in the community

Health and community has become a cornerstone of humanitarian assistance. It also aims to enable communities to reduce their vulnerability to diseases and prepare for and respond to public health crisis.

In district Hoshiarpur four activities had been organized by Indian Red Cross Society during 2007-08, i.e. one at Dasuya and three at Hoshiarpur. During this, 20,231 beneficiaries were treated for various ailments in the district. Out of the total, 3374 were expectant mothers and children who got the treatment (District Red Cross Society, Hoshiarpur).

Table 16: Activities of Indian Red Cross Society

Block	No. of Prog.	Name	Activities	Beneficiaries
Dasuya	1	Sub Health Bureau at Village Bodal	Provide treatment to the patients in the Allopathic System of Medicines	5283
Hoshiarpur	3	1.Maternity and Child Health Care Centre at Red Cross Building, Hoshiarpur. 2.Homeopathic Dispensary at Red Cross Building, Hoshiarpur 3. Physiotherapy Centre at Civil Hospital, Hoshiarpur	1.Care of the children and expectant mothers during the pregnancy and after delivery 2.To provide treatment to the patients in the Homeopathy System of Medicines 3.To provide exercise and treatment for rehabilitation of disabled persons and diseased persons with modern equipments to deal with chronic disorders	3374 3968 7606

Source: Secretary, Indian Red Cross Society, Hoshiarpur, 2008

Besides Indian Red Cross Society, there are several others organisations like Lion Club, Rotary Club, Star Sports Club, National Youth and Development Centre, Shri Guru Nanak Education and Social Society, Subhkarman Society and ASHADEEP Welfare Society etc. who conducted various health related programmes in district Hoshiarpur like registration of pregnant women, ANC check up, seminar on female foeticide, general awareness camp, Drug de-addiction, blood donation camp, Eye camp, eye donation camp,

polio camps, dental camps, counseling on HIV/AIDS and also provide medicines. They also provide free ambulance service.

Overall, there were 15,768 beneficiaries in the various camps organized by different NGOs. These camps were held in different blocks of District Hoshiarpur.

Table 17: Activities organized by NGOs in Health in District Hoshiarpur

Block PHC	No. of NGOs	Activities	Beneficiaries		
			M	F	T
Bhunga	-	-	-	-	-
Mand Mander	1	OPD, , Laboratory, X-Ray, ECG	1270	1627	2897
Possi	-	-			
Hajipur	2	Seminar, Registration of Pregnant women, Health Check-up, IFA tablets, Ambulance services	724	2427	3151
Talwara	2	Medical Camp, General Awareness Camp, National Days, Blood Donation Camp	1936	2946	4882
Chakowal	2	Health Services, Provide Medicines,	1290	1725	3015
Harta Badla	3	Blood Donation Camp, Medical Check-up Camp, Eye Camp	50	*	50
Paldi	2	Medical and Dental Camp, Eye Camp and Eye Surgery	118	128	246
Budhabar	2	Nil	-	-	-
Tanda	3	Awareness Camp regarding social evils, Annual Free Eye Camp	775	440	1215
Hoshiarpur*	6	Awareness on TB and De-addiction, Counseling on HIV/AIDS, Blood and eye donation, dental checkup.	292	20	312

Source: Office of Civil Surgeon Hoshiarpur, 2008

* Complete Data not available

Part B

Public Health Infrastructure

Eleventh Five Year Plan (2006-11) recognizes at the outset that unless people have access to basic services like health, education, clean drinking water and sanitation, they may not get their due share in the benefits of growth. The problem of access of people to such basic services is more severe in rural areas.

Rural health infrastructure facilities are based on nationally accepted norms as per the Bhore Committee recommendation which have been modified from time to time. Health facilities are based on three tier system, i.e. Sub centre (SC) at the grassroot/lowest level, Primary health centre (PHC), Community health centre (CHC) for primary health care, while District and specialized medical institute for providing secondary and tertiary care services.

Primary Health Centres are the cornerstone of rural health services- a first port of call to a qualified doctor of the public sector in rural areas for the sick and those who directly report or referred from Sub-centres for curative, preventive and promotive health care. The Sixth Five Year Plan (1983-88) proposed reorganization of PHCs on the basis of one PHC for every 30,000 rural population in the plains and one PHC for every 20,000 population in hilly, tribal and desert areas for more effective coverage with 4-6 indoor/observation beds. It acts as a referral unit for 6 sub-centres and refer out cases to CHC (30 bedded hospital) and higher order public hospitals located at sub-district and district level. These requirements are being projected based on the basis of 40 patients per doctor per day.

The nomenclature of a PHC varies from State to State that include Block level PHCs (located at block headquarters and covering about 1,00,000 population and with varying number of indoor beds) and additional PHCs/New PHCs covering a population of 20,000-30,000, etc

Table 18: Public Health Facilities by Districts of Punjab

S. No	Name of district	SC	SHC	PHC	RH	CHC	SDH	DH
1	Amritsar	171	88	22	2	4	2	1
2	Barnala	73	35	8	3	3	1	1
3	Bhatinda	129	60	17	3	9	2	1
4	Fatehgarh sahib	72	23	13	2	2	3	1
5	Faridkot	62	20	9	0	2	2	1
6	Ferozpur	204	79	36	3	6	3	1
7	Gurdaspur	274	113	41	2	14	2	1
8	**Hoshiarpur**	**235**	**85**	**36**	**3**	**9**	**4**	**1**
9	Jalandhar	198	95	30	5	10	2	1
10	Kapurthala	88	44	10	3	4	2	1
11	Ludhiana	245	109	35	5	8	5	1
12	Mansa	103	37	12	2	3	2	1
13	Moga	121	52	21	1	3	1	1
14	Muktsar	102	43	19	3	4	2	1
15	Nawashahar	95	47	15	2	3	1	1
16	Patiala	180	61	33	21	8	3	1
17	Ropar	83	30	14	2	2	1	1
18	Sangrur	193	68	32	4	7	3	1
19	SAS Nagar	72	45	12	0	2	1	1
20	Taran taran	162	62	19	2	9	1	1
	Total	2862	1196	434	48	112	43	20

Source**:** State Programme Implementation Plan of NRHM, Punjab, 2008-09

Table 18 provides details of the public health facilities in all the districts of the state. Besides the above facilities, there are 2 TB and Chest Diseases Hospitals and 13 TB Clinics; 3 Mobile Eye Hospitals (Ferozepur, Jalandhar, and Sangrur), and Mobile Eye Teams in 3 districts (Gurdaspur, Faridkot, Ludhiana). There are also 116 Urban Health Centres, 7 ESI Hospitals and 71 ESI dispensaries. Among all the district of Punjab, Gurdaspur has the highest number of institutes in rural areas providing primary health care followed by Ludhiana. Hoshiarpur district occupies the third position. District Faridkot has the least number of health institutes.

According to Table 19 for the state of Punjab there is one secondary health facility available for a population of 80,000 people and also in District Hoshiarpur for every 80,000 persons one secondary health facility is available. Inter district differences are observed. District

Table 19: District –wise Coverage of Rural Population by Secondary Health Facilities in Punjab

S. No	Name of District	Rural Population 2007-08 (Projected in lakhs)	No. of secondary Health facilities	Ratio of rural population to secondary facilities
1	Amritsar	11.9	9	1.3
2	Barnala	3.2	8	0.4
3	Bhatinda	9.0	15	0.6
4	Fatehgarh Sahib	3.9	8	0.5
5	Faridkot	4.2	5	0.8
6	Ferozpur	14.1	13	1.1
7	Gurdaspur	17.1	19	0.9
8	**Hoshiarpur**	12.9	17	0.8
9	Jalandhar	11.2	18	0.6
10	Kapurthala	5.5	10	0.6
11	Ludhiana	14.6	19	0.8
12	Mansa	5.9	8	0.7
13	Moga	7.8	6	1.3
14	Muktsar	6.3	10	0.6
15	Nawashahar	5.5	7	0.8
16	Patiala	11.3	13	0.9
17	Ropar	5.3	6	0.9
18	Sangrur	9.5	15	0.6
19	SAS Nagar	5.0	4	1.3
20	Taran taran	8.9	13	0.7
	Total	173.3	223	0.8

Source**:** State Programme Implementation Plan of NRHM, Punjab, 2008-09

Barnala provides better access to health facility. In districts Amritsar, Moga, Ferozpur, SAS Nagar one secondary health facility caters to more than one lakh population and there is a need to open more secondary level health facilities.

Hoshiarpur district is divided into nine health block level PHCs: Bhunga, Man Mandher (Dasuya), Possi (Garhshankar), Chakowal (Hoshiarpur-I), Harta Badla (Hoshiarpur-II), Paldi (Mahilpur), Budhabar (Mukerian), Hajipur (Talwara) and Tanda. The administrative control of the blocks is within the block PHCs.

According to Bulletin on Rural Health Statistics in India (2008) there are 234 SCs, 37 PHCs, and 9 CHCs in District Hoshiarpur. On the other hand the information provided by the Office of Civil Surgeon, Hoshiarpur, (2009) there are 384 health institutes which include 7 hospitals (3 rural and 4 civil hospitals). The Civil hospital located in Hoshiarpur is 200 bedded hospital, Dasuya hospital is 100 bedded and Mukerian and Garhshankar hospitals are 50 bedded each. There are 9 CHCs, 30 PHCs (4 PHCs and 26 Mini PHCs), 244 SCs, 85 Subsidiary Health Centres (SHC) and 9 Civil Dispensaries. SHC are under the control of Panchayati Raj Institution (PRI) i.e. under Zila Parishad. Besides this there are 53 AYUSH dispensaries, 10 Tuberculosis Centres and 1 Urban Family Welfare centres. (UFWCs) and one MCH centre. There is no CHC in block Harta Badla and Possi, while block Bhunga and Hajipur have two CHCs each.

Table 20: Health Infrastructure in District Hoshiarpur-2008-09

BLOCK PHC	Total pop#	Rural Hosp	CHCs	Block PHCs	Mini PHCs	SHC*	CD	SC	No.of Ayush Disp.	Div/ civil hosp.	No of TB/MCH/ UFWC Centres
Bhunga	148180	-	2	-	1	12	1	30	5	-	1
Mand Mander	162904	-	1	-	3	7	-	24	4	1	1
Possi	184289	2	-	1	4	10	-	32	9	1	1
Chakowal	151506	-	1	1	4	10	-	29	4	-	1
Harta Badla	149535	1	-	1	3	9	-	27	4	-	1
Paldi	142376	-	1	1	3	12	-	29	6	-	1
Budhabar	184302	-	1	-	4	9	-	22	9	1	3
Hajipur	125340	-	2	-	2	7	-	25	7	-	-
Tanda	141827	-	1	-	2	9	-	26	5	-	-
HSP City	158037	-	-	-	-	-	8	-	-	1	3
Total	**15,48,296**	3	9	4	26	85	9	244	53	4	12

#Population for the year 2006-07
*SHC are now under the control of Zila Parishad
Source: Office of Civil Surgeon, Hoshiarpur

Private Health Services

During the last few years there has been a significant growth of private health in the state. According to the information provided by Indian Medical Association Hoshiarpur Branch there were 225 Registered Medical Doctors in the district and 64 Nursing homes covered under the PNDT. Apart from this there are Rural Medical Practitioners in practically every village and there is no official record of these doctors. In fact the private health sector dominates health care services.

Status of Public Health Infrastructure

In district Hoshiarpur, 35.2 percent sub centres, 63.3 percent PHCs and all the 9 CHCs are functioning in government buildings, whereas 60.2 percent SCs and 36.7 percent PHCs are functioning in a Panchayat building (Facility Survey (2009), Office of Civil Surgeon Government of Punjab).

In Punjab 64 percent sub centres, 83 percent PHCs and 92 percent CHCs are functioning in government building, while rest of the health centres are functioning either in rented or rented free panchayat/voluntary society buildings. (Bulletin on Rural Health Statistics, MOHFW, 2008).

Sub Centre Building

Table 21 reveals that the majority of the SC buildings are not in good condition. Only 35.2 percent sub centres, 56.7 percent PHCs and 89 percent CHCs buildings are in

good condition. It is important to mention that a large majority of the SCs are located within the village.

More than half of the SCs and nearly all PHCs and CHCs have electricity. Furthermore 78 percent CHCs have alternative arrangements for electricity in the form of gensets and invertors. Basic facility of water supply in available in all the PHC and CHCs

Table: 21 Status of the Public Health Infrastructure in the District

Indicators		**CHC (N=9)**	**PHC (N=30)**	**SC (N=244)**
Building	Govt.	9 (100)	19 (63.3)	86 (35.2)
	Panchayat	-	11 (36.7)	147 (60.2)
	Rented/Others	-	-	11 (4.5)
Condition of the building	Good	8 (89.0)	17 (56.7)	86 (35.2)
	Fair		13 (43.3)	117 (48.0)
Location- within the village locality		-	-	232 (95.0)
Water supply	Yes	9 (100)	30 (100.0)	153 (62.7)
Tap water	Yes	8 (89.0)	23 (76.7)	-
Electricity		9 (100)	29 (96.7)	124 (50.8)
Power back up		7 (78.0)	-	-
Toilets		9 (100)	-	108 (44.3)
Staff quarter		8 (89.0)	11 (36.7)	75 (30.7)
Telephone facility		8 (89.0)	8 (26.7)	-
Labour room		9 (100)	7 (23.3)	-
Operation theatre		9 (100)	8 (26.7)	-
Laboratory		9 (100)	19 (63.3)	
24x7 services		-	13 (43.3)	-

Source: Facility Survey (2009), Office of Civil Surgeon Government of Punjab.
Note: Percentages are in parenthesis.

and tap water is the major source of water supply. In case of SCs, less than two- thirds have the facility of water supply. Nearly 31 SCs, 37 percent PHCs and 89 percent CHCs

have staff quarter. Majority of the staff quarters attached with SCs are not in good condition.

None of the SCs have telephone facility at its premises and only 26.7 percent PHCs have telephone facility with them, while nearly all CHCs have this facility. Availability of the labour room is essential for promoting institutional deliveries but none of the SCs have labour room. Only 7 PHCs and all CHCs have the facility of labour room. The facility of Operation Theatre is available in one- fourth of PHCs and less than 50 percent are functioning as 24x7. Thus it may be pointed out that the SCs, PHCs, CHCs have not been upgraded as per the Indian Public Health Standards.

Well equipped and furnished Sub Centre

The findings of the facility survey conducted in the District Household Level Survey (DLHS-3) in Hoshiarpur district (IIPS-DLHS3-RCH, 2007-08), indicates that all the 13 CHCs in the district have Operation Theatre, 11 CHCs have labour room and none of the CHC's were having blood storage facility. Availability of Ambulance on road was reported in nine CHCs.

Health - Human Resource

Human resource for health is increasingly recognized as crucial to the improvement of the health system. India's existing disease burden, the changing

demographic and disease profile reflect a critical need for adding more health workers in order to achieve even modest coverage for essential health interventions.

Human resources in health can be defined as the stock of all individuals engaged in promoting, protecting or improving the health of populations. This includes the formal health care sector – private for-profit and non-profit systems, the public sector and different domains of health systems, such as personal curative and preventive care, non-personal public health interventions, health promotion and disease prevention. It also includes the informal health care sector, including traditional healers and volunteers.

National Rural Health Mission tries to provide in every locality a trained health worker-a married woman known as ASHA who is preferably educated, trained to promote good health behaviour, recognize early signs of the onset of disease (for treatment if minor or referral if serious), run a drug depot to provide essential medicines for minor ailments and help communities access health care services. The vision is for her to be from the community, responsible and accountable to them.

The types of human resources for health for managing the public health system in India have been largely influenced by prevailing health situation on the recommendations of the Bhore Committee (1946), and various other committees of the government.

The term health manpower includes both professional and auxiliary health personnel, who are needed to provide health care. The health manpower is based on a series of accepted ratios such as doctor-population ratio, nurse-population ratio, bed-population ratio, etc. Table 22 describes the norms suggested by Mudaliar Committee (1961).

Table 22: Suggested norms for Health Personnel

Serial No.	Category of Personnel	Norms Suggested
1	Doctors	1 per 3500 population
2	Nurses	1 per 5000 population
3	Health Worker Female (ANM)	1 per 5000 population
4	Pharmacist	1 per 10,000 population
5	Laboratory Technician	1 per 10,000 population

In the Punjab state there are 8023 ANMs available for 1,27,28,285 persons. In Hoshiarpur district there are 6699 ANMs available for nearly 13 lakh rural population and it is occupies 6th position in the state as far as the ratio of coverage of ANM to rural

population is concerned. In district Fatehgarh Sahib one ANM on an average covers 4646 population while in Ferozpur district the situation is bad as one ANMs covers nearly 19,000 population. Thus there is a need to appoint more ANMs so has to reduce their coverage of population.

Table 23: Ratio of ANMs to Rural population in Districts of Punjab

S. No	Name of district	No. of ANMs existing on Dec. 2007	Rural Population Projected 2007(in lakhs)	Ratio of ANMs to Rural population
1	Amritsar	133	1188748	8939
2	Barnala	60	321316	5365
3	Bhatinda	118	904373	7664
4	Fatehgarh Sahib	84	388623	4626
5	Faridkot	46	420872	9149
6	Ferozpur	75	1408967	18786
7	Gurdaspur	173	1706234	9863
8	**Hoshiarpur**	193	1292914	6699
9	Jalandhar	178	1121149	6299
10	Kapurthala	80	552541	6907
11	Ludhiana	183	1456673	7960
12	Mansa	50	594202	11884
13	Moga	118	779012	6602
14	Muktsar	84	629657	7496
15	Nawashahar	88	550841	6260
16	Patiala	90	1130394	12560
17	Ropar	65	530341	8159
18	Sangrur	145	954363	6582
19	SAS Nagar	53	502420	9480
20	Taran taran	144	894605	6213
	Total	2160	17328845	8203

Source**:** State Programme Implementation Plan of NRHM, Punjab, 2008-09

According to data available from the Office of Civil Surgeon, Hoshiarpur, there were 233 doctors including 85 working under Zila Parishad, 141 nurses, 238 ANMs, 95 pharmacists and 64 laboratory technicians, who are covering a total population of 1548296 persons in district Hoshiarpur. However it may be mentioned that there is a dearth of specialists in the district.

Table 24: Medical and Para-Medical Staff in District Hoshiarpur 2006-07

Block PHC	Doctors	Doctors Under PRI	Staff Nurse	ANM	Pharm.	Lab.Tech.	
Bhunga	8	12	7	28	15	4	
Mand Mander	26	7	19	25	16	8	
Possi	22	10	22	20	14	10	
Chakowal	13	10	5	27	15	4	
Harta Badla	5	9	6	28	6	6	
Paldi	11	12	10	18	9	7	
Budhabar	9	9	21	26	8	9	
Hajipur	12	7	9	25	4	5	
Tanda	9	9	-	26	3	3	
Hoshiarpur Civil Hospital	33	-	42	15	5	8	
Total	148	85	141	238	95	64	

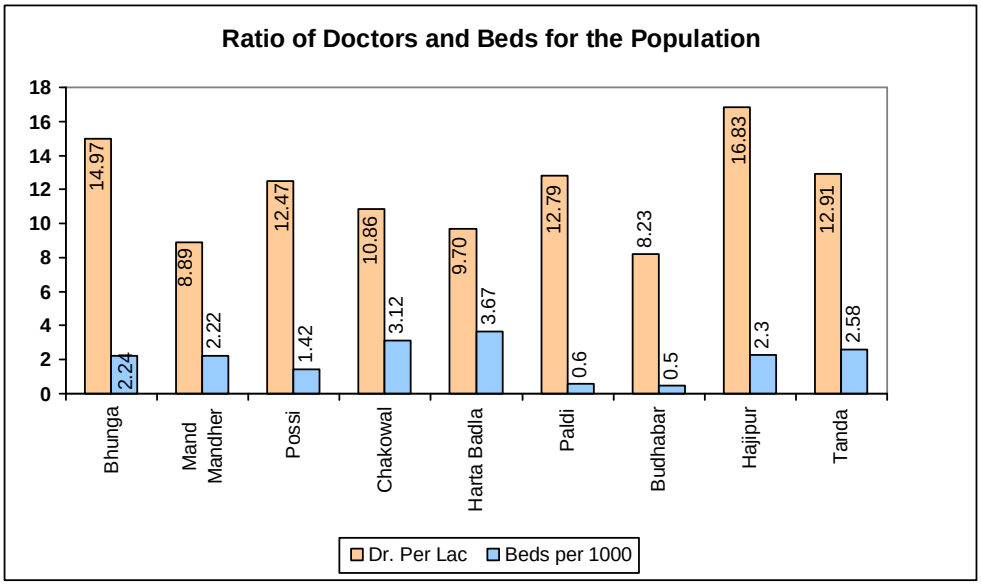
Source: Office of Civil Surgeon, Hoshiarpur

The analysis of the data at district level reveals that there are nearly 15 doctors per lakh population. During the period 2006-07, nearly 27 percent of the total rural population sought treatment from government sector both as in and out patients. Table 25 reveals that PHC Mand Mander (49 percent) had the highest proportion of patients and lowest at PHC Paldi (5 percent). The proportion of in-patients was highest in PHC Tanda followed by PHC Hajipur. There were no in patients at PHC Harta Badla.

Table 25: Ratio of Doctors and Beds for the rural population (2006-07)

Block PHC	Total Rural Population	Dr	Dr per Lakh	Hosp. Beds	Bed per 10,000	No. of In-patient	% of In-patient	No. of Out-patient	% of Out-patient	Total no. of Patient	% of Total patient
Bhunga	133568	20	14.97	30	2.24	1337	1.00	23085	17.28	24422	18.28
Mand Mander	134897	12	8.89	30	2.22	636	0.47	65790	48.77	66426	49.24
Possi	168353	21	12.47	24	1.42	162	0.09	72140	42.85	72302	42.94
Chakowal	147234	16	10.86	46	3.12	None	None	45020	30.58	45020	30.58
Harta Badla	144195	14	9.70	53	3.67	381	0.26	39263	27.22	39644	27.49
Paldi	132246	17	12.79	8	0.60	73	0.05	6028	4.53	6101	4.59
Budhabar	157920	13	8.23	8	0.50	410	0.25	19321	12.23	19731	12.49
Hajipur	112856	19	16.83	26	2.30	1761	1.56	41632	36.88	43393	38.44
Tanda	116103	15	12.91	30	2.58	2556	2.20	18051	9.31	20607	17.75

Intra district analysis depicts that the doctor per lakh population was lowest in PHC Budhabar block closely followed by Man Mander whereas it was highest in Hajipur. The hospital bed per ten thousand population was abysmal low –even less than one bed in Paldi and Budhabar. Thus, efforts must be made to fill vacant position of doctor and increase number of beds in PHCs and CHCs as some of the PHCs and CHCs do have the stipulated norm of 6 beds in PHC and 30 beds in CHCs.



Availability of Health Facilities in Villages: Based on Findings of Primary Survey

As already mentioned a primary survey was undertaken in 40 villages (selected through multi Stage stratified sampling) of Hoshiarpur district and 10 urban wards. Information was sought on availability of government and private health facilities in selected villages. Regarding the availability of government health facility in sampled villages, data reveal that out of selected 40 villages only one village, i.e., Bhunga there was a Primary Health Centre and Community Health Centre. Besides this, in block Harta Badla there was one mini PHC in Mohrawali village. On an average the nearest PHC from the sampled villages was at a distance of 6.5 kms, while, the distance of CHC was even further, i.e., 8.2 kms.

With regard to accessibility of sub centre in villages, 42.5 percent of sampled villages had the sub centre facility in the village itself and the remaining 57.5 percent villages did not have a sub centre. In non sub centre villages, 70 percent of sub centres were located at a short distance of 2 kms and in 30 percent villages the sub centre was at a distance of 3 or more kms. Only in one village the nearest health facility was at a distance of 5 kms.

Thus, it can be stated that by and large the health facility is within an easy reach in villages of Hoshiarpur district. However to seek the services of medical doctor the people have to travel some distance.

Further analysis indicates that in only three villages Government Ayurvedic Dispensary (GAD) was available and in remaining villages GAD was located at a distance ranging from 1 km. to 25 kms. On an average the nearest GAD facility was available at a distance of 7.50 kms. Thus there is a dire need to popularize Indian System of Homeopathic Medicine (ISHM) in villages by opening more of Ayurvedic dispensaries in villages. Also one of the objectives of NRHM is to revitalize local health traditions and mainstream AYUSH.

Private Health facility was available to a large extent in villages of Hoshiarpur district. Nearly 68 percent of sampled villages were reported to have private doctor/private clinic, while in remaining villages private clinic/private doctor was accessible within a distance of about 3 kms. However, only one- fifth of villages had a chemist shop and in the remaining villages the nearest chemist shop was located at an average distance of 4 kms. Only one village Miani in Tanda Block having a population of approximately 18,000 had a private hospital. Similarly, there was only one nursing home in village-Lambra under Chakowal block whereas in other villages nursing homes are accessible at an average distance of nearly 8 kms.

Availability of Service Provider's

In all the 40 villages except 3 there was an anganwari centre along with an anganwari worker. The three villages which did not have an anganwari centre are small sized villages having a population of 500 while the prescribed norm of having an anganwari centre is for every one thousand population.

One of the key strategies of NRHM is the appointment of female Accredited Social Health Activist (ASHA) to promote and facilitate access to health services. It is envisaged that ASHA would reinforce community for universal immunization, safe delivery, care of newborn, prevention of water borne and communicable diseases, nutrition and sanitation. ASHA is being provided in each village having 1000 population. The findings reveal that more than two-thirds of the villages (67.5 percent) ASHA workers have been appointed and in remaining villages ASHA workers have not been selected. According to the information provided by district health authorities' 80 percent

ASHA workers were been appointed before 31st March 2008 and 20 percent ASHA workers would be appointed in the year 2008-09. Thus, it is expected that when the process of selection of ASHA workers is complete then in all the villages ASHA will be available.

The findings of the survey reveal that in 37.5 percent villages trained dai was available while in 62.5 percent trained dai was not available. As mentioned above that there were 17 villages where SC was located and in all the 17 sub centres ANM was in position and no post of ANM was vacant in these 17 sub centres

Private doctor in the villages was available to a large extent in the selected villages. The data show that in two-thirds of the villages Private Doctor was accessible and in one-third villages no private doctor was available. The probable reason for non availability of private doctors in these villages is that size of the village is small and having less population.

Thus, it can be stated that government health facilities are available in medium and large sized villages and this is true in case of availability of Private doctors. Efforts should be made to improve the connectivity of small sized villages with those villages having health facilities by improving the availability and frequency of public transport system.

Facility Survey of Sub Centres

During the primary survey an attempt has been made to assess the type of health facilities available at the grassroot level in the sampled villages. Hence a Facility survey of the Sub centres was done which were either located in the village itself or the nearest sub centre of the villages were taken.

In the facility survey information on infrastructure, equipment, supplies and other facilities available at sub centre was collected of 36 sub centres from the ANMs in district Hoshiarpur. From two sub centre information was not collected as the post of ANM was vacant.

The distribution of the Sub centres covered in each block for facility survey is shown in Table 26. The findings reveal that on an average 3-4 sub centres were covered in each block PHC except two blocks where 5 and 8 sub centres are covered. Out of total 36 sub centres covered, 17 are located within the selected villages while the remaining

SCs were at a distance ranging from less than one km to 7 kms. It may be pointed out that one sub-centre named Mehadpur which falls in Hajipur block was functioning from PHC Budhabar which is located at a distance of 2 kms from Mehadpur village although in the official record the sub centre is located in Mehadpur itself. Majority of the villages have road connectivity with sub centre village.

Table 26: Number of Sub centres covered in each block in District Hoshiarpur

Block PHC	No of SCs	Percentage
Bhunga	3	8.3
Mand Mander	4	11.1
Possi	4	11.1
Chakowal	3	8.3
Harta Badla	2	5.6
Paldi	4	11.1
Budhabar	8	22.2
Hajipur	3	8.3
Tanda	5	13.9
Total	36	100.0

Each sub centre, on an average covers 6.78 villages and an average population of 5692. However, there is wide variation in population being covered by sub centres. The findings of the survey reveal that 8 percent of the sub centres covered 1-3 villages, 30 percent covered 4-5, 36 percent 6-8 villages and 25 percent covered 9-13 villages. One of the reasons for large number of villages being covered by each sub centre was that the size of villages are small in Hoshiarpur district.

Table 27 reveals that nearly 6 percent of the sub centres covered population less than 3000 persons, 28 percent covered population in the range of 3000-5000. Approximately half of the SCs covered population ranging 5000-7000 and 19 percent 7000-11000 population. In other words, nearly two-thirds of the SCs covered population of more than 5000.

Table 27: Number of Villages and Population covered by each SC

No. of villages	No of SCs	Percentage
1-3	3	8.3
4-5	11	30.5
6-8	13	36.1
9-13	9	25.0
Population		
1000-3000	2	5.6
3000-5000	10	27.8
5000-7000	17	47.2
7000-11000	7	19.4

Physical Infrastructure

It has been noted that seven out of 10 sub centres do not have their own buildings. They are functioning either in panchayat buildings or in buildings donated by voluntary organizations in the village. The condition of the buildings of 28 percent sub centres was found to be good and satisfactory, while the remaining 72 percent sub centres buildings need repair. All barring two sub centres are located within the village. Further analysis reveals that out of a total of 36 SCs, 34 SCs have pucca building and only 2 SCs have semi pucca building and they are located either at Gurdwara or in a donated building by some voluntary society.

Table 28: Infrastructure of the Sub centres

Location of the SC	**No of SC**	**Percentage**
Within village	34	94.4
Type of the building		
Government	10	27.8
Others	26	72.2
Condition of the building		
Good/satisfactory	26	27.8
Needs repair	10	72.2

It is interesting to note that although 10 SCs are functioning from the government building but only one SC has ANM quarter attached to it. In other words, the government SC buildings do not have provision for residential quarter of ANM and the ANMs are expected to stay in the sub centre building.

A very small proportion of ANMs i.e., 11 percent are residing in sub centre village while the remaining are residing outside the SC village and have to commute on an average 10 kms to reach the SC.

As far as the basic facilities in the sub centres are concerned, it data reveals that one-third SCs do not have water supply while the remaining two-thirds either have the facility of piped water or hand pumps. Most of the sub centres have erratic supply of electricity, while 44 percent SCs do not have any electricity connection. Further more the findings reveal that more than half (55.6 percent) of the SCs did not have any functional toilet and none of the SCs had any telephone connection for communication. It was observed that the cleanliness of premises of 24 sub centres was rated to be good, 11 SCs as fair and only one sub centre premises was not clean.

Information was also collected on disposal of bio-medical waste from the ANMs. It was noted that 86 percent of the ANMs stated that the bio medical waste of SC is burnt 11 percent mentioned that they bury it in pit and one ANM said that she carries the waste to CHCs .

Availability of Human Resources

Out of 36 sub centre, in 34 sub centres regular ANMs were in position and in 2 SCs contractual ANMs were appointed as the position of regular ANM was lying vacant. In case of MPW (M), in 28 SCs MPW (M) were in position, in 2 SCs contractual male workers have been appointed, while in 6 SCs the post of MPW(M) were vacant. Besides these health workers, ASHA workers have been appointed and were working in their area.

Furniture and Equipment

Information was collected on the availability of furniture and equipment at the SCs. Data reveal that all the sub centres are not fully equipped with sufficient furniture. Examination table was available in two thirds of the sub centres while a large majority i.e. 91.6 percent of them had cupboard for storage of medicines and other supplies. A majority of the SCs do not have labour table (80.5 percent), footstep (61.1 percent) and screen (69.4 percent). Equipments like infant and adult weighing machines, BP instrument, speculum, IUD insertion kit, vaccine carrier, foetoscope and stethoscope which are necessary items for check up are by and large available in the SCs. It has been noted that most of the SCs do not have steam sterilizer, but cooker has been provided simply for sterilizing the needles and syringes. No effort has been made for upkeep of the furniture and equipment of the SC.

Table 29: Availability of Furniture and Equipment in the SC

Furniture	**Available**	**Not available**
Examination table	24 (66.6)	12 (33.3)
Labour table	7 (19.4)	29 (80.5)
Foot step	14 (38.8)	22 (61.1)
Cupboard with lock and key	33 (91.6)	3 (8.3)
Screen	11 (30.5)	25 (69.4)
Equipments		
Instrumental sterilizer	29 (80.5)	7 (19.4)
Infant weighing machine	31 (86.1)	5 (13.8)
Adult weighing machine	36 (100)	-
BP instrument	36 (100)	-
Haemoglobin meter	20 (55.5)	16 (44.4)
Speculum	34 (94.4)	2 (5.5)

IUD insertion kit	34 (94.4)	2 (5.5)
Vaccine carrier	36 (100)	-
Foetoscope	35 (97.2)	1 (2.8)
Stethoscope	35 (97.2)	1 (2.8)

Availability of Essential Drugs and Contraceptives

The supplies of the drugs made available in the kits, which are essential for the smooth working of the ANM were not available in all the sub centres for last 2-3 years. None of the SC had the stock of IFA tablets (big and small) and Vitamin-A syrup. Most of the SCs did not have any supply of ORS packets, whereas 30 percent sub centres were having stock of ORS packets. Further, it was noted that more than 50 percent of the sub centres did not have basic medicines such as Paracetamol tablet and syrup in their stock. Drugs like Ampicillin capsules was not available in any of the sub centres while Metronidazole tablets were available in only two sub centres. Majority of the centres (94 percent) did not have anti-leprosy drugs. It is usually taken on demand from PHCs, i.e., if there is any patient suffering from the disease. Thus, there is a shortage of basic medicines in the SCs for quite some time and efforts need to be made by the health department to supply the medicines regularly to the SC's.

By and large testing facilities like urine sugar and urine albumin were not available in any of the SC as no strips were available anywhere. Approximately 86 percent of the sub centres had Malaria diagnostic kit and 89 percent had Anti-tuberculosis drugs in their stock.

The supply of contraceptives namely condoms, oral pills, and IUD were available in most of the SCs. Out of the total 36 SCs, 86 percent (31) had the supply of condoms, 92 percent (33) had oral pills, 95 percent (35) SCs had copper-T and only 7 SCs had the supply of emergency contraceptive, but none of the SCs had the stock of weekly oral pills.

Services Available

The services, which are provided by the sub centre include ante natal care, assistance in natal care, and immunization. The findings of the survey reveal that the number of ante natal care cases registered with ANM during last three months at the time of survey varies in all the sub centres. It ranges from 0-35. Similarly the number of deliveries conducted both at home as well at sub centre vary. The table shows that majority of the deliveries (84.1 percent) were conducted at home against sub centres (78.9

percent). It may be pointed out that although a large proportion (80 percent) of SC does not have a separate functional labour table but ANMs are still conducting deliveries at sub centre's.

Table 30: Services provided by SC during last three months

Number of cases	No. of SCs	Percentage
Ante natal care		
Less than 25	12	33.3
25-50	22	61.1
50-75	-	-
75-100	-	-
100-125	2	5.5
Deliveries conducted at home		
0	6	16.6
1-10	19	52.7
10-20	10	27.7
20-30	1	2.7
Deliveries conducted at SC		
0	8	22.2
1-10	12	33.3
10-20	13	36.1
20-30	3	8.3

The monitoring and evaluation of the SC is done through the monthly reports, records and registers maintained by ANM. It is also monitored by the frequent visits of Lady Health Visitors (LHV). Medical officer also visit the SC for evaluation from time to time. All the ANMs mentioned that they have prepared the Sub centre plan for the current year.

Apart from seeking information on infrastructure, furniture, equipment and other facilities efforts have been made to assess how far the National Rural Health Mission has been implemented at village level. The Village Health and Sanitation Committee (VHSC) which forms a link between the Gram Panchayat and community have been established in all the sampled villages for accountability and transparency. Each VHSC received a grant of Rs.10,000 for carrying out various activities in the village. Although VHSCs have been formed in the villages but they have not started working effectively as they have been recently formed. However in the opinion of ANMs, the VHSC was not facilitating in carrying out activities such as cleanliness and sanitation drive and also VHSC has not been monitoring the work regularly. Thus, it is apparent that although the committees have been formed but have not been functioning effectively and were facing some

teething problems. Progress of VHSCs becoming functional and effective has been rather slow.

Another component of NRHM is providing each sub centre with Rs 10,000 to facilitate meeting urgent yet discrete activities like purchase of consumables, purchase of items like bulb, curtains to ensure privacy and so on. The study shows that 35 sub centres have received untied funds and only one sub centres has not received the funds as at that point of time the post of ANM was vacant. Among the SCs who received the grant of untied funds, 83 percent had utilized the funds but 17 percent had not utilized the grant as funds were received in the month of March. It must be mentioned that full amount of the grant was not being given to all ANMs.

Another component of NRHM is Janani Suraksha Yojana (JSY) which integrates the cash assistance with antenatal care during the pregnancy, institutional care during delivery and immediate post-partum period in a health centre. There is a provision of better diet for pregnant women from BPL families. Under JSY scheme, each beneficiary registered under this yojana should have a BPL card, JSY card along MCH card. Information was sought from the ANMs regarding the number of registered beneficiaries of JSY for one year. The findings show that on an average there were nearly 11 beneficiaries in each sub centre. There was wide variation in the number of registered beneficiaries in the SCs ranging from 2 to 27. However, a detailed assessment needs to be made to see whether there has been an increase in institutional deliveries in the district.

National Rural Health Mission- An Overview

National Rural Health Mission (NRHM) was launched in 2005 with broad objectives to provide universal access to equitable, affordable, and quality health care. It would help to achieve goals under the National Health Policy and Millennium Development Goals so as to address inter and intra-state disparities.

NRHM has drawn a plan of action at all levels of healthcare to build up sustainable healthcare delivery system, where all citizens have access to affordable and appropriate quality healthcare. To achieve its goals, NRHM in its strategies, set up a platform for involving the Panchayati Raj Institutions (PRIs) in primary health programmes and infrastructure. The PRIs are trained to own, control and manage public health services. At grassroots level, Village Health and Sanitation Committees (VHSC)

have been formed to decentralize the planning and monitoring of various programmes. For strengthening the health centers, they are provided with untied funds.

Janani Suraksha Yojana (JSY) another component of NRHM was launched in 2005 with the objective to reduce maternal mortality and infant mortality by promoting institutional delivery among poor pregnant women (BPL). JSY is a totally centrally sponsored scheme, which provides monetary benefits to pregnant women from BPL families. There is a provision of better diet for pregnant women from BPL families. Under JSY scheme, each beneficiary registered under this yojana should have a BPL card, JSY card along MCH card. One of the key strategies under the National Rural Health Mission (NRHM) is having a Community Health Worker i.e. ASHA (Accredited Social Health Activist) in every village for a population of 1000. ASHA will be trained to work as an interface between the community and the public health system.

At the district level, out of a total of 1303 ASHA workers to be appointed in Hoshiarpur district, nearly 80 percent of them had been appointed in 2007-08 and the remaining were to be appointed in the 2008-09. It is rather early to make an assessment of work done by ASHA. However, on the basis of the feedback from the Medical Officers from different blocks, it can be inferred that ASHA workers were doing their work and were creating awareness in the community regarding the importance of ANC, institutional delivery, etc.

Table 31: Number of ASHA workers appointed in the Blocks 2007-08

BLOCK PHC	2007-08
Bhunga	111
Mand Mander	136
Possi	87
Chakowal	132
Harta Badla	111
Paldi	72
Budhabar	146
Hajipur	114
Tanda	128
Total	**1037**

Source: Office of Civil Surgeon Hoshiarpur

Similarly the JSY scheme has been implemented in Hoshiarpur district and community is coming forward to avail the benefits of this scheme. Table 32 gives us information of

number of beneficiaries in nine health blocks of Hoshiarpur district. Over the period of two years the proportion of beneficiaries has increased in most of the PHCs.

Table 32: Beneficiaries of Janani Suraksha Yojana

BLOCK PHC	No of beneficiaries 2006-07	No of beneficiaries 2007-08
Bhunga	161	78
Mand Mander	120	273
Possi	129	219
Chakowal	37	218
Harta Badla	48	129
Paldi	103	110
Budhabar	131	213
Hajipur	88	150
Tanda	84	170

Source: Office of Civil Surgeon, Hoshiarpur

Utilization of Public health Services

Maternal Care (Ante natal Care)

One of the objectives of RCH programme is to provide maternal health care services to ensure safe motherhood. Under RCH programme a package of services is included i.e., ante natal care including three ante natal check-ups, two doses of tetanus toxoid, adequate amount of supplementary iron and folic acid tablets, adequate nutrition, detection and treatment of anaemia among mothers, management and referral of high risk pregnancies, and ensure that deliveries are carried out by trained health personnel and post natal check ups are carried out. Government health network of sub centres, primary health centres, and community health centres are major providers of free services in rural areas. In urban areas reproductive health services are available mainly through government/municipal hospitals, urban health posts (UHP), Urban Family Welfare Centres (UFWC), private hospitals and nursing homes.

Several of the national socio-demographic goals for 2010 mentioned in National Population Policy-2000 pertain to safe motherhood, i.e. 80 percent of deliveries should take place in institutions by 2010, 100 percent deliveries should be attended by trained personnel and 100 percent registration of pregnant women. Proper ante natal care can contribute significantly to maternal mortality and morbidity and also can help to reduce incidences of low birth weight babies and infant mortality.

According to DLHS-3 (IIPS & MOHFW, 2009) 64.1 percent of mothers had three or more ante natal check-ups in Punjab. A comparative picture of districts regarding proportion of women receiving three or more ANC in Punjab shows that 61 percent of women in Hoshiarpur received three or more ANCs and was ranked 15th among 20 districts of Punjab and in rural areas the proportion is even less, i.e., 57.2 percent.

Table 33: Women receiving three or more ANC visits and atleast one TT Injections in Punjab 2007-08

District	3 or more ANC visits	Atleast one TT
Amritsar	82.3	88.4
Bathinda	68.9	85.7
Faridkot	72.8	84.1
Fatehgarh Sahib	61.3	74.5
Ferozpur	71.2	82.9
Gurdaspur	63.6	82.7
Hoshiarpur	**61.0**	**91.6**
Jalandhar	63.1	88.6
Kapurthala	56.9	86.2
Ludhiana	58.9	75.8
Mansa	37.4	57.9
Moga	71.8	84.3
Muktsar	70.6	83.6
Nawanshahar	64.3	80.8
Patiala	64.9	85.7
Rupnagar	68.7	80.2
Sangrur	52.0	82.1
Tarn taran	77.8	86.1
SAS Nagar	69.2	78.4
Barnala	58.3	89.1
Total	64.1	82.5

Source: District Level Household Survey and facility survey 2007-08 IIPS and MOHFW, New Delhi. 2009

Amritsar district reported the highest ANC (82.3 percent) while Mansa district had the least ANC. Regarding the tetanus toxoid (TT) Hoshiarpur was ranked at first position and Mansa district was at the bottom. This reveals that in Hoshiarpur district women were particular about getting TT injections, but tend to be lax in receiving ante natal checkups.

According to the latest information provided by the Office of Civil Surgeon in Hoshiarpur district, 85 percent mothers received three ANC check ups and the same proportion received TT immunization. Intra-district variations exist.

PHC Chakowal reported to have the highest three ANC checkups closely followed by PHC Hajipur, Bhunga and Budhabar while PHC Possi recorded the lowest ANC 3 check-ups.

Table 34: Block wise information on Ante natal Care in Hoshiarpur district 2008-09

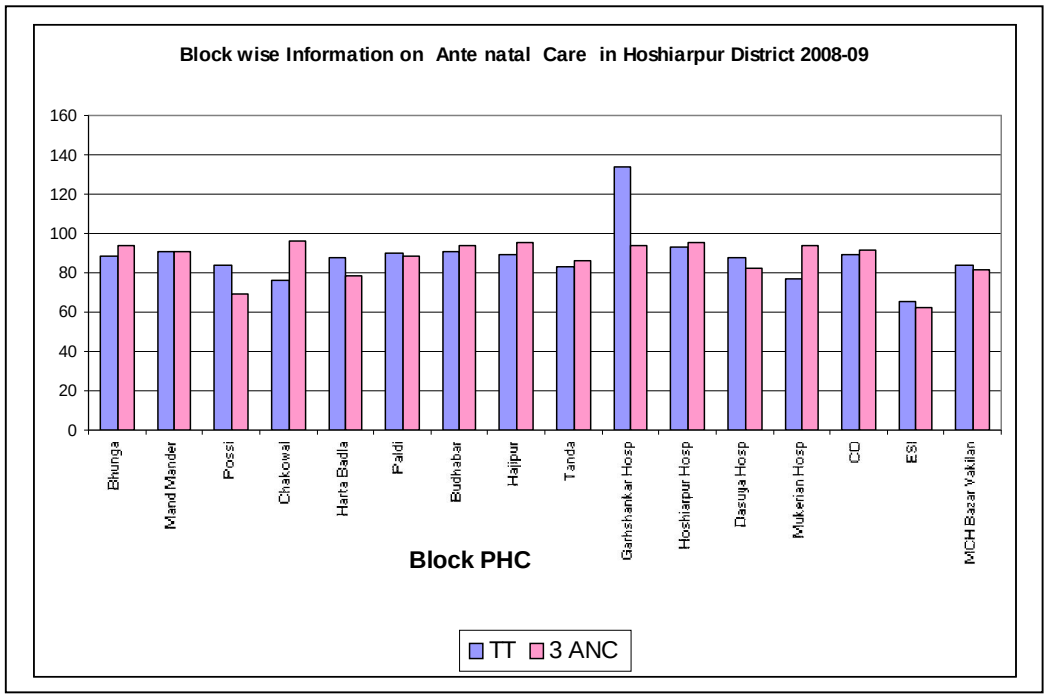
	TT		3 ANC Check-ups	
BLOCK PHC	**Number**	**% age**	**Number**	**% age**
Bhunga	2676	88.3	2836	93.6
Mand Mander	2498	91.0	2498	91.0
Possi	2859	83.6	2366	69.1
Chakowal	2276	76.0	2882	96.2
Harta Badla	2585	87.5	2312	78.2
Paldi	2185	89.7	2161	88.7
Budhabar	2910	91.0	3007	94.0
Hajipur	2049	89.0	2195	95.6
Tanda	2392	83.3	2467	85.9
Garhshankar Hosp	425	134.0	297	94.0
Hoshiarpur Hosp	631	92.8	648	95.3
Dasuya Hosp	485	88.0	454	82.4
Mukerian Hosp	413	77.0	503	93.7
CD	976	89.0	1007	91.8
ESI	678	65.5	139	62.2
MCH Bazar Vakilan	182	83.8	177	81.6

Source: Office of Civil Surgeon, Hoshiarpur

In urban area SDH Garshankar reported the highest ante natal 3 check ups . The probable reason for high ante natal 3 check ups is that either out of area cases come for ANC check up or proportion of floating population is high. On the other hand ESI Hospital reported the least ante natal 3 check-ups.

Blockwise information on TT immunization of pregnant women presents a distorted picture. For instance in PHCs like Bhunga, Chakowal, Hajipur where proportion of three ANC was high the TT coverage was low and vice versa. In urban area also more or less the same trend was observed.

For the growth and development of foetus, additional nutrients are needed during the pregnancy. Deficiency of iron during pregnancy is very common and often leads to complications during pregnancy and also affects the growth and development of new born. There was no supply of Iron Folic Acid tablets (IFA large) for sometimes, hence no IFA tablets have been distributed to pregnant women during the year 2007-08.



Natal care

Care during delivery is an essential component of RCH. In order to ensure safe deliveries and reduce infant and maternal mortality and morbidity, deliveries should take place in a proper hygienic conditions and under the supervision of skilled health professional.

In Punjab proportion of institutional deliveries was 63.1 percent (DLHS-3, IIPS & MOHFW; 2009) Overtime, there has been an increase in proportion of institutional deliveries from nearly 49 percent in DLHS-2.

Inter-district level data on proportion of births that took place in medical institutions in table 35 shows that SAS Nagar reported the highest institutional deliveries whereas the lowest was recorded in Gurdaspur. In Hoshiarpur district 55 percent of the deliveries were institutional.

Table 35 : District wise Place of delivery in Punjab

District	Percentage of women who had institutional delivery	Percentage of women who had home delivery
Amritsar	65.1	49.4
Bathinda	66.5	33.5
Faridkot	57.3	42.7
Fatehgarh Sahib	67.6	32.4
Ferozpur	65.1	34.9
Gurdaspur	49.9	49.4
Hoshiarpur	**55.1**	**44.4**
Jalandhar	60.4	39.6
Kapurthala	65.7	34.0
Ludhiana	60.9	38.4
Mansa	59.1	40.4
Moga	63.7	36.3
Muktsar	55.9	44.1
Nawanshahar	54.5	45.5
Patiala	67.4	32.1
Rupnagar	64.8	35.2
Sangrur	72.3	27.2
Tarn taran	57.5	42.5
SAS Nagar	73.8	26.2
Barnala	64.8	33.9
Punjab	63.1	36.5

Source: District Level Household Survey and facility survey 2007-08 IIPS and MOHFW, New Delhi. 2009

For the year 2008-09 the proportion of institutional deliveries was reported to be 60 percent in District Hoshiarpur (Office of Civil Surgeon-Hoshiarpur). Further analysis reveals that proportion of deliveries taking place in private institutions were more than in government institutions.

Highest percent of institutional deliveries were reported in PHC Budhbar (69.6 percent) and Man Mander (69.1 percent) respectively. In PHC Harta Badla proportion of births that took place in medical institutions was the lowest, i.e. 47 percent followed by PHC Paldi (49 percent). Further analysis reveal that that in PHC Man Mander 6 out of 10 deliveries took place in government institutions which was the highest. The least

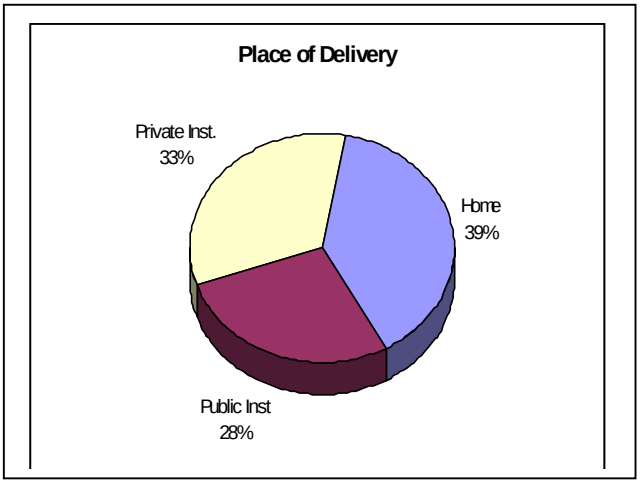


Table 36: Block wise information on Proportion of Institutional and Home Deliveries 2008-09

BLOCK PHC	Institutional	Home	Total
Bhunga	1534 (62.0)	939 (38.0)	2473
Mand Mander	1758 (69.1)	786 (30.9)	2544
Possi	1644 (56.5)	1267 (43.5)	2911
Chakowal*	3099 (65.8)	1613 (34.2)	4712
Harta Badla	1003 (47.0)	1137 (53.0)	2140
Paldi	992 (49.0)	1018 (51.0)	2010
Budhabar	2051 (69.6)	898 (30.4)	2949
Hajipur	977 (47.5)	1080 (52.5)	2057
Tanda	1373 (63.0)	805 (37.0)	2178

Source: Office of Civil Surgeon, Hoshiarpur
* Includes Hoshiarpur town

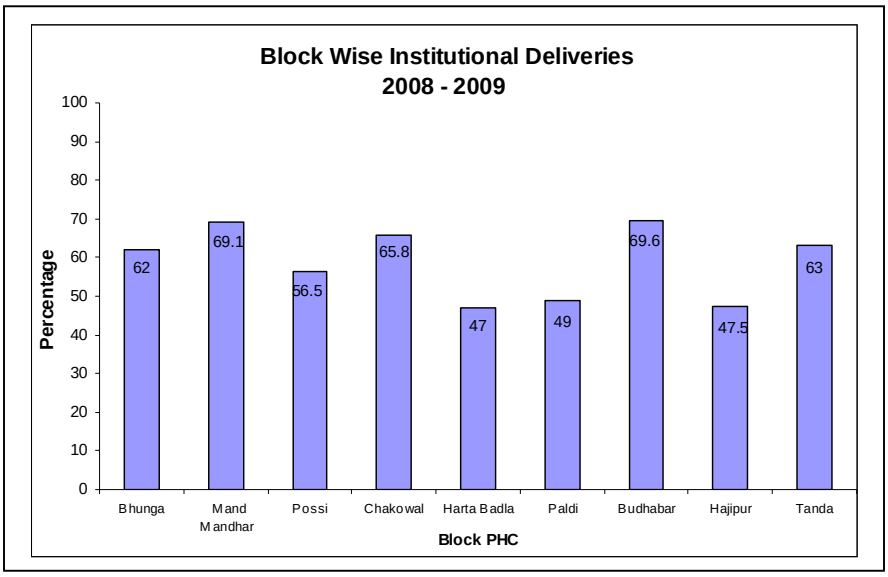
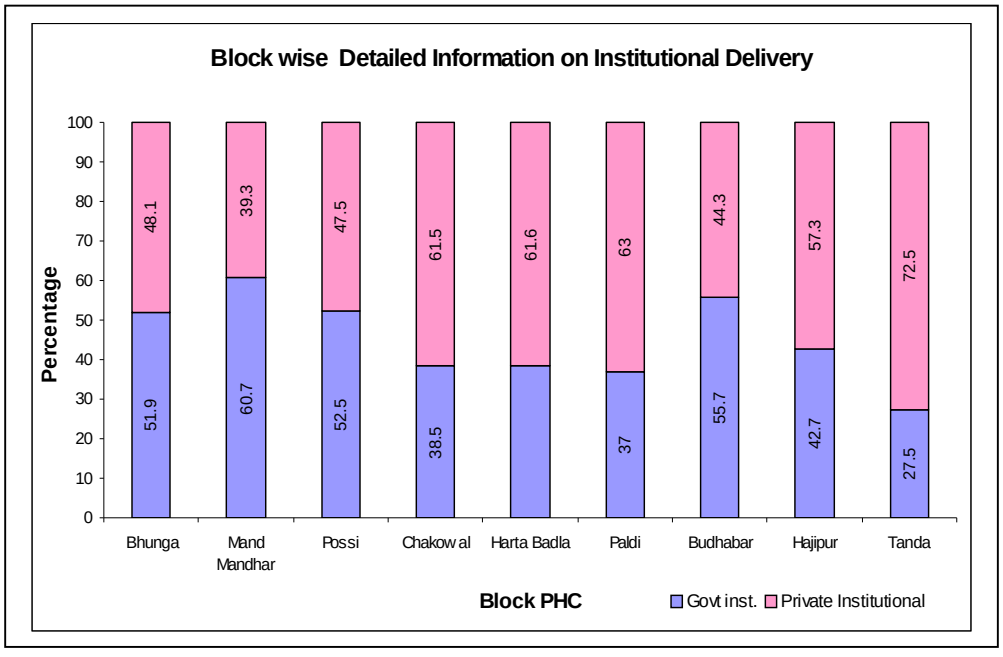


Table 37: Detailed Information of Institutional Delivery 2008-09

BLOCK PHC	Govt inst.	Pvt. inst.	Institutional
Bhunga	797(51.9)	737(48.1)	1534
Mand Mander	1067(60.7)	691 (39.3)	1758
Possi	863(52.5)	781(47.5)	1644
Chakowal	1193(38.5)	1906(61.5)	3099
Harta Badla	385(38.4)	618(61.6)	1003
Paldi	367(37.0)	625(63.0)	992
Budhabar	1142(55.7)	909(44.3)	2051
Hajipur	417(42.7)	560(57.3)	977
Tanda	378(27.5)	995(72.5)	1373



number of deliveries took place in government institutions in PHC Tanda. The share of deliveries in private institutions was highest in PHC Paldi, Chakowal and Harta Badla (61.5 percent) It may be mentioned that there is acute shortage of Obstetrics and Gynecologist in district Hoshiarpur as well in other districts of Punjab. In Hoshiarpur district there are only five Obstetrics and Gynecologist for a population of 3 lakhs (State Programme Implementation Plan of NRHM, Punjab, 2008-09)

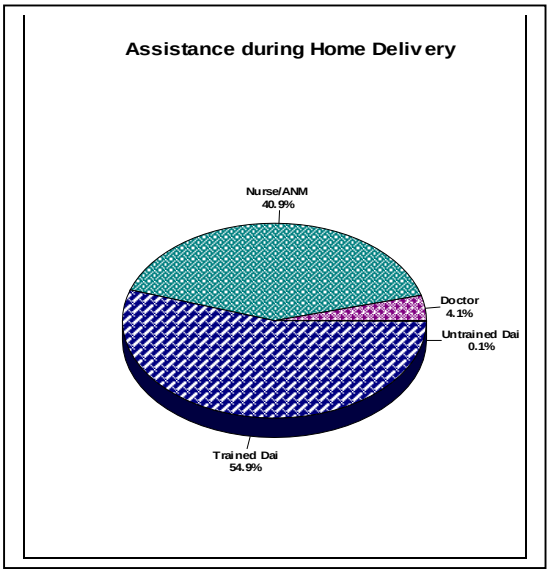
Assistance during Home Delivery

Out of the total home based (1203 for the year 2006-07)) deliveries 45 percent were attended by health professional and 55 percent received assistance from trained dai and a negligible number (12) received assistance from untrained dai. This indicates that less than half of home based deliveries were safe deliveries. In rural area people prefer to seek the services of trained dais due to easy availability accessibility and cost factor. Intra-district differential exist.

Table 38: Block wise Information regarding Assistance during home delivery*

BLOCK PHC	Untrained Dai	Trained Dai	Nurse ANM	Doctor
Bhunga	-	47.1	52.9	-
Mand Mander	-	55.1	44.0	-
Possi	0.8	3.2	22.8	33.2
Chakowal	-	70.8	29.2	-
Harta Badla	-	51.4	48.6	-
Paldi	-	55.9	44.1	-
Budhabar	-	11.8	88.2	-
Hajipur	-	73.0	27.0	-
Tanda	-	78.4	21.6	-

* Percentage based on 2006-07 data from the Office of Civil Surgeon, Hoshiarpur



Thus the goal of achieving 80 percent institutional deliveries and 100 percent deliveries by trained personnel is half way but definitely there has been an improvement and concerted efforts are needed to achieve this goal.

Post natal care

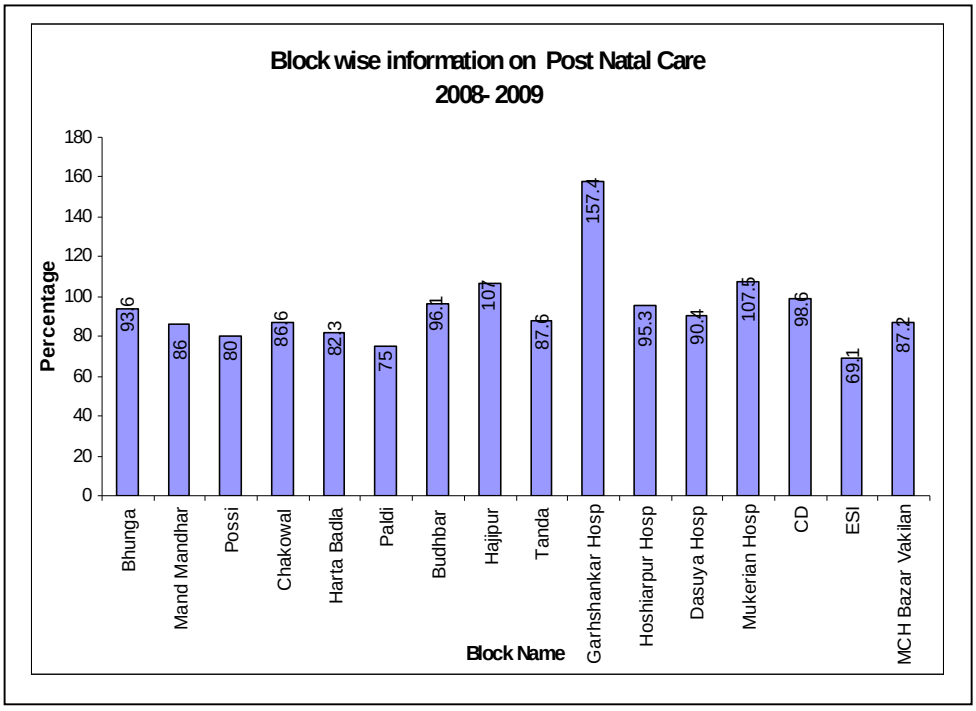
Care is essential not only during pregnancy and delivery but it is also important for the first few weeks after delivery in order to ensure good health of mother and the new born child. According to DLHS-3 (IIPS & MOHFW, 2009) in Punjab 78.1 percent of women reported to have had post natal check up within 48 hours after delivery while in Hoshiarpur relatively higher proportion (81.5 percent) of women had post natal check up although in rural areas 78.5 percent had post natal check up.

Table 39: Block wise information on Post Natal Care 2008-09

	Post Natal Care		
BLOCK PHC	**Annual Target**	**Number**	**%age**
Bhunga	2634	2465	93.6
Mand Mander	2386	2050	86.0
Possi	2972	2366	80.0
Chakowal	2605	2256	86.6
Harta Badla	2568	2113	82.3
Paldi	2684	2011	75.0
Budhabar	2780	2671	96.1
Hajipur	1997	2134	107.0
Tanda	2467	2162	87.6
Garhshankar Hosp	275	433	157.4
Hoshiarpur Hosp	592	564	95.3

Dasuya Hosp	479	433	90.4
Mukerian Hosp	467	502	107.5
Civil Dispensary	949	936	98.6
ESI	898	621	69.1
MCH Bazar Vakilan	188	164	87.2

Source: Office of Civil Surgeon, Hoshiarpur, 2009



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According to the information provided by the Office of Civil Surgeon about 89 percent of women had post natal checkups. However intra-district variations were observed. Possi and Paldi were the poor performing PHCs as far as post natal check-ups were concerned. Some of the PHCs like Hajipur, Budhabar, and Bhunga reported 90 percent or more follow up care. As far as urban areas are concerned except for ESI hospital and MCH Bazar Vikilan all the Sub divisional hospitals and civil hospital reported post natal checkups to be more than 90 percent.

Child Immunization

Immunization of children against six deadly and preventable diseases namely tuberculosis, diphtheria, pertusis, polio, tetanus and measles has been in intense stage of child health programme. In India, expanded programme on immunization has been vigorously launched with the objectives of reducing morbidity and mortality caused due to these six vaccine preventable diseases.

Complete immunization for state of Punjab was reported to be 79.8 percent during DLHS-3 (IIPS&MOHFW, 2009) while in DLHS-2 it was reported to be 72.9 percent. Thus there has been an increase of 7 percent points over period of five years.

According to the findings of DLHS-3, Muktsar district had the highest proportion of complete immunization coverage (95.9 percent) and Sangrur has the lowest coverage (53.0 percent). Hoshiarpur district had a fairly high proportion of complete immunization coverage (83.0 percent) and ranked at 9th position in the state and the coverage is higher than the state average. A comparative analysis between DLHS-2 and DLHS-3 reveal that there has been a decline of 5 percent points as complete immunization coverage was 88.5 percent in DLHS-2 (2002).

Table 40: District wise Complete Immunization Coverage in Punjab 2007-2008

District	Percentage
Amritsar	91.8
Bathinda	90.3
Faridkot	84.2
Fatehgarh Sahib	77.7
Ferozpur	87.7
Gurdaspur	74.6
Hoshiarpur	83.0
Jalandhar	84.0
Kapurthala	81.0
Ludhiana	68.9
Mansa	66.5
Moga	94.6
Muktsar	95.6
Nawanshahar	76.0
Patiala	79.4
Rupnagar	72.7
Sangrur	53.0
Tarn taran	82.4
SAS Nagar	70.1
Barnala	67.4
Punjab	79.8

Source: District Level household and Facility Survey-3, 2007-08
IIPS& MOHFW

Detailed analysis of vaccines reveal that in District Hoshiarpur nearly 99 percent received BCG vaccine, 93.8 percent DPT, 87 percent Polio and 95 percent received Measles (DLHS-3, IIPS & MOHFW, 2009) which is higher than the state. The proportion of infants who have not receive any vaccine is one percent.

In Hoshiarpur district for the year 2008-09 the complete immunization of children was reported to be 94 percent (Office of Civil Surgeon , Hoshiarpur). Detailed analysis of vaccines indicates that 90.3 percent children were given BCG, 65.4 percent received all doses of DPT, 90.7 percent were given polio and 93.3 percent were given measles, while only 59.2 percent were given Vit. A (under 1 year). The reason for low DPT immunization was that there was shortage of this vaccine.

Table 41: Block wise information of Complete Immunization 2008-09

	Complete Immunization		
BLOCK PHC	**Annual Target**	**Number**	**% age**
Bhunga	2634	2784	106.7
Mand Mander	2386	2254	94.5
Possi	2972	2225	75.0
Chakowal	2605	2506	96.2
Harta Badla	2568	2455	95.6
Paldi	2684	2322	86.5
Budhabar	2780	2623	94.4
Hajipur	1997	1973	99.0
Tanda	2497	2389	95.7
Garhshankar Hosp	275	400	145.4
Hoshiarpur Hosp	592	614	104.0
Dasuya Hosp	479	507	106.0
Mukerian Hosp	467	422	90.4
Civil Dispensary	949	977	103.0
ESI	898	737	82.1
MCH Bazar Vakilan	188	184	98.0
Total	26971	25372	94

Source: Office of Civil Surgeon, Hoshiarpur

Block wise analysis indicates that coverage of BCG vaccine was highest in PHC Hajipur and lowest in PHC Possi, while in urban area it was highest in Garhshankar hospital. In case of three doses of DPT, Polio and Measles it was lowest in PHC Possi and in urban area in ESI hospital. Thus there is a need to increase the coverage of immunization in PHC Possi.

To reduce the risks of night blindness infants are supposed to get required doses of Vitamin-A supplement. There was no supply of Vitamin-A in district Hoshiarpur for the year 2007-08 but supply of Vitamin A was regular in year 2008-09.

Table 42: Block wise information of Detailed Immunization 2007-08

BLOCK PHC	Annual Target	BCG %	DPT %	Polio %	Measles %	Vit. A %
Bhunga	2634	85.0	63.0	97.0	98.0	115
Mand Mander	2386	81.0	75.0	93.0	94.0	82.0
Possi	2972	76.0	30.0	67.0	75.0	50.0

Chakowal	2605	93.0	65.0	81.0	96.0	32.0
Harta Badla	2568	89.0	59.0	92.0	96.0	29.0
Paldi	2684	84.0	64.0	75.0	87.0	29.0
Budhabar	2780	75.0	63.0	91.0	94.0	62.0
Hazipur	1997	111.0	67.0	110.0	99.0	61.0
Tanda	2497	106.0	63.0	96.0	86.0	59.0
Garhshankar Hosp	275	218.0	173.0	228.0	145.0	104.0
Hoshiarpur Hosp	592	97.0	94.0	103.0	104.0	76.0
Dasuya Hosp	479	100.0	97.0	97.0	106.0	115.0
Mukerian Hosp	467	98.0	90.0	90.0	90.0	47.0
Civil Disp.	949	104.0	106.0	109.4	103.0	65.4
ESI	898	71.0	60.6	80.0	82.0	52.0
MCH Bazar Vakilan	188	105.0	98.0	100.0	98.0	59.0

Source: Office of Civil Surgeon, Hoshiarpur

Contraceptive Prevalence

One of the important components of RCH programme is provision of free contraceptive services to all the needy couples.

The contraceptive prevalence rate for any method for Punjab is 69 percent in DLHS-3. In Hoshiarpur district the prevalence rate is only 52.3 percent which is the lowest among all the districts of Punjab. Similarly the contraceptive prevalence of any modern method (43.4 percent) and female sterilization (23.9 percent) are the lowest in the state. Consequently the unmet need for family planning both for spacing and limiting the family is the highest i.e. 23 percent- higher than the state average of 11.4 percent. Thus there is a need to strengthen the family planning programme in the district. Grass root level workers should counsel and motivate the target couples to adopt some method of family planning.

Nutritional Services

Nutrition is an important input and the foundation for good health and development. Better nutrition means stronger immune system, less illness and better health. On the other hand malnutrition results in reduced productivity, slow recovery from illness, increased susceptibility to infections and heightened risk of adverse pregnancy outcomes.

In developing countries, children and adults are vulnerable to malnutrition, because of low dietary intakes, infectious diseases, lack of appropriate care and inequitable distribution of food within the household.

Children, who are the future of the nation constitute 15.4 percent of India's population with sex ratio 927 as per census 2001. A significant proportion of these children live in such economic and social environment which impedes the child's physical and mental development. These conditions include poverty, poor environmental sanitation, diseases, infection, inadequate access to primary health centre etc.

Government of India proclaimed a National Policy on Children in August 1974 declaring children as "supremely important asset". The policy provided the required framework for assigning priority to different needs of child. In 1975 Integrated Child Development Services (ICDS) programme was launched seeking to provide an integrated package of services in a convergent manner for the holistic development of the child. The objective of the programme was psychological development of the child, improve nutritional and health status of children (0-6 years), reduce incidence of mortality, morbidity, malnutrition and school dropouts, enhance the capability of the mother and family to look after the health, nutritional and development needs of the child. The scheme provides an integrated approach for converging basic six services: Supplementary nutrition, Non-formal pre-school education, Immunization, Health Check-up, Referral services, Nutrition and Health Education through community based Anganwadi workers and helpers at Anganwadi Centres. The three services namely immunization, health check-up and referral are delivered through public health infrastructure viz. Health Sub Centres, Primary and Community Health Centres under the Ministry of Health & Family Welfare.

Target Groups & Service Provider

Services	Target Group	Services Provided By
Supplementary Nutrition	Children below 6 years; pregnant and lactating mothers	Anganwadi Workers (AWW) & Anganwadi Helper (AWH)
Immunization*	Children below 6 years; pregnant and lactating mothers	ANM/MO
Health Check-ups*	Children below 6 years; pregnant and lactating mothers	ANM/MO/AWW
Referral	Children below 6 years; pregnant and lactating mothers	AWW/ANM/MO
Pre-School Education	Children 3-6 years	AWW
Nutrition & Health Education	Women (15-45 years)	AWW/ANM/MO

* AWW assists ANM in identifying and mobilizing the target group

In the district there were 1177 Anganwadi workers, working at 1177 Anganwadi Centers with the coverage of 18299 pregnant and lactating women and 118487 children (0-6 years). However the number of anganwari centres are likely to increase to 1763.

Table 43: Anganwadi Centres and its Beneficiaries (2008)

Block PHC	No of AWC	No. of AWW	No of children (0-3 yrs)	No of children (0-6yrs)	0-6 yrs population	ICDS Beneficiaries		Population-pregnant & Lactating women (W)	ICDS Benefic-iaries (W)
						0-3 yrs	3-6 yrs		
Bhunga	126	126	5347	4993	10340	3417	2395	1488	1380
Mand Mander	97	97	5456	4894	10350	4543	2255	1549	1549
Possi	169	169	8834	8145	16979	959	3520	2447	1431
Chakowal	140	140	7414	7374	14788	1460	3405	2405	1781
Harta Badla	149	149	6884	6754	13638	3171	2620	2321	1427
Paldi	145	145	5830	5797	11627	1556	2148	1655	1044
Budhabar	111	111	10348	2980	13328	2828	2980	2450	1929
Hajipur	65	65	4017	3936	7953	1444	1913	1120	693
Tanda	93	93	7676	2519	10195	2573	2519	1663	1275
Talwara	82	82	4686	4602	9288	2144	2271	1201	952
Total	**1177**	**1177**	**66493**	**51994**	**118487**	**24095**	**26026**	**18299**	**13461**

Source: ICDS, Hoshiarpur

Out of the total 0- 6 years children 56 percent are in the category of 0-3 years while rest of 46 percent are in the age group of 3-6 years. The number of the Anganwadi centres depends upon the population size of the village. As per norms there should be one anganwadi for a population of one thousand.

The available data reveals that 42 percent of the beneficiaries in 0-6 years and 74 percent pregnant and lactating women were covered under Supplementary Nutrition Programme under ICDS. Besides, Kishori Shakti Yojana (KSY) was launched under ICDS for adolescent girls to address the life cycle approach of human development. Out of 5546 identified adolescents under KSY, 63 percent of the beneficiaries were covered under Nutritional and Health Education(NHE), Supplementary Nutritional Programme (SNP), Deworming and IFA.

Table 44: No of Beneficiaries of Kishori Shakti Yojana

Block PHC	No of AWC	Adolescent Identified	Beneficiaries			
			Total	NHE	SNP	Deworming /IFA
Bhunga	126	7624	256	256	256	256
Mand Mander	97	6624	210	210	210	210
Possi	169	5672	150	150	150	150
Chakowal	140	3839	150	150	150	150
Harta Badla	149	6791	180	180	180	180
Paldi	145	665	37	37	37	37
Budhabar	111	3898	36	36	36	36
Hajipur	65	534	150	150	150	150
Tanda	93	7980	185	185	185	185
Talwara	82	7040	180	180	180	180
Total	**1177**	**5546**	**3510**	**3510**	**3510**	**3510**

Source: ICDS, Hoshiarpur

School Health Check up Programme

Developing the human capital of nations especially the intellectual, social, mental, and physical abilities of children and adolescents is fundamental to the improvement of the quality of life of the citizens. Furthermore, education and health are inseparable. Student's health affects not only their cognitive performance in school, but also their ability to attend and stay in school over the years. Those young people who attend primary schools have better chances of survival. To ensure attendance of our children and to enhance their ability to learn, their health issues need to be addressed continuously. It is in this regard that the public health system of a nation has an important role to play.

The Government of India launched the 'Special School Health Check-up Programme' in the year 1996 for school going children of Primary Schools. in coordination with Department of Health & Family Welfare and Department of Education.

School Health Programme is an important component of total health care delivery system in the state, which helps in keeping close watch on the health of school going children in the State. The school health programme has started with the objectives of:

- To reduce morbidity amongst school children by preventing them from falling prey to the preventable diseases and thus help to reduce the drop-out rate amongst school children.
- Early detection of defects in children and their proper treatment through referral services.
- To impart health education to the school children and the teachers.
- To advice the school authorities on safe drinking water, good environmental sanitation and cleanliness etc.
- To provide curative, referral and follow-up services to the students of Primary and middle classes of the schools through medical check-ups.

In the beginning, it was a 6-days programme throughout the country and the Multi-Purpose Health Workers undertook primary screening. Referral services were provided at the Primary Health Centers. Now it is running with the assistance of Medical officer, ANM and Anganwadi workers.

According to the data available for the state of Punjab during 2003 to 2006 it was revealed that various programmes were conducted under school health programme. In the year 2003 and 2004, 18 percent of the students were reported to be suffering from various ailments but the number of cases has increased to 23 percent till June, 2006.

Table 45: No. of Children examined and Percentage suffering From Ailments 2003 to 2006 (Upto June 06) in Punjab

Year	No. of Children examined	No. of Children Suffering from various ailments	%age
2003	2903289	522195	17.98
2004	3229719	575455	17.81
2005	3391808	689012	20.31
2006 (Upto June, 06)	420325	98500	23.43

Source: http://punjabgovt.nic.in/government/govt754Major.htm

In Hoshiarpur district various programmes were run under school health programme like check-up of school children, organizing health talk and seminar in schools by the Department of Health. Table 42 reveals that maximum number of programmes was organized in PHC Chakowal and Possi and least in PHC Tanda followed by Hajipur. However in PHC Bhunga and Mand Mander (Dasuya) the coverage of students under this programme has decreased between 2004-05 to 2006-07, while in the remaining health blocks the number of students covered has increased during the same period.

Table 46: No. of programmes organized and number of students covered under School Health Programme

BLOCK PHC	2006-07		2004-05	
	No of Progrmmes	No of students covered	No. of programmes	No of students Covered
Bhunga	120	24472	120	35256
Mand Mander	124	8571	142	9137
Possi	311	27408	248	26674
Chakowal*	313	21495	295	20675
Harta Badla	59	9696	48	8641
Paldi	120	7758	118	7367
Budhabar	108	1884	104	1709
Hajipur	28	19490	31	18795
Tanda	12	25493	10	23192

Source: Office of Civil Surgeon, Hoshiarpur
*Hoshiarpur city- information is not available

Poor Patient Fund

India is on fast track of development. Its further advancement is attracting favourable attention from all sectors. Non resident Indians (NRIs), who played a greater role, were appealed to strengthen their investment and help the country towards

development with their zeal, commitments, professional expertise and broad vision which could be a major boost to the country. The state government started a matching grant scheme for NRIs who wanted to invest for the welfare and development of their village. In area of health Poor Patient fund scheme was started in district Hoshiarpur for the treatment of patients coming from the poor families and who could not afford the cost of treatment. The fund is donated by the NRIs and district administration is authorized to use that funds.

According to the information provided by the Office of the Deputy Commissioner, Rs. 2,57,247 has been used to treat 65 (35 male and 30 female) poor patients who were admitted in the Civil hospital, Hoshiarpur. Another organization Swami Sarwanand Giri Institute of Information and Technology, Hoshiarpur assured to donate upto Rs. Five lac per annum. for treatment of poor patients.

Utilization of Public Health Facilities

Health is an important indicator of productivity and development. To assess the health status and health seeking behaviour of the people, household survey was undertaken in Hoshiarpur district. Information was collected on various aspects like sickness, hospitalization and it also examined the role of different health providers in meeting the health care needs of the people.

The respondents were asked to report about the sickness episode of any family member during the last one month. On the basis of the findings it was reported that about 63 percent household members had fallen sick during the last one month. About two-thirds of the respondents had reported that they or the family members suffered from minor ailments like seasonal infection, diarrhoea and skin infection and one -third were suffering from chronic problems like Blood Pressure, Diabetes, Arthritis and so on. The results show that more than 80 percent of households normally go to the private medical doctor for treatment. Only 16 percent reported to have visited any government health facility, i.e. Sub Centre, PHC, CHC or government hospital for treatment for their health problems. Reliance on private Doctor was more. In case of public sector CHC/hospitals are the popular source of health care. In case of patients requiring hospitalization, three-fourths of the respondents mentioned that the patients were admitted to private hospitals.

Voice of the People

In the opinion of the people although health facilities are available but the Auxillary Nurse Midwife continues to be the primary service provider. Non availability of skilled personnel remains the major bottlenecks to universal access to the first level of health care. For instance in Community Health Centre Bhal Khalota which has been functioning since 2002 only one delivery has been conducted and that too recently so far, as the post of Doctor has been vacant until recently.

People prefer going to private doctor. Reasons for non-utilization of public health facilities are non-availability of health worker/doctor and drugs and of faith of the people in rural health system and distance of the health facility. Village leaders are not aware of new health programmes initiated by the government. For instance they have no knowledge of National Rural Health Mission. Similarly about the ASHA – their role and Village Health and Sanitation Society –village leaders were ignorant. People were of the view that there was a need to sensitize the community and village leaders about different schemes being implemented by the government from time to time.

Common health problems reported were jaundice, stone in kidney, liver problems which were due to unsafe drinking water. They are instances of leakage in water pipe at different points and the repair work is not attended to and as a result water is contaminated and consumed by the masses.

Poor Sanitation is another problem in the villages. The drains in the villages are constructed in parts. The piecemeal work has created problem in providing outlet to the whole drainage system of the villages

Utilization of primary health care in public sector was low as less than one-fourth (23.6 percent) availed services at public sector during the last three months. In the opinion of the community the reasons for not availing the services in order of priority are non-availability of drugs, locational distance of health facility, non-availability of doctors and non availability of laboratory facilities

Among the respondents who had visited a public health facility in last three months preceding the survey were asked few questions to assess their perception of the quality of care they received. Specific dimensions covered were waiting time before receiving the services, availability of doctor, staff attending to patients was polite and proper examination done, and explaining the patient as how to take the medicine.

The median waiting time to receive the services was about 30 minutes. Large majority of them reported the doctor was available at the health facility at the time of visit. Also most of them reported that staff attending to patients was polite and patients were properly examined and were explained how to take the medicines.

Further the respondents who availed the services at public health facility were asked to rate the medical facilities available to them. More than half (56 percent) of respondents stated that government medical facilities available to them were good and one-fifth rated the government health facilities as fair. However, it is important of note

that about 32 percent of the respondents are satisfied with the existing health facilities in their villages.

Budget Allocation and Expenditure on Health

According to the information provided by the Office of Civil Surgeon the total budget allocation for health was Rs 50,32,40,136 for the year 2008-09 and the total expenditure of the district was Rs 46,39,74,629. The health department utilized more than 90 percent of the funds allocated to them.

Table 47

Fund allotted and Expenditure under broad heads (2008-09)

Heads and percent share	Allotted	Expenditure	Percent utilized
NRHM (14.7)	73767508.00	58305669.00	79.0
Family Welfare (13.4)	67503400.00	65910000.00	97.6
Public health (8.3)	41718228.00	39517960.00	94.7
Medical (63.6)	320251000.00	300241000.00	93.7
Total 9100)	**503240136.00**	**463974629.00**	**92.2**

A break up of the budget under broad sub heads, show that 63.6 percent of the budget allocation was on medical, 14.7 percent on NRHM, 13.4 percent on family welfare, and 8.3 percent on public health respectively. The table indicates that the health department has been able to utilize the funds allocated under medical, health and public health to a large extent while in case of NRHM 79 percent of funds have been utilized.

Suggestions

Hoshiarpur is one of the least urbanized district with a large chunk of migratory population, which has led to the development and expansion of slums. The situation of urban slums is worse than rural areas since there is a breakdown in the basic conditions for healthy living and also dearth of public utility services. In the opinion of the community there is a dire need to open more hospitals in villages, civil dispensaries for slums in urban areas as it is estimated that the slum population is about 5 lakh which is 33 percent of the total population of the district, upgrade the existing health facility. Lastly the most important is the availability of the doctor in CHCs/PHCs/SCs during the day and also at night. Most of the doctors do not maintain the headquarter.

Thus, it is stated the physical health infrastructure is in place but the delivery and availability of services is not good. Despite a steady increase in public health

infrastructure, utilization of public health facilities by population has not really improved. People prefer going to private sector despite higher cost. This indicates the people's growing lack of trust in the public health system. Provision of adequate health care to large population is indeed challenging task. The Government has been trying to provide health care through PHCs, dispensaries, etc. The quality and quantity of medical care is extremely variable ranging from organized advanced and sophisticated in urban area and to most primitive in rural area. There is heavy concentration of health infrastructure and manpower in urban areas. We should have a well worked out referral system to provide adequate expertise at various levels which should be nearest to the community. Vast majority of those seeking medical relief have to travel long distance to the nearest doctor and also for lack of proper referral system people have to travel to cities to visit various specialists and consequently leading to high expenditure.

Hoshiarpur district especially rural areas are behind in achieving the cherished goal of health for all as there are wide gaps in implementation. The meager government spending on health are not sufficient to improve the status of health status of the community and more so the needy and unprivileged. In the public health system there is a shortage of medicines, non availability of medical staff and unavailability of diagnostic kits. The doctor patient ratio is low and it is worse in rural areas. In fact most of the hospitals and dispensaries providing specialized care are located in urban area and health care continues to elude the rural masses.

The government has launched National Rural Health Mission with earnest efforts to improve and provide health to rural populace but there is shortage of doctors and pace of progress has been rather slow and tardy and has been bogged down by red tapism. Although Punjab is one of the most prosperous states of India but fares badly on several health parameters. Survey reveals that people prefer private medical system to public health system which at times is unaffordable and pushes many families into debt.

Although government has launched various health related programmes like RCH, NBCP, RNTCP-DOTs, etc, but one has to increase the efficiency, coverage and impact of the programmes. One of the major strategies is decentralization of public health system involvement of Panchayati Raj Institution and public private partnership but these require a boost to implement it at ground level. There is an urgent need to hike public health expenditure and also important is the political will.

It has been suggested by members of district planning committee that health department should play an active regulatory role in curbing adulteration of food items particularly milk and milk products and khandseri products. The health department should periodically take samples of different food products and ensure that quality food products are being provided to the masses.

The involvement of the community in promotion of their own health care is an essential ingredient of primary health care. The community should participate in the planning, implementation and maintenance of health service like village development committees, mother's club, health insurance, village funds for nutrition and village health committees.

CHCs were created to provide efficient referral services within the rural areas at a lower cost and with best treatment. However CHCs have failed to serve as referral centre and thus defeating the purpose for which these were created.

Thus following specific suggestions are given for bringing about the improvement of quality of health care provided by the public sector:

- All CHCs should be upgraded as per IPHS standard having facility of FRUs, adequate laboratory, blood storage equipment, drugs and importantly specialist.
- All PHCs should be upgraded into 24x7.
- PHCs should have a provision of proper building with staff quarters, adequate laboratory, furniture, drugs and facility of ambulance.
- All the sub centres should be well equipped and function from proper government building with staff quarters. For storage of medicines adequate cupboard's should be given.
- Supply of medicines and equipment should be regularized.
- Wide publicity of various health programmes implemented by the government from time to time should be done.
- To have proper access of health services, public transport should be made available for rural people. One of the main reasons of the non utilization of the public health facilities is lack of connectivity in the villages.
- Public health system alone cannot provide quality health care. In fact there is a need to usher in public private partnership for bringing in substantial change in the health arena.

Thus there is a need to transform public health care into accountable, accessible, affordable system of quality services.

CHAPTER V

ECONOMY AND LIVELIHOOD PATTERNS

This chapter is an endeavour to examine the material conditions of district Hoshiarpur as it is one of the backward districts of Punjab. The major focus is on income and related parameters to analyze inter-and intra-district differences. District Hoshiarpur, on economic front particularly income parameters lags far behind other districts of the state. There are also regional disparities in the district due to diverse geographical terrain and other characteristics. An attempt has been made here to understand reasons behind low income levels of the district with other parts of Punjab and within district focus is on economic disparities.

The chapter has been organized in three sections. In the first section, income estimates based on district domestic product along with sectoral distribution of domestic product have been covered. On these parameters, level and growth of district domestic product of Hoshiarpur has been compared with other districts and the state. To estimate the growth rate, data have been taken for the last 10 years only due to reorganization of the district Hoshiarpur in the year 1995 with the transferring of area of Tehsil Balachaur in Nawanshahar district. The second section deals with present situation of agriculture in the district and its comparison with state level data. It also highlights the block level variations in the agricultural development and estimation of land productivity and initiatives taken to improve the agricultural sector of the economy. In the third section, the details of manufacturing and services sector, and poverty status have been dealt with.

I

Income Estimates

Development of an area, region or a country is best measured by the goods and services produced. Gross Domestic Product, the market value of the goods and services produced by a country by residents or non residents, is the most common tool, used by administrators, researchers, and economists to compare the development of the area with others. It is calculated by four types of expenditures such as consumption, investment, government purchases and net exports. Thus, to compare the development in district Hoshiarpur viz-a-viz with other districts of Punjab, in terms of Gross Domestic Product (GDP), Net State Domestic Product (NSDP) and Per Capita Net State Domestic Product

Table 1 : Growth of Net State Domestic Product at Constant (1999-2000) Prices for the years 1995-96 to 2004-05 (Rs. in Lakhs).

	District	1994-95	1995-96	1996-97	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	Growth rate	Rank
1	Gurdaspur	351322	370297	396767	431658	432551	455314	476687	473987	505330	522320	4.3	3
2	Amritsar	559911	612295	644765	673357	706654	742385	751191	769038	797686	845836	4.2	4
3	Kapurthala	176868	181530	174810	191886	199296	216438	209014	215586	226410	235847	3.5	9
4	Jalandhar	390709	428520	451876	497519	540242	513686	517384	540002	559414	589172	4.0	6
5	Nawanshahar	120935	150371	136087	153201	167704	177656	167208	176583	185820	193796	4.5	2
6	Hoshiarpur	281443	293047	307567	284643	319822	321542	343911	350988	369634	386390	3.5	**10**
7	Rup Nagar	235694	261541	239140	285152	281357	279176	288096	294446	285374	301114	2.4	17
8	Ludhiana	742606	774250	860927	890028	849808	898513	922893	945905	1007990	1065119	3.5	11
9	Ferozpur	393073	417324	413014	414932	452625	442831	447439	449558	492665	509361	2.5	16
10	Faridkot	139408	130860	127750	138413	145147	149991	151132	152127	160653	169566	2.6	15
11	Muktsar	145980	163161	140812	148848	174953	179209	179214	184020	197458	213659	4.1	5
12	Moga	137664	173149	230358	209495	217281	269174	275793	278263	296330	307100	8.2	1
13	Bathinda	256300	264197	260649	257270	277804	296103	282453	298872	317966	341246	3.0	13
14	Mansa	135221	142856	140415	136527	154974	157975	152771	161267	175020	186943	3.6	8
15	Sangrur	452697	492506	502227	502403	530981	550654	554366	589013	601301	635161	3.5	12
16	Patiala	417359	444671	463327	488203	490231	508091	518177	522601	536609	564396	2.9	14
17	Fatehgarh Sahib	126440	137386	140842	148836	168679	158995	163402	163151	173801	183211	3.7	7
	PUNJAB	5063629	5436552	5583813	5905170	6110109	6317733	6401131	6565407	6889461	7250237	3.7	

Source: Office of Income Cell, Economic and Statistical Organization, Punjab

(PNSDP) are used at both current and constant prices. With a view to study the present level and the rate of growth and per capita income, the information on NSDP at constant (1999-2000) prices have been taken and have been compared with other districts of the state. As given in Table 1, Net State Domestic Product (at constant Prices) of Hoshiarpur district was Rs. 386390 during 2004-05, having a little more than 5 percent share in Net State Domestic Product.

The change in district domestic product of Hoshiarpur district as compared with other districts of the state and Punjab as a whole has been shown in Table 1. The economy of Hoshiarpur district between 1995-96 and 2004-05 has experienced a rate of growth of 3.5 per cent per annum, which is much below the standard norm of economic development namely 5 to 7 percent rate of growth. The economies of other districts of states, such as Gurdaspur, Jalandhar and Nawanshahar have grown at a rate higher than that of Hoshiarpur. The rate of growth of Hoshiarpur district was also lower than that of Punjab state as a whole. Hence, both from the standard norm of economic development as well as comparison with neighbouring districts of the State, it can be inferred that the rate of growth of Hoshiarpur district is far from satisfactory due to its geographical variations.

Per Capita Income

Level of per capita income is widely used, to measure the existing level of economic development at international level, national and regional levels. Per capita income is the average annual income of a person i.e. generated in the country through productive activities. It reflects the gross national product of the country and considered as an appropriate index of economic development to capture the ability of economy to grow at a faster rate than the growth of its population. Per capita income is treated as an accepted measure of the over all economic well-being of the people although it does not depict the inequalities in income distribution. Here the economic well being of the people and the economic development has been measured on the basis of per capita income.

Hoshiarpur district had Rs. 24,896 as per capita income (at 1999-2000 constant prices) during the year 2004-2005, which is lower than the average income of the State as whole (Rs. 27,873). Table 2 shows that Hoshiarpur district falls in the category of less developed districts. The rank of Hoshiarpur in terms of per capita income is the second lowest among all the districts except district Gurdaspur which is at the bottom. Its per capita income is almost 2.5 times less than that of Moga and Ludhiana districts. The reason may be due to less

agricultural productivity, its natural disadvantages, lack of infrastructure, non development of industry and lack of technological progress.

Table 2 : Ranking of Districts on the Per Capita income in Rs. (2004-2005)

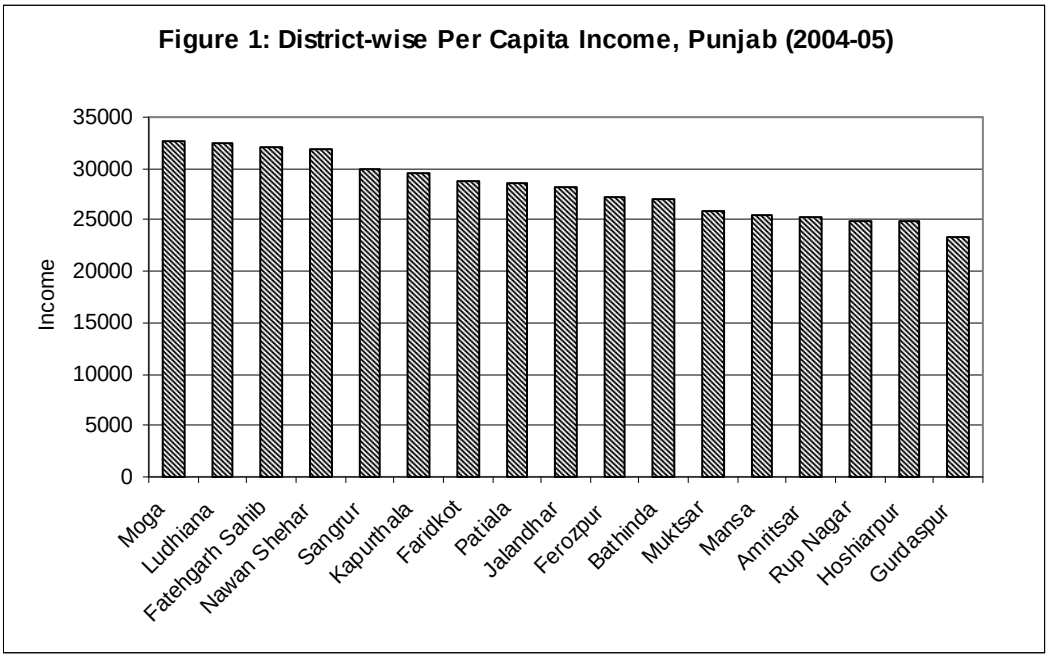
District	Per Capita Income	Rank
Moga	32635	1
Ludhiana	32434	2
Fatehgarh Sahib	32086	3
Nawanshahar	31822	4
Sangrur	29876	5
Kapurthala	29592	6
Faridkot	28740	7
Patiala	28606	8
Jalandhar	28217	9
Ferozpur	27297	10
Bathinda	27019	11
Muktsar	25835	12
Mansa	25434	13
Amritsar	25324	14
Rup Nagar	24968	15
Hoshiarpur	**24896**	**16**
Gurdaspur	23276	17
PUNJAB	**27873**	**-**

Source: Office of Income Cell, Economic and Statistical Organization, Punjab

Other districts falling in this category, with lower income, are Muktsar, Mansa, Amritsar, Rupnagar and Gurdaspur. Districts, such as, Sangrur, Kapurthala, Faridkot, Patiala, Jalandhar, Ferozpur and Bathinda belong to the category of moderately developed districts – their per capita income is in the range of Rs. 27,000 to Rs. 30,000. The top ranking districts (per capita income more than Rs. 30,000) in terms of economic development include, Moga, Ludhiana, Fatehgarh Sahib and Nawanshahar.

Growth of Per Capita Income

It is not only that Hoshiarpur district belongs to category of least developed districts of the state, the per capita income of the district is also growing at a very slow rate. The per capita income of Hoshiarpur district grew at the rate of 2.0 per cent per annum between 1995-96 to



2004-05. During this period the per capita income of the state also experienced slow rate of growth, i.e., 1.8 per cent per annum. The neighbouring districts, namely, Gurdaspur, Jalandhar, Nawanshahar, however, experienced a rate of growth higher than that of Hoshiarpur district (see Table 3). The rate of growth of per capita income was twice as high in district Nawanshahar than Hoshiarpur district in the last 10 years.

To explore the low per capita income and its slow rate of growth of Hoshiarpur district it is interesting to study the sectoral distribution of NSDP and sector shift in income over the years.

Sectoral Growth and Sectoral Shift in Income

As is true of Punjab state, the structure of the economy of Hoshiarpur district is predominantly an agrarian economy. The ideal model of economic development postulates

Table 3 : Growth Rate of Per Capita Net State Domestic Product at Constant (1999-2000) Prices for the years 1995-96 to 2004-05 (Rs. in Lakhs)

Sr. No.	District	1994-95	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	Growth Rate	Rank
1	2	3	4	5	6	7	8	9	10	11	12	13		
1	Gurdaspur	17791	18651	19380	20313	21936	21693	22507	22422	21893	22928	23276	2.2	4
2	Amritsar	20558	20642	22230	23073	23858	25166	26094	23961	24017	24394	25324	1.4	11
3	Kapurthala	24107	24672	24895	23476	25490	26715	28554	27466	27890	28842	29592	2.0	7
4	Jalandhar	21924	22482	24274	25087	27317	28630	26796	26091	26773	27262	28217	2.1	5
5	Nawanshahar	0	20182	24664	21861	24295	27313	28471	28292	29578	30816	31822	4.1	2
6	Hoshiarpur	20681	22446	23024	23676	25728	24668	21465	23050	23213	24143	24896	2.0	7
7	Rupnagar	23884	23269	25193	22422	26222	25485	24706	25495	25493	24184	24968	0.5	17
8	Ludhiana	24753	25493	25776	27663	27863	26876	27553	30032	30115	31382	32434	1.9	9
9	Ferozpur	22388	24244	25193	23287	23985	25805	24712	25351	25003	26892	27297	1.1	14
10	Faridkot	23627	28657	26367	25172	26778	26979	27321	27133	26783	27747	28740	0.8	16
11	Muktsar	0	20234	22210	18789	19559	22900	23064	22801	23031	24288	25835	2.4	3
12	Moga	0	15496	19190	19891	22471	24524	29875	30576	30445	31932	32635	7.3	1
13	Bathinda	23506	23932	24217	23379	22747	24115	25243	23616	24538	25642	27019	1.2	13
14	Mansa	21918	21315	22160	21376	20495	23481	23543	21850	22746	24241	25434	1.3	12
15	Sangrur	24147	24706	26377	26319	25900	26736	27193	27444	28662	28770	29876	1.8	10
16	Patiala	23424	24168	25248	25711	26681	27296	27749	27784	27491	27703	28606	1.1	15
17	Fatehgarh Sahib	23044	24488	26238	26389	27549	32007	29719	30092	29556	30925	32086	2.1	6
	Punjab	22112	22500	23705	23890	24792	25615	25988	25999	26182	26975	27873	1.8	

Source: Office of Income Cell, Economic and Statistical Organization, Punjab

that overall satisfactory rate of growth should be accompanied by structural changes in the economy, namely, a consistent decline in share of agricultural and allied activities in income as well as employment followed by an increase in the share of non-agricultural activities in both income and employment. The share of agriculture and allied sector in district income was as high as 53.23 per cent in 1980-81 (see Table 4) and it declined to 29.28 per cent in the year 2004-05. A decline of 24 per cent points in the share of primary sector over a span of twenty four years is much faster than of 14 per cent points decline in Punjab state over this period. Major decline in primary sector of Hoshiarpur district was due to fast decline in the share of forestry and logging sector which declined from 10.28 percent to a negligible share of 0.52 percent during two decades. Similarly, there has been a 10 per cent points decline in livestock sector. It suggests that structural changes are in progress in the economy of Hoshiarpur district.

Table 4: Percentage Distribution of Net Domestic Product of Districts of Punjab at Factor Cost at Constant Prices (at 1980-81 prices for the 1980-81 and 1990-91 years, at 1999-2000 prices for the years 1999-2000 and 2004-05)

Sector	Hoshiarpur				Punjab			
	1980-81	1990-91	2000-2001	2004-2005	1980-81	1990-91	2000-2001	2004-2005
Agriculture	42.91	41.08	35.31	28.24	48.18	47.63	41.47	35.77
(i) Agriculture	23.62	23.32	23.80	18.74	32.03	30.69	27.33	24.18
(ii) Livestock	19.29	17.76	11.51	9.50	16.15	16.94	14.14	11.59
Forestry & logging	10.28	4.48	0.81	0.52	1.61	0.59	0.16	0.30
Fishery	0.02	0.06	0.69	0.51	0.03	0.09	0.40	0.33
Mining & Quarrying	0.02	0.03	0.00	0.01	0.02	0.02	0.00	0.04
Sub Total Primary	**53.23**	**45.66**	**36.81**	**29.28**	**49.84**	**48.33**	**42.02**	**36.44**
Manufacturing	6.47	14.60	9.20	11.70	10.94	16.27	15.30	12.24
(i) Registered	2.32	8.55	4.03	6.57	5.88	9.41	10.11	6.65
(ii) Un-Registered	4.15	6.04	5.17	5.13	5.06	6.86	5.19	5.58
Construction	7.42	4.84	8.63	9.65	6.12	3.82	5.40	6.54
Electricity Gas and Water Supply	0.99	2.10	0.58	1.35	1.24	2.45	0.73	1.95
Sub Total Secondary	**14.88**	**21.54**	**18.41**	**22.71**	**18.30**	**22.54**	**21.42**	**20.73**
Transport Storage & Communication	1.58	2.31	4.41	6.75	2.06	2.32	4.05	6.71
Trade Hotels & Restaurants	11.85	10.24	14.69	14.40	14.50	11.33	14.02	14.08
Banking & Insurance	2.75	5.63	7.89	6.31	2.54	4.67	6.08	5.36
Real Estate Ownership of Dwelling & Business Services	5.13	4.06	4.76	3.96	4.23	3.20	3.44	3.21
Public Administration	3.74	4.53	7.23	5.28	2.80	3.28	4.59	4.41
Others Services & Sanitary Services	6.83	6.04	6.00	11.32	5.73	4.32	4.37	9.05
Sub Total Tertiary	**31.88**	**32.81**	**44.78**	**48.02**	**31.86**	**29.13**	**36.55**	**42.83**
Total SDP	100	100	100	100	100	100	100	100

Source: Office of Income Cell, Economic and Statistical Organization, Punjab

In comparison to agricultural sector, the contribution of other sectors of economy is very low in terms of income. Overall, the share of industrial sector has increased over time in district Hoshiarpur. Its share in NDP was 14.88 percent in 1980-81 and it increased to 22.71 percent in the year 2004-05 whereas in case of Punjab state there has been a marginal increase from 18.30 to 20.73 during the same period. The share of service sector in the district economy was 31.88 per cent in 1980-81, which increased to 48.02 per cent in 2004-05 and the increase has been higher than the Punjab state. The non-agricultural sectors pooled together witnessed a gradual increase in their share in the district income over time. For example, their share in district income was 56.75 per cent in 1980-81 and it increased to 70.73 per cent in 2004-05. Overall the share of industrial sector increased by 8 percent points over time and share of tertiary sector increased by 17 percent points in Hoshiarpur district. The changes in structure of economy can be studied by distribution of workers in different occupation groups.

Table 5: Distribution of Workers for the years 1981, 1991 and 2001 in Hoshiarpur and Punjab.

	Hoshiarpur				Punjab			
Year	**Cultivator**	**Agriculture Labour**	**Household Industry**	**Other workers**	**Cultivator**	**Agriculture Labour**	**Household Industry**	**Other workers**
1980-81	118149 (36.00)	70199 (21.39)	12139 (3.70)	127727 (38.92)	1767286 (35.86)	1092225 (22.16)	127186 (2.58)	1941062 (39.39)
1990-91	122681 (30.60)	95119 (23.72)	9642 (2.40)	173529 (43.28)	1917210 (31.44)	1452828 (23.82)	81084 (1.33)	2647252 (43.41)
2000-01	123458 (24.05)	85383 (16.63)	14337 (2.79)	290173 (56.53)	2065067 (22.62)	1489861 (16.32)	333770 (3.66)	5238776 (57.40)

Source : Census of India, Primary Census Abstract, Punjab 1981, 1991, 2001.

Table 5 reveals that the number of cultivators over the 1981-2001 period has increased by 4.4 percent in the district though there is a slow shift of workers from primary sector to other sectors of economy in Hoshiarpur as well as in Punjab. Percentage of workers in household industry has rather declined in the district showing a reverse trend to that of state. Major change has occurred in the 'other workers' occupation where the number of workers has been more than doubled over the 1981-2001 period whereas in Punjab it has increased 2.7 times over the same period.

II

Current Scenario of Agricultural Sector

The total geographic area of Punjab is 5036 thousand hectares. Out of the total area 6 percent is under forests and 10 percent is either uncultured, barren or non agricultural area. Thus, 83 percent is the net sown area in the state. Out of the total net sown area, 81 percent is irrigated with 188 percent cropping intensity. The major source of the irrigation in the state is tubewells (electrically operated) and wells followed by government canals.

Table 6: District wise Geographical Profile of Punjab

Districts	Total Area	Forests	Non Agri. Area	Net sown area	Net Area Irrigated
Punjab	**5036**	**300**	**502**	**4184**	**4078**
Gurdaspur	356	37	26	288	237
Amritsar	267	10	31	222	222
Tarntaran	241	5	18	218	218
Kapurthala	163	2	29	136	135
Jalandhar	266	6	21	239	239
Nawanshahar	119	16	13	95	87
Hoshiarpur	**340**	**108**	**29**	**201**	**172**
Rupnagar	144	37	20	78	67
SAS Nagar	111	18	18	75	75
Ludhiana	368	10	52	305	305
Ferozpur	585	12	38	476	474
Faridkot	144	2	17	128	128
Muktsar	263	2	19	227	225
Moga	168	2	23	195	195
Bathinda	334	8	32	297	295
Mansa	219	3	14	190	190
Sangrur	361	5	38	315	315
Barnala	141	2	14	124	124
Patiala	329	13	39	273	273
Fatehgarh sahib	117	2	11	102	102

Note: Area in thousand hectares
Source: Statistical Abstract of Punjab, 2007

In Hoshiarpur district total area is 340 thousand hectares, out of which forest area is 108 thousand hectares (32 percent) and the district has the highest forest covered area in the state followed by Gurdaspur and Rupnagar. Nearly 60 percent is the net sown area and is ranked at 11th position. Out of the net area sown, 85.6 percent is irrigated and the cropping intensity is 170 percent- 18 percent points less than the state average. For 90 percent of irrigated area, source of irrigation is tubewells (electric operated) and wells.

Table 7: Land Use Pattern in District Hoshiarpur (2005-06)
(Area in '000' Hectares)

Land Use	Area	Per cent
Forests	109	32.15
Barren Land	001	0.30
Land use other than Cultivation	024	7.08
Permanent Pastures	001	0.30
Present Waste Land	001	0.30
Area under Cultivation	203	59.88
Irrigated Area	154	75.86
Un-irrigated Area	49	24.14
Area Sown more than once	145	71.43
Gross Cropped Area	348	171.43
Cropping Intensity	171%	-
Total Geographical Area	339	-

Source: Village Directory (2005-06), Economic and Statistical Organisation, Punjab.

Forest Area

Topographically, the District can be divided into three regions mainly on the basis of soil crop-climate complex. (1) The flood plains are the most fertile area formed by Beas river in the north-west. It covers 17.0 percent of the geographical area of the district. It has wide-spread irrigation facilities. Paddy-Wheat followed by Maize-Wheat is the main rotations of this region. (2) The Kandi Belt covers the sub-mountainous undulating plain with a slope of more than 16 meters per kilometre which progressively decreases towards west side of the district. There is acute shortage of water and this area faces high incidence of soil erosion

which is caused by the rivulets (Choes) passing through this region and are flooded during the rainy season. Soils of this region are poor. This constitutes 53 percent of the total area of the district. In Kandi area about 50 percent arable land is sown under rain fed conditions. Rainfall at sowing time is a major factor influencing rise and fall in the sown area of this belt and this is the major cause of wide fluctuations in area and production of crops in the district. This region broadly covers Talwara, Bhunga, and Hoshiarpur-II blocks. Maize in Kharif and Wheat in Rabi are the major crops of this region. (3) The Bet area is located on the beds of lower Shivaliks. These are undulating plains with relatively low slope decreasing up to 4 meters per kilometre and covers 30 percent of the area of the district. This is suitable for maize, sugarcane and paddy crops.

The marginal (26.72 percent) and the small farmers (23.50 percent) together have nearly 50 percent of the total operational land holdings. In the district, by adding another significant proportion of medium farmers (28.8 percent) nearly 80.0 percent are cultivating one hectare to less than 4 hectares of operational holding (ESO, 2007).

Table 8 : Block-wise Geographical Profile of District Hoshiarpur

Block Name	No of Villages in Sub Mountain area	Area	No of Villages in Plains	Area	Total Villages	Total area	Percent Kandi area
Hoshiarpur-I	32	7063	168	28354	200	35417	19.9
Hoshiarpur-II	60	23525	67	19501	127	43026	54.7
Bhunga	121	42783	79	13096	200	55879	76.6
Dasuya	93	17191	90	16547	183	33738	51.0
Tanda	0	0	123	27644	123	27644	0.0
Mukerian	64	10403	77	12823	141	23226	44.8
Talwara	78	22738	0	0	78	22738	100.0
Hajipur	95	16994	0	0	95	16994	100.0
Garhshanker	70	19956	75	18352	145	38308	52.1
Mahilpur	69	25229	88	17086	157	42315	59.6
Total	682	185882	767	153403	1449	339285	54.8

Source: Office of Chief Agricultural Officer, Hoshiarpur

Overall, 70 percent of the total area in the district is irrigated. At the block level, in the Kandi blocks the situation is bad, as in Talwara only one-fourth of its area is irrigated and only 36 percent is area net sown. In Bhunga block only 42 percent of the area is net sown. In many other blocks (Hoshiarpur-II, Hajipur, Garhshankar and Mahilpur) nearly 60 percent of the area is under cultivation.

Table 9: Block-wise Area under Cultivation, Net Sown area and Net Irrigated Area

Block	Total Area	Area under Forests	Net Irrigated Area	Percent	Net Sown Area	Percent
Hoshiarpur I	31827	213	192229	79.97	24045	75.55
Hoshiarpur II	43790	5507	18873	68.15	27693	63.24
Bhunga	55615	3682	16873	72.15	23386	42.05
Dasuya	30924	3531	16652	75.64	22016	71.19
Tanda	25764	1000	17460	88.22	19791	76.82
Mukerian	23827	0	17744	82.51	21505	90.25
Talwara	22188	11566	1993	25.03	7962	35.88
Hajipur	17045	4921	6810	66.05	10310	60.49
Garhshankar	38420	4937	12766	53.01	24080	62.68
Mahilpur	39514	9142	15043	57.93	25969	65.72
Total	328914	44499	143443	69.38	206757	62.86

Source: http://www.punjab.gov.in/general/villagedirectory - retrieved in January 2008.

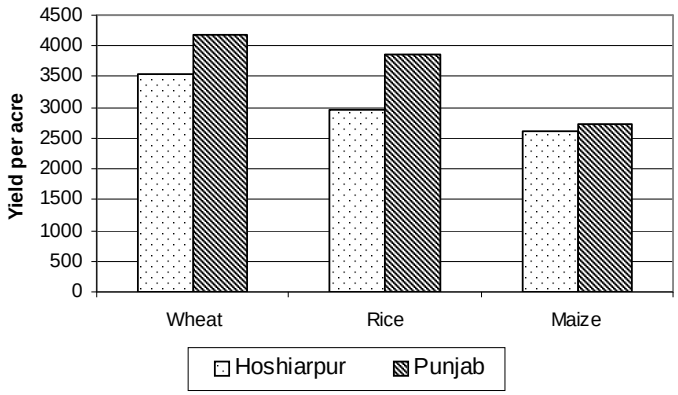
Cropping Pattern at District Level

Cropping pattern is the central element of agricultural land use. It helps to study the acreage under various crops in different crop seasons. The total cropped area in the district was 200 thousand hectares in 2005-06. Nearly half of the total cropped area is sown more than once resulting into cropping intensity of 171 percent. However a significant proportion of the area is affected by the problems of soil erosion especially the Kandi belt and 108 thousand hectares of the district are under forests. Wheat during winter and rice and maize during summer occupy more than 68 percent of the total cropped area. Besides these, the district produces sugarcane, groundnut, sesame, mash, arhar, masar, gram, sunflower, rapeseed and mustard. These crops have a strong scope of expansion. In addition to this vegetables and fruits are also produced in the district.

Land Productivities of Major Crops

Table 10 and Figure 2 show the land productivity of wheat, rice and maize. For wheat, it was much lower than the state average at 3546 kilograms (kgs.). per hectare. In 2005-06 it was around 84 percent of state average of 4179 kgs per hectare.

Figure 2: Yield of Major Crops (per Hectare), 2005-06



Wheat Fields

Table 10: Land Productivity of Major Crops of Hoshiarpur District for the Years 1980-81 to 2005-06 (in Kilograms (kgs) per hectare)

Year	Wheat	Rice	Maize
1980-81	2041	2416	1541
1985-86	2539	2468	1147
1990-91	2858	2869	1997
1995-96	3168	3010	1828
2000-01	3443	3047	2779
2005-06	3546	2975	2612

Source: Statistical Abstract of Punjab, 2007

Changes in land productivity of wheat over the 25 years period suggest that although it has increased by 73 percent but are still below the state average. In case of paddy, the land productivity has improved by 23 percent in the district where as during the same period this increase was 41 percent at the state level. It has rather declined in 2005-06 (2975 kgs. per hectare) as compared to 2001-02 (3074 kgs per hectare). The land productivity in case of maize which was grown on 66,000 hectares of district (44 percent of state area under this crop) was 1541 kgs. per hectare in 1980-81 and it increased to 2612 kgs per hectare in 2005-06, coming closer to state average of 2726 kgs per hectare. Among other crops, area under sugarcane was 21,000 hectares in 2004-05 and land productivity is around 90 percent of the state average of 5783 kgs per hectare. The only crop with higher productivity than state average is groundnut, i.e. 880 kgs per hectare compared with 871 kgs per hectare at state level.

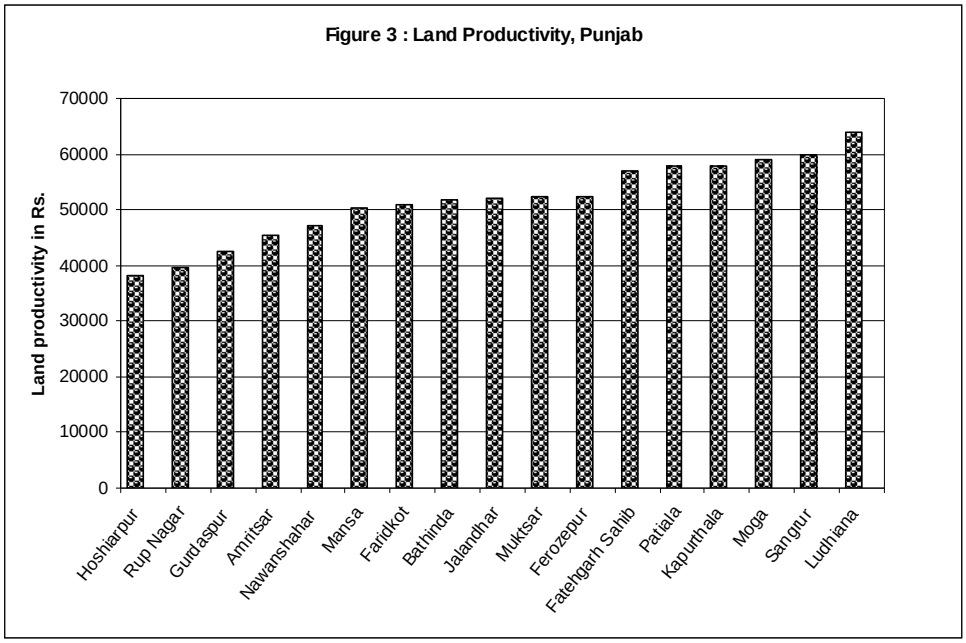
In a recent study (Singh, 2008), district level land and labour productivity in agriculture have been measured which provides more insights in level and development of agriculture in a district. Land productivity in this study is measured as value output of the 45 major crops per hectare of the net sown area in the district. In the same way, Labour Productivity has been measured as value output per worker engaged in agriculture. Table 11 given below based on the information culled out from the study, gives data for the districts of Punjab State. The land productivity in Hoshiarpur is the lowest among all the districts of Punjab and the labour productivity at rank 16^{th} (Rs. 37869) is just Rs. 100 more than that of Rup Nagar district. Thus, on both the parameters the agricultural productivity is the lowest in Hoshiarpur. In Ludhiana District, land productivity at Rs. 63963 per hectare of net sown area is 1.6 times higher than that of Hoshiarpur whereas labour productivity per worker of per

hectare is 2.3 times which is much higher in Ludhiana district. There are many reasons for low productivity in the district, like soil erosion, irrigation facilities and size of land holdings. Almost two-third of land in the district is degraded due to soil erosion with varying degree from slight to severe erosion. Data on this aspect is given in Table 12.

Table 11: District wise Level of Agricultural Development in Punjab 2001-2004.

District	Land Productivity	Rank Land Productivity	Labour Productivity	Rank Labour Productivity
Gurdaspur	42447	15	50878	14
Amritsar	45313	14	47273	15
Kapurthala	57989	4	83182	2
Jalandhar	52004	9	73811	4
Nawanshahar	47208	13	54401	12
Hoshiarpur	**38131**	**17**	**37869**	**16**
Rup Nagar	39767	16	37777	17
Ludhiana	63963	1	86181	1
Ferozepur	52500	7	67834	6
Faridkot	50975	11	51424	13
Muktsar	52465	8	65295	7
Moga	59018	3	62668	9
Bathinda	51694	10	60291	10
Mansa	50328	12	58903	11
Sangrur	60020	2	69883	5
Patiala	57847	5	65287	8
Fatehgarh Sahib	56996	6	83177	3

Source: Gurmail Singh, "Growth of Indian Agriculture: A district wise Study", Planning Commission, Govt. of India, 2008.



One of the factors responsible for lower agricultural productivity is the proportion of area under irrigation is relatively less. In the Kandi belt, area is rain fed in nature. The area in plains is irrigated by the deep tubewells. The ground water table in this area is getting deeper and deeper every year which is a matter of concern. This area needs more attention towards water management and judicious use of water.

Another factor for lower agricultural productivity in the district is that 2,10,000 hectares (63.4 percent) land is degraded due to water and salt erosion. Out of this 39 percent of land is degraded due to slight to moderate soil erosion. Another 1,22,000 hectares mainly falling in Kandi area (in the lower Shivaliks) land is effected by moderately to very severe soil erosion. In the Kandi area, the soil strata are sandy to clay loam, and are affected by the gullied lands. A small percentage (2.4) of land area is affected by water logging and slightly salt contents in soil (Table 12).

Table 12: District-wise degraded Lands under different categories in Punjab (000' hectares)

Districts	**Water erosion area**				**Salt affected area**			**WLA**	**RLA**	**TDA**	**PTTA**
	SL	M	MS	VS	SL	M	S				
Gurdaspur	58.2	40.4	10.4	1.7		3.8	2.5		4.6	121.7	34.1
Amritsar	16.4	1.3				1.5	6.1		3.0	31.7	6.2
Kapurthala	12.7	1.5				4.1	4.3			26.1	16.0
Jalandhar	13.4	7.2				4.4	0.5			25.5	9.6
Nawanshahar						0.4		0.4		0.8	0.7
Hoshiarpur	**49.7**	**33.1**	**22.6**	**56.5**	**43.0**	**0.4**		**4.6**		**209.9**	**63.4**
Rup nagar	30.3	16.1	10.6	27.7	29.2	0.3	1.7	0.7		116.4	55.0
Ludhiana	13.4	9.8				1.2	1.0			25.4	6.7
Ferozepur	53.0	0.3				19.8	5.5	14.1		92.6	15.8
Faridkot	35.9	2.1				10.0	4.7	2.4		56.9	38.7
Muktsar						10.2	0.4	35.2		46.6	17.9
Moga	25.1					6.1	0.9			7.3	4.3
Bathinda		2.4				4.9	0.2	0.2		34.9	10.3
Mansa						5.1	1.3	7.0		13.9	6.5
Sangrur	19.5	6.4				9.1	6.0			48.5	9.7
Patiala	13.7	5.4	1.0	1.4	0.1	8.2	3.2			35.5	9.8
Fatehgarh Sahib						2.2	0.0			2.3	2.0

Source: Sidhu G.S., Walia C.S., Singh R.P., 2002. (SL=Slight, M=Moderate, MS=Moderately Severe, S=Severe, VS=Very Severe, WLA=Water Logged Area, RLA=Ravinous Land Area, TDA=Total Degraded Area, PTTA=Percent to Total Area of the District)

The third problem is the size of land holdings. Over the years number of marginal and small farmers has increased in the district as well as in the state. With increasing pressure on land for more production and new technologies of inputs, marginal and small farmers are

unable to keep pace. There were 26.7 marginal holdings in the district compared with 12.3 in the state. Almost one-fourth of holdings in the district were small in size compared with 17 percent at the state level.

Remedy to Earth Cancer

In district Hoshiarpur, out of 500 Acre of land area, 200 acre of land in the areas of Simbli, Panam and Nazarpur and 600 acre in adjoining districts of Nawanshahar containing seleniferous soils having 0.31 to 4.55 selenium mg/kg as against the norm of 0.05 mg/kg are badly affected, as the underground water was not fit for the irrigation. the consumption of fodder produced by this land causes negative impact on the lives of human beings in the form of Rheumatic arthritis in younger generation, abdomen problems, baldness etc. and cattle are suffering from loosing hair, malfunctioning of hoofs, horns and tails etc. This disease is known as 'EARTH CANCER' in the area.

The Earth Cancer was cured by installation of four deep tube wells and treating the soil with gypsum with the help of NABARD Hoshiarpur under RSVY. After this application, Selenium content in the area has been reduced to 0.001 mg/kg and productivity of land is also increased by 20-25% in the area. Diseases in human beings and cattle are vanishing.

Table 13: Per Hectare (net area sown) use of Chemical Fertilisers (in Tonnes), 2006-07

Sr. No.	District	Nitrogenous	Phosphatic	Potassic	Total
1	Gurdaspur	3.4	13.7	144	2.7
2	Amritsar	3.0	12.3	55.5	2.3
3	Tarntaran	3.0	12.8	218	2.4
4	Kapurthala	3.3	10.5	68	2.4
5	Jalandhar	3.2	10.4	59.8	2.3
6	Nawanshahar	4.0	13.6	47.5	2.9
7	**Hoshiarpur**	**4.2**	**13.4**	**100.5**	**3.1**
8	Rupnagar	3.1	11.1	0	2.4
9	SAS Nagar	3.0	9.4	0	2.3
10	Ludhiana	2.7	10.5	101.7	2.1
11	Ferozpur	3.3	14.4	238	2.6
12	Faridkot	3.0	8.5	64	2.2
13	Muktsar	3.6	9.9	113.5	2.6
14	Moga	3.2	10.3	97.5	2.4
15	Bathinda	3.3	10.6	99	2.5
16	Mansa	3.6	13.6	95	2.8
17	Sangrur	2.3	10.2	78.75	1.8
18	Barnala	0.0	0.0	0	0.0
19	Patiala	3.0	11.4	136.5	2.3
20	Fatehgarh Sahib	2.8	11.3	0	2.3
	Punjab	**3.2**	**11.8**	**107.3**	**2.5**

Source: Economic and Statistical Organisation, Statistical Abstract Punjab, 2007.

Information provided in Table 13 highlights that the use of chemical fertilisers is highest in Hoshiarpur district among the districts of Punjab. Although the land productivity is

one of the lowest in the district and most of the land is also degraded, farmers are resorting to excessive use of fertilisers to enhance the productivity of the land.

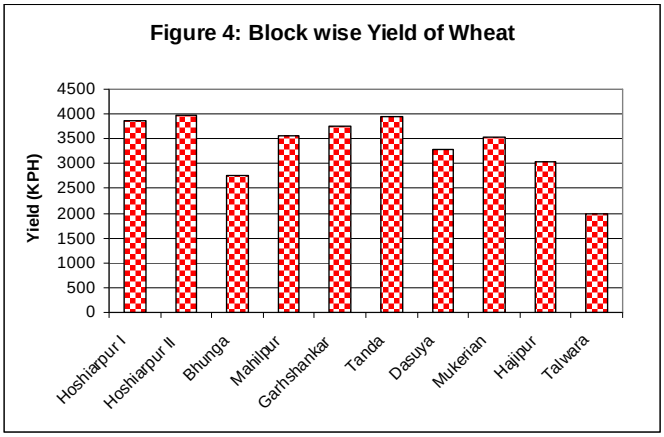
Agriculture Situation at the Block Level

At the sub district level there are variations in per hectare yield of crops. As already mentioned many factors like type and health of soil, irrigation facilities and other inputs contribute to it. Table 14 and Figures 4 to 7 given below highlight the block wise yield (kgs per hectare) for major crops of the district on average basis for the period 2003-04 to 2005-06. The per hectare yield of wheat in Tanda at 3946 kgs is almost double of yield in Talwara Block. One of the reasons for this is that all the area in Talwara block falls in the sub mountainous regions (Kandi) and most of area is sown under rainfed conditions. Land in Tanda block is a plain area with tubewells as source of irrigation, giving boost to crop production.

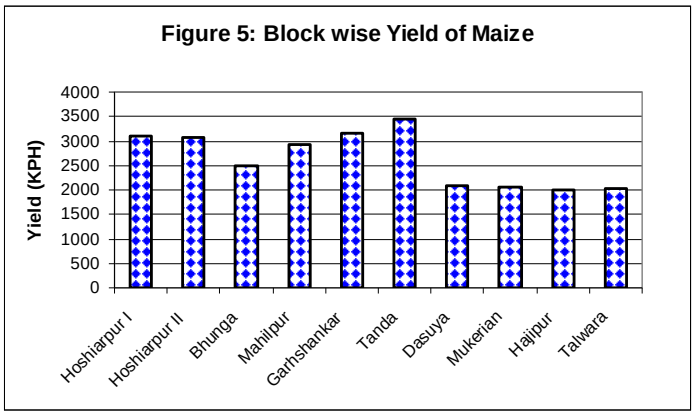
Table 14: Block-wise Yield of Main Crops (Average for the years 2003-04, 2004-05, and 2005-06)

Block	Wheat	Maize	Rice	Sugarcane
Hoshiarpur I	3851	3091	3189	4728
Hoshiarpur II	3985	3064	0	5211
Bhunga	2771	2490	0	5159
Mahilpur	3556	2925	3297	3824
Garhshankar	3768	3147	3444	5271
Tanda	3946	3439	3918	5509
Dasuya	3288	2080	3401	5296
Mukerian	3543	2072	3316	5787
Hajipur	3026	2013	2689	4659
Talwara	1977	2035	0	6463

Source: Office of Chief Agricultural Officer, District Hoshiarpur



As is evident from the Table 14, there are variations in per hectare yield within the blocks. Some of the crops like rice, which are more productive, are not sown in some of the blocks due to nature of soil and lack of irrigation facilities.



As already mentioned above land and labour productivity of Hoshiarpur district is one of the lowest in Punjab. Land and labour productivity has been estimated at the block level also to see the intra district variations. Data in Table 15 reveals that land and labour productivity is the lowest in Garhshankar block whereas it is highest in Hoshiarpur-II block.

Table 15: Block wise Land and Labour Productivity in Hoshiarpur district

Block	Land Productivity	Ranking	Labour Productivity	Ranking
Hoshiarpur-1	49143	3	69142	6
Hoshiarpur -2	63124	1	96837	1
Bhunga	54384	2	68302	7
Mahilpur	42092	9	67622	8
Garhshankar	36617	10	45803	10
Tanda	45373	8	72430	5
Dasuya	45499	7	82771	2
Mukerian	40990	4	80315	3
Hajipur	47010	5	74174	4
Talwara	45775	6	55934	9
Total	**47099**	-	**70839**	-

Source: Estimated from unit level data

Agriculture: Allied Activities

Besides agriculture, rural masses are engaged in other allied agricultural activities like dairy farming, fisheries, bee keeping and horticulture. All these played an important role in the national economy as well as in the socio-economic development of the country. These sectors also play a significant role in supplementing family incomes and generating gainful employment in the rural sector, particularly among the landless labourers, small and marginal farmers and women, besides providing cheap nutritional food to millions of people.

Dairy Farming

Milk, being one of the major products of animal husbandry is an important food item. Buffaloes and cows are the main source for the supply of milk. Though sheep and goats are also source of milk but due to low yield these are of little commercial importance.

India is endowed with the largest livestock population in the world. It accounts 57 percent of the world's buffalo population and 15 percent of the cattle population. The share of livestock product is estimated at 21 percent of total agriculture sector. Sixty six percent of economically active population is engaged in agriculture. The fact that dairy farming could play a more constructive role in promoting rural welfare and reducing poverty it is increasingly being recognized. Milk production in India during 2005-06 was 97.1 million tones and is estimated to reach 100 million tones during 2006-07.

In Punjab, on an average a buffalo yields about 1300 litres of milk in its lactation period of about 210 days. The inter-calving period is 15-18 months. In the case of crossbred cows, the average lactation yield is over 3500 litres of milk with a calving interval of 12 -14 months. Unfortunately, consumers in Punjab do not like cow's milk, because of its low fat

content and yellowish in colour, whereas all over the world cow's milk is in demand. The per capita availability of milk is about 870 gms. in Punjab against 204 gms. for India (1998).

Livestock enterprises account for about 14 percent of the state domestic product in Punjab, which is one third of the share of agriculture. The cost has been worked out to be Rs. 2,64,000 for a buffalo unit and for a cross bred cow-herd unit it is Rs. 2,98,000 per lactation period. However, the net income is estimated at Rs. 31,803 for cross bred cow as against Rs. 20,672 for buffalo-herd units (Singh and Dhaliwal, 2002). The higher probability of crossbred cow-herd unit is because of a higher milk yield.

Table 16: Number of Cattle and Buffaloes in Punjab (2003)

Districts	Cattle (000)	Buffaloes (000)
Gurdaspur	189.7	383.6
Amritsar	184.1	526.46
Tarntaran	51.1	191.34
Kapurthala	67.4	171.3
Jalandhar	154.5	332.1
Nawanshahar	48.5	144.0
Hoshiarpur	**152.8**	**287.9**
Rupnagar	37.8	152.5
SAS Nagar	30.5	0
Ludhiana	167.7	587.9
Ferozpur	165.9	454.9
Faridkot	56.6	147.1
Muktsar	109.8	214.4
Moga	89.8	267.0
Bathinda	116.5	319.4
Mansa	70.8	280.9
Sangrur	135.3	557.9
Barnala	48.3	214.6
Patiala	112.2	438.4
Fathegarh Sahib	50.7	169.1
Punjab	**2038.6**	**5994.5**

Source: Economic and Statistical Organisation, Statistical Abstract Punjab, 2007.

In 1972, the number of cattle (cows) and buffaloes in the district was about 2,59,000 and 3,28,300, respectively which has been increased to 15,28,000 and 28,79,000. With the setting up of a milk plant at Hoshiarpur under the Co-operative sector and a milk chilling centre at village Ghugial (tehsil Hoshiarpur), dairy farming has become popular.

Table 17: Block Level Information of Dairy Farming of District Hoshiarpur 2004

Blocks	Dairy Units	Animal	Employees
Hoshiarpur –I	035	085	064
Hoshiarpur-II	085	780	136
Bhunga	066	524	079
Dasuya	076	236	106
Tanda	000	000	000
Mukerian	052	262	052
Talwara	004	033	008
Hajipur	052	419	094
Garhshankar	103	5778	235
Mahilpur	059	3023	192
Total	532	11140	966

Source: Office of the District Animal Husbandry, Hoshirpur, 2007

SUCCESS STORY OF DAIRY FARMING

In year 2004-05 Shri Darshan Singh of village Kahri, District Hoshiarpur completed his dairy training at Phagwara Centre and then he applied loan for purchase of 20 cross breed cows from Punjab State Cooperative Agricultural Development Bank Ltd. (PADB) Hoshiarpur. The dairy development field staff guided him to adopt dairy farming as main source of income.

In 2007-08, he got another training of 45 days of dairy entrepreneurship at Phagwara about Artificial insemination to dairy animals and then he applied another loan for purchasing cross breed cows.

Now he owns about more than 100 milch animals and produces 5 quintals of milk daily. He is growing fodder crops on 20 kilas. He is producing organic manure at his farm and is earning Rs. 10,000/- per month through its sale. In coming months he is going to set up milk parlour by investing Rs. 8 to Rs. 10 lacs.

Fish Farming

Fish farming is the principal form of aquaculture. Punjab is now on the threshold of blue revolution. Farmers have been engaged in fish farming. They are engaged in intensive fish culture in ponds and tanks on modern scientific lines through composite fish culture of fast growing species.

The economics of fish farming is quite attractive, as returns over variable cost under proper management practices are nearly one and half times those of paddy-wheat rotation. The only expenditure involved is deep excavation of land for fish ponds. Fish culture is a highly specialized occupation and requires technical skill in production and marketing.

There are eight check dams in district Hoshiarpur i.e. Dholbaha, Maili, Saleran, Chohal, Mehngrowal etc. and fish culture is done in these dams. These dams have been given for five years long lease to private fish contractors through auction. The natural water river

Beas falling in District Hoshiarpur is being auctioned every year to generate government revenue. Beside these river and dams fish culture is also done in village ponds/excavates ponds.

Fish seed for ponds/dams is supplied by the government fish seed farm from Hariana. To encourage fish culture, department arranges Rs. 2.30 lacs loan for one hectare from banks and also give subsidy for Rs. 46,000 per hectare. Similarly, for village ponds, banks give loans of Rs. 70,000 per hectare and department arranges subsidy of Rs. 12,000 per hectare. New farmers are imparted training in fish culture for five days and fish seed of six culturable species is supplied to farmers on subsidized rate of Rs. 100 per thousand seeds.

Table 18: Block wise Number of Fish farms

Block	2004	2005	2006
Bhunga	12	14	18
Dasuya	52	65	85
Garhshankar	31	59	66
Hajipur	24	25	33
Hoshiarpur-I	8	11	14
Hoshiarpur-II	21	25	33
Mahilpur	20	31	40
Mukerian	32	33	41
Talwara	19	20	26
Tanda	24	27	29
Total	243	310	385

Source: www.hoshiarpur.nic.in

The above table reveals that number of fish farms in 2004 was 243 and it increased to 385 in 2006. The block Dasuya followed by Garhshankar have the highest number of fish farms i.e. 85 and 66 respectively, whereas Hoshiarpur-I has 14 fish farms only. Thus, there has been a significant increase in number of fish farms during this period**.**

Bee Keeping

Honey is a consumable product and is used extensively in making Ayurvedic medicines. It is obtained from honey bees. This activity has the potential to provide regular income especially in rural areas. Bee keeping is a profitable activity. But it has to be undertaken where there is a minimum movement of people or vehicles with little noise.

Hoshiarpur district is known as 'Honey Bowl' of the Punjab State as there is sufficient availability of flora here throughout the year, particularly due to sunflower crop. The department of agriculture is providing training in beekeeping and helping the trainees to

acquire beehive colonies with the help of bank loans. Octroi on honey and sales tax on boxes have been exempted since March 1995, which gave a great fillip to this activity. Private agencies in the district have also huge export orders of honey. During the year 2003-04 about 460 tonnes of honey had been exported to other states through private agencies.

Bee keeping is the best source of self employment. There are about 800 beekeepers in district Hoshiarpur. The average yield ranges between 35 and 50 kg per hive for stationary and migratory beekeepers respectively. However, there is no honey processing plant in area which force them to sell their produce to unorganized sector at low price. Processing honey is necessary before commercial sale to remove foreign particles, destroy yeast, reduce moisture content, prevent fermentation, and maintain original flavour, colour and nutritional value. Pasteurization/processing is also essential to avoid granulation of honey, not preferred in the domestic market. Pollen collection is available in Hoshiarpur in plenty. Bees also help in cross pollination of some of these crops which improve yield and quality of the crop.

For promotion of bee keeping the agriculture department is imparting training to the small and marginal formers and Self Help Group (SHG) members to take up this self employment activity with assistance of bank loans. An estimated cost 10 bee hives unit is Rs. 30,000/- only which will be met by bank loan. Table 19 gives us information how bee keeping provided self employment to people for the year 2005-06.

Table 19: No of Bee Keeping Units and Area under Bee keeping and Number Employed, 2005- 06

Block	Units	Area (Acres)	Employment
Hoshiarpur-I	0	0	0
Hoshiarpur-II	14	870	32
Bhunga	15	82	24
Dasuya	1	15	1
Tanda	2	72	2
Mukerian	0	0	0
Talwara	2	45	4
Hajipur	0	0	0
Garhshankar	1	78	2
Mahilpur	6	320	16
Total	41	1482	81

Source: http://hoshiarpur.nic.in

The above table reveals that there are 41 units providing employment to 81 persons. There are no beekeeping units in Hoshiarpur-I, Hajipur and Mukerian blocks. The largest

area under this activity is covered by Hoshiarpur II block and that gives employment to 32 people.

Poultry

In these days, interest in keeping poultry is on the increase and many persons breed it on scientific lines. The government advances loans for poultry farming. There is neither any government poultry farm nor any poultry extension centre in district. However, there are government service centres at Mukerian, Dasuya, Tanda, Hoshiarpur, Mahilpur and Garhshankar giving counseling on poultry farming. According to the livestock census of 1972, there were 4,08,700 poultry birds in the district. Details of all the blocks of Hoshiarpur poultry is given in the Table 20 below.

Table 20: Blockwise details of Poultry in District Hoshiarpur

Block	Units	Stock	Employment
Hoshiarpur –I	0	0	0
Hoshiarpur-II	31	40600	73
Bhunga	44	50126	44
Dasuya	25	19918	50
Tanda	0	0	0
Mukerian	37	133000	77
Talwara	1	250	1
Hajipur	3	2750	6
Garhshankar	8	11902	17
Mahilpur	3	4000	8
Total -10	152	262546	276

Source: www.Punjab.gov.in

This table reveals that total number of poultry units are 152 and it provides employment to 276 number of people. The block Mukerian has second highest number of poultry units, i.e. 37 whereas Hoshiarpur I and Tanda has no poultry units.

Table 21: Blockwise percent share in Hoshiarpur district
Egg (Poultry) 2005-06

Blocks	2004-2005	2005-2006
Hoshiarpur –I	0	0
Hoshiarpur-II	34.53	15.58
Bhunga	2.46	2.85
Dasuya	3.11	35.48
Tanda	0.00	`0.00
Mukerian	3.34	6.73
Talwara	3.76	27.50
Hajipur	43.90	1.67
Garhshankar	8.63	9.68
Mahilpur	0.28	0.40

Source: www.Punjab.gov.in

The above table reveals the over all production of eggs for the year 2005-06. Among all the blocks Dasuya, Hoshiarpur-I and II and Talwara are only blocks which show the highest production of eggs in 2005-06, i.e. 35.48 percent, 15.58 percent and 27.5 percent respectively. This table indicates that the production of eggs in these blocks is high as compared to other blocks.

Horticulture

Horticulture involves plant cultivation particularly fruits, berries, nuts, vegetables, flowers, trees, shrubs, and turf. Horticulturists work to improve crop yield, quality, nutritional value, and resistance to insects, diseases, and environmental stresses. The horticulture sector has established it's credibility for improving productivity of land generating more employment than agriculture, improving economic condition of the farmers and entrepreneurs, enhancing export and above all providing nutritional security to the people.

India accounts 10 percent of the world's production and is the second largest producer of fruits in the world. Acreage under horticulture–which includes fruits, vegetables, spices, floriculture and coconut increased to 17.8 million hectares or about 10 per cent of gross cropped area of the country in 2004-05 from 16.3 million hectares in 2002- 03. With a

Table 22: District wise Area and Production of Different Fruits in the Punjab State during 2005-06

Sr. No.	Name of the District	Area (in hect.)	Production (M.Tonnes)
1	Hoshiarpur	7301	100923
2	Jalandhar	1134	17697
3	Ludhiana	1737	25848
4	Ferozepur	13759	196195
5	Amritsar	3390	57228
6	Gurdaspur	3621	40365
7	Kapurthala	422	6409
8	Bathinda	3417	59441
9	Patiala	2850	38649
10	Rup nagar	3000	39263
11	Faridkot	1096	16966
12	Mansa	670	11000
13	Fatehgarh Sahib	580	8218
14	Moga	376	5959
15	Muktsar	4508	65937
16	Nawanshahar	752	10873
17	Sangrur	3025	45360
18	Mohali	1959	14631
19	Tarantaran	1562	20368
	Grand Total	**51638**	**746331**

Source: http://punjabgovt.nic.in/tenders/2007/july/tmc%20modi.doc

production of 164 million tonnes in 2004-05, the sector contributed 28 per cent of GDP from agriculture. A National Horticulture Mission has been launched as a Centrally Sponsored Scheme to promote holistic growth of the horticulture sector through an area based regionally differentiated strategies.

In Punjab, out of the total net sown area of 42.01 lakh hectares horticulture crops are currently grown over an area of 2.05 lakh hectares which accounts for 4.8 percent of the net sown area. The area under fruit crops is 0.47 lakh hectares and 1.58 lakh hectares is under vegetable crops which accounts for 2.5percent of the total vegetable production in the country. Flowers are grown over an area of 0.006 lakh hectares.

Table 23: Area under Plantation of Fruit in District Hoshiarpur

Sr. No.	Name of fruit	Area in Hectares
1	Kinnow	2806.75
2.	Mango	1642.90
3.	Guava	257.37
4.	Litchi	221.10
5.	Peas	156.55
6.	Pear	51
7.	Malta	26
8.	Ber	15.5
9.	Grapes	2
10.	Others	82.82

Source: Department of Horticulture, Hoshiarpur

Inter-district analysis (Table 22) reveals that Hoshiarpur ranks second in area and production of fruits, while Ferozepur occupies the first position. Out of the total cultivated area of Hoshiarpur district, about 5262 hectares area is under fruit plants, 26354 hectare under the different vegetables and about 24.4 hectares area is under floriculture. Major fruits and vegetables grown in the district are kinnow, mango, peach, cauliflower, tomato, cabbage, brinjals, etc.

This district is known for the cultivation and distant marketing of kinnow fruit. It is also known for mango production, cultivation of potato, kajri and chandermukhi. Besides, the farmers cultivate flowers for the purpose of bringing crop diversification and their economic upliftment. The perfumed oil is extracted from the flowers of chameli, marigold, and tuberose etc.

For supplying healthy and disease free fruit plants to the growers, the department has three gardens and nurseries situated at Khiala Bulanda in an area of 45 acre area, Bhunga in 49 acres and Chauni kalan in 25 acres. These nurseries produce about 2.50 lakhs fruit plants every year. Besides, these nurseries, the department has a government potato seed farm

situated at Khanoura (159 acres). This farm produces quality seeds of potato, peas, Bhindi, radish etc. and the seeds are distributed to farmers at reasonable rates. The department has a government fruit preservation laboratory and Community Canning Centre at Chauni Kalan which apart from imparting training to the people in fruit and vegetable processing, manufactures various fruit products like squash, jams, pickles, sauces etc. and sells it to the people at no profit no loss basis through departmental network. The laboratory produces about 24,000 bottles of different fruits product.

III

Industrial Development

Hoshiarpur district has a very low level of industrial development. A perusal of structure of the district economy reveals that industrial sector had contributed only 11.70 per cent in the district income, during 2004-05 (Table 4). Further, the bifurcation of manufacturing sector in terms of registered and un-registered manufacturing sub sector reveals that both of them have contributed almost same share in the district income.

Sonalika International

In District Hoshiarpur there are 9183 Small Scale Industrial (SSI) Units, which have employed 32345 persons as on 31.03.2006. This sector produces goods worth Rs. 294.40 crore with an investment of Rs. 140.02 Crores. Besides this, there are 26 units in

large/medium scale sector working in the district employing 13316 workers directly, with an investment of Rs 1461.80 crores and production worth Rs. 2689.75 crores.

Major products of SSI sectors are Resin, Paint and Varnish, Agriculture Implements, Tractor Parts, Diesel Engines, Generator Sets, Brass Utensils, Handicraft Items, Valves and Cocks, Electrical Appliances, Rice Sheller, Cotton Cloth, Wooden Furniture, Steel Furniture, Steel Fabrication, PVC pipes, Cement Pipes and Poles, Rubber/Coir Mattresses, Tyre Retreading, Cycle Tyre Tubes, Activated Carbon, Cattle Feed, Casting, Atta Chakkies, Etc.

Major Industries in Large/medium sectors are: Sonalika, Mahavir Spinning Mills, Hawkins Cookers Ltd., JCT Mills Ltd. (Steel & Filament Div.), Apollo Fibres Ltd., International Tractors Ltd., GNA Axles Mehtiana, Kakkar Complex Steels Pvt. Ltd., Oswal Sugars, Guru Teg Bahadur Sugars Ltd., Mukerian Papers Ltd., Amrit Paper Etc. Major product's in large/medium sector are Cotton Thread, Pressure Cookers, Filament Yarn, Steel Wire & Rope, Polyester Oriented Yarn, Tractors, Casting, Sugar Paper, Auto Parts, Trousers and Jeans, Zips, Suiting Shirting Cloth etc.

Household Industry in Rural Area

Handicrafts Sector

Hoshiarpur district is famous for its traditional wooden handicrafts, ivory and plastic inlay works. There are more than 125 such small units and 8 lacquer ware units in the district. All Indian Handicrafts Board has its office in Hoshiarpur for development of this sector.

Table 24: District wise Comparison of Total Number of Enterprises during 2005 with 1998 economic census

District	Number of Enterprises		Percentage change in 2005 over 1998
	1998	2005	
Hoshiarpur	50445	74632	47.41

This data shows that in year 1998 total number of enterprises in District Hoshiarpur was 50445 and in 2005 total number of enterprises was 74632, which shows there was only 47.41 percent increase in number of enterprises during this period.

Khadi and Village Industry

Total number of Khadi units in district Hoshiarpur is 793 and it provides employment to 1206 people. The highest units of Khadi are in block Hoshiarpur-II and that provides employment to 274 people. The Block Dasuya has 8 units of Khadi and it gives employment to 12 persons.

Poverty

Poverty is a condition in which a person or community is deprived of, or lacks the essentials for a minimum standard of well being and life. Since poverty is understood in many senses, the essentials may be material resources such as food, safe drinking water and shelter or there may be social resources such as access to information, education, health care, social status, political power or the opportunity to develop meaningful connections with other people in society.

In India poverty has been defined as that situation in which an individual fails to earn income sufficient for meeting their needs. To quantify the extent of poverty and measure the number of poor in the country, professional economists have made use of the concept of the poverty line.

The Planning Commission accepted the concept of poverty line in 1979 which is based on minimum needs and effective consumption demands. According to the Planning Commission, definition of poverty is based on nutritional norm of 2400 calorie and 2100

calorie per capita per day in rural and urban areas respectively. Then the cost of the grains (about 650 gms.) that fulfils this normative standard was calculated. This cost was the poverty line. Thus, people living in rural and urban India who can afford to consume an average of at least 2400 and 2100 calories of food per day respectively are said to be above the poverty line. At 1973-74 prices, the poverty lines for rural and urban areas stood at Rs.48.92 and Rs.57.37 per person per month. This poverty line first estimated is adjusted periodically to account for inflation of prices. Since then the Planning Commission calculates the poverty line every year adjusting for inflation. The poverty line in recent years is as follows:

Table 25: Poverty Line (per month per head)

India			Punjab	
Year	**Rural**	**Urban**	**Rural**	**Urban**
2000-01	328	454	371.25	400.18
2005-06	368	560	415.80	492.22

Source: www.planningcommission.nic.in

This income is bare minimum to support the food requirements and does not provide much for the other basic essential items like health, education etc. So the poverty lines have also been described as starvation lines. The state government was considering fixing poverty line in terms of annual family income during the last 2-3 years. The reason was that the 13 para meters survey was started in 2002 but it could not be finalized due to Supreme Court stay. The Supreme Court vacated the stay on 14/2/2006 and it was decided thereafter that BPL survey based on 13 parameters be finalized. It has accordingly been finalized.

Poverty Line for the State

The poverty lines are specific for each State and computed by taking into account inter-State price differences. The rural poverty line for Punjab is about 11 percent higher than the national average. For example during 2001-2002, the Poverty Line for Punjab was – per capita monthly income – Rs.371.25 (Rural) and Rs.400.18 (Urban). In 2005-06 the poverty line for the state as mentioned above was Rs. 415 per month per head and Rs. 493 per month per head in rural and urban areas respectively. This works out to Rs. 30,129 and Rs. 31,473 per year per family for rural and urban areas. Existing annual income for BPL families after

BPL Family

after adjusting for inflation works out to Rs. 30,000 in the year 2006. The recommendations vary from Rs. 45,000 to Rs. 60,000 as explained above. It would therefore be proper if the annual family income for BPL families is fixed around Rs. 40,000.

Table 26: District wise BPL Families in Punjab

District	Total No. of Rural Families	No. of Rural BPL Families	No. of Urban BPL Families	Total No. of Families	Total BPL (Rural+ Urban)	Percentage	Ranking
Amritsar	307240	29777	20902	541339	50679	9.36	12
Barnala	-	-	5129	-	5129	-	-
Bathinda	124476	11792	12092	208993	23884	11.43	10
Faridkot	57859	15120	2745	97690	17865	18.29	2
Fatehgarh Sahib	58260	8052	6763	93414	14815	15.86	4
Ferozpur	213680	45651	7756	301112	53407	17.74	3
Gurdaspur	269355	30352	3989	366025	34341	9.38	11
Hoshiarpur	216376	19611	3471	279904	23082	8.25	13
Jalandhar	184462	10296	61505	364030	71801	19.72	1
Kapurthala	84760	1241	3048	136664	4289	3.14	16
Ludhiana	192031	17508	13843	558650	31351	5.61	14
Mansa	85505	11360	4355	121075	15715	12.98	6
Moga	120705	16858	2002	153744	18860	12.27	9
Muktsar	91157	14806	2042	135442	16848	12.44	8
Nawanshahar	81189	1253	1765	107763	3018	2.80	17
Patiala	206794	30439	10988	327859	41427	12.64	7
Rupnagar	121519	10138	1269	205954	11407	5.54	15
Sangrur	244129	44630	8616	348922	53246	15.26	5
SAS Nagar	-	-	2805	-	2805	-	-
Tarntaran	-	-	4120	-	4120	-	-
Punjab	**2659497**	**318884**	**179205**	**4348580**	**498089**	11.45	-

Source: BPL Survey, 2006

During the year 1973-74 more than 28 percent population of Punjab state was living below poverty line which came down to 5.2 Percent in 2004-05 in contrast to national level where half of the population was living below poverty line in 1973-74 which came down to 21.80 percent in 2004-05. As per BPL survey 2006, Jalandhar has the highest number of BPL families followed by Faridkot, Ferozpur while Nawanshahar has the lowest number of BPL families. Hoshiarpur ranked 13th as per the survey.

Table 27: Block-wise Households Below Poverty Line in 2002 (Percent)

Block	Households	BPL	Percent	Ranking
Tanda	24093	177	0.73	1
Mahilpur	26147	477	1.82	2
Hajipur	13036	711	5.45	3
Dasuya	20969	1151	5.49	4
Bhunga	22006	1296	5.89	5
Hoshiarpur II	26664	2356	8.84	6
Mukerian	21161	2174	10.27	7
Garhshankar	29611	4074	13.76	8
Talwara	13626	2075	15.23	9
Hoshiarpur I	24502	3949	16.12	10
All Blocks	**221815**	**18440**	**8.31**	-

Source: BPL Survey, 2006.

In Hoshiarpur district, the data available from the BPL survey 2002, indicates overall poverty level of 8 percent for the district, but in four blocks (Hoshiarpur-I, Talwara, Garhshankar and Mukerian) more than 10 percent of the people are below poverty line. Table 27 shows that Tanda and Mahilpur Blocks have the lowest poverty in the district, while Hajipur, Dasuya and Bhunga blocks have poverty below than district average.

Initiatives for Poverty Reduction

Self Help Groups (SHGs)

A self help group has been defined as a small and informal association of poor having preferably similar socio-economic background. The SHGs in Punjab were formed in 1992 by National Bank for Agriculture and Rural Development (NABARD) sponsored SHG-Bank linkage programme and Swaranjayanti Gram Swarozgar Yojna (SGSY) implemented by District Rural Development Agency (DRDA). SHGs are being promoted as a part of microfinance interventions aimed at helping the poor to easily obtain financial services like savings, credit and insurance. SHGs worked on the principle of solidarity which helps poor and empower women in terms of their potential. In Punjab, there are only 541 SHGs who

have taken credit from NABARD upto 2001. Such low numbers of SHGs are due to the fact that voluntary agencies, especially NGOs, are not very active in the state. The existing SHGs have been mostly formed with the efforts of bank officials in co-operation with Panchayats. In district Hoshiarpur, there are 892 SHGs with 12111 members (Table 26).

Table 28: Self Help Groups formed by Various Departments at Block level (upto March 2007)

Block	No of Villages	No. of SHGs	No. of Members		
			Total	SCs	Non SCs
Tanda	71	71	811	282	529
Mahilpur	131	131	2130	996	1134
Hajipur	43	43	363	64	299
Dasuya	75	75	841	432	409
Bhunga	91	91	1401	615	786
Hoshiarpur I	130	130	1761	971	790
Hoshiarpur II	77	77	927	463	464
Mukerian	58	58	662	196	456
Garhshankar	164	164	2605	1064	1541
Talwara	52	52	620	100	520
All Blocks	892	892	12121	5183	6928

Source: Office of Deputy Manager, NREGA

Member of SHGs manufacturing detergent/disposable bowls

Rashtriya Sam Vikas Yojna (RSVY)

Rashtriya Sam Vikas Yojna is a 100 percent Govt. of India funded scheme. The main objectives of the scheme are to redress the problems of low agricultural productivity, unemployment and to fill critical gaps in physical and social infrastructure, problems of high poverty pockets, low growth and poor governance by putting in place the programmes and policies which would remove barriers to growth and accelerate the development processes.

The scheme was implemented in Hoshiarpur district during 2004-07 with a total cost of Rs. 45.00 crore for the projects in rural drinking water supply, promotion of vermiculture, treatment of selenium toxicity by gypsum, haldi and honey processing plants, extension and augmentation of sewerage schemes, installation of deep wells, and free tree plantation.

Haldi Plantation and Processing-Ghugial

The project of Haldi (turmeric) processing was approved for implementation by Planning Commission to FAPRO (Farms Produce Promotion Society), District Hoshiarpur under RSVY scheme. The land was provided by Village Panchayat of Ghugial on lease basis and machinery for the processing was placed through Agriculture Department. The project was completed in time and earned Rs. 4 lakhs during the first ever session even after giving concession to member farmers. The economics worked out shows per acre expenditure of Rs 15,000 and returns of Rs.40,000 per acre as compared to Rs. 20, 000 per acre under wheat and paddy rotation.

Twenty Point Programme (TPP)

Twenty Point Programme was originally announced by late Prime Minister of India Smt. Indira Gandhi in 1975. The programme was restructured on 14/1/1982 and then on 1/4/1986. It was again restructured w.e.f. 1/4/2007. The Twenty Point Programme-2006 consists of 20-Points for the benefit of the rural and urban people. Its thrust is towards programmes for eradicating poverty and improving the quality of life of the poor and the under- privileged people all over the country. The programme covers various socio-economic aspects like poverty, employment, education, housing, health, agriculture, land reforms, irrigation, drinking water, protection and empowerment of weaker sections, consumer protection, environment, e-governance, etc. Detail schemes covered under TPP are as follows:

National Rural Employment Guarantee Scheme was launched in India February, 2006 in 200 districts under National Rural Employment Guarantee Act (NREGA) which was passed by Parliament in September 2005. The main objective of the 'National Rural Employment Guarantee Scheme' is to enhance the livelihood security of the households in rural areas by providing at least hundred days of guaranteed wage employment within a radius of five kilometres of village to every household whose adult members volunteer to do unskilled manual work. Under the scheme the Household has to get itself registered with the Gram Panchayat. Names of all the adult members including women can be registered. As per scheme, one third of the persons to whom work is allotted should be women. Gram Panchayat will issue a job card to the household.

Construction of Road Under NREGA

In Punjab the scheme was launched on 2nd February, 2006. Initially the scheme was implemented only in district Hoshiarpur. Later Government of India decided to cover three more districts namely Amritsar, Nawanshahar and Jalandhar under NREGA during 2007-2008. Since it is a demand driven scheme, the targets under this scheme are not specified. All the districts of the State are to be covered within five years as per national policy.

Table 29: District wise NREGA Statistics in Punjab

District	HH (lakhs)	Total (lakhs)	SC/ST (lakhs)	Women (lakhs)	Others (Lakhs)	Total Fund (crores)	Expenditure (crores)	Expenditure (percent)
Amritsar	0.108588	4.2	3.69	0.03	0.51	10.11	6.66	65.88
Barnala	0.00589	0.04	0.04	0.02	0	3.3	0.43	13.03
Bathinda	0.15464	0.6	0.6	0.6	0	5.1	1.09	21.37
Faridkot	0	0	0	0	0	0	0	0
Fatehgarh Sahib	0.0032	0.14	0.13	0	0.01	1.97	0.2	10.15
Ferozpur	0	0	0	0	0	0	0	0
Gurdaspur	0.0299	0.02	0.02	0	0.01	4.16	0.03	0.72
Hoshiarpur	0.07881	3.59	2.36	1.29	1.23	9.58	6.07	63.36
Jalandhar	0.02691	0.34	0.32	0.15	0.02	10.16	0.72	7.09
Kapurthala	0	0	0	0	0	0	0	0
Ludhiana	0	0	0	0	0	4.02	0.14	3.48
Mansa	0.04431	0.11	0.08	0.01	0.03	2.23	0.14	6.28
Moga	0	0	0	0	0	0	0	0
Muktsar	0.03701	0.29	0.28	0.11	0.01	1.4	0	0.00
Nawanshahar	0.2531	0.44	0.39	0.22	0.06	3.19	0.82	25.71
Patiala	0.00129	0.01	0.01	0	0	5.77	0.18	3.12
Rupnagar	0	0	0	0	0	4.08	0.49	12.01
Sangrur	0	0	0	0	0	0	0	0
SAS Nagar	0	0	0	0	0	0	0	0
Tarntaran	0.004	0.04	0.04	0	0.01	1.34	0.08	5.97
Punjab	**0.51992**	**9.83**	**7.94**	**2.43**	**1.89**	**66.42**	**17.04**	25.65

Source: www.nrega.nic.in

Swaran Jayanti Gram Swarozgar Yojana was launched w.e.f. 1st April, 1999 by the Government of India jointly with State Government (funding share on 75:25 basis). The objective of SGSY is to bring the assisted poor families (Swa-Rozgaris) above the poverty line by providing them income-generating assets through a mix of bank credit and subsidy. It is a holistic programme covering all aspects of self-employment such as organization of the rural poor into self help groups, training, planning of activity clusters, infrastructure build up, technology, credit and marketing. In establishing the micro enterprises, the emphasis under SGSY is on the cluster approach. For this 4-5, key activities will be identified for each block based on resources, occupational skills of the people and availability of markets. The major key activities are bee keeping, handloom, dairy, poultry, sewing, knitting and embroidery etc.

SGSY is a credit-cum-subsidy programme, subsidy under the programme will be uniform at 30 percent of the project cost, subject to a maximum of Rs. 7500/-. In respect of SCs, however this will be 50 percent of the project cost and Rs. 10,000/- respectively. For a group of Swarozgaris (SHGs), the subsidy would be 50 percent of the cost of the scheme subject to a ceiling of Rs. 1.25 lac. Loans will be arranged by the DRDAs from the banks. Under this scheme, 50 percent assistance is required to be provided to the SCs, 40 percent to women and 3 percent to the handicapped. The target group under the scheme will be the families living below the poverty line in rural areas. The selection of beneficiaries will be done at the block level by a committee consisting of BDPO, Bank Manager and village Sarpanch, out of the list of applicants prepared by the Gram Sabha. The bank manager is mainly responsible for the selection of beneficiaries. There is a provision of training for the beneficiaries who are called swarozgaries under the new scheme. Two days orientation training has been prescribed for all the swarozgaries before getting assistance. The training will be imparted by the line departments along with banks and development functionaries. A skill up gradation training can also be arranged for these swarozgaries through institutions.

Sampoorna Grameen Rozgar Yojana has been launched by merging two schemes namely "Employment Assurance Scheme" and "Jawahar Gram Samridhi Yojana" into one scheme namely "Sampoorna Grameen Rozgar Yojana". The objectives of the SGRY are to provide additional wage employment in the rural areas and also food security, along-side the creation of durable community, social and economic assets and infrastructure developments in these areas such as soil and moisture conservation works, watershed development, promoting of traditional water resources, afforestation and construction of village

infrastructure and link roads, primary school buildings, civil dispensaries, veterinary hospitals, marketing infrastructure and Panchayat Ghars etc.

`From the year 2004-05, this programme is being implemented as one integrated scheme by all the three Panchayati Raj Institutions. The resources are distributed in 20:30:40 ratio among the Zila Parishads, Panchayat Samities and Gram Panchayats. The programme is self-targeting in nature and is available for all the rural poor (BPL/APL) who is in need of wage employment and is willing to take up manual/unskilled work. Under the scheme, 5 Kg of food-grains (in kind) will be distributed as part of wages per man-day. The remaining part of the wages will be paid in cash to ensure notified minimum wage. The districts covered under National Rural Employment Guarantee scheme (NREGA) are automatically taken out of the purview of this scheme. There is a target to generate 1300 lakhs man-day of employment during 11th Five Year Plan and 86 lakhs mandays during Annual Plan 2007-08 under SGRY and NREGA collectively.

Indira Awaas Yojana (IAY). Housing is the basic requirement for human survival. Construction of houses for the poor is one of the major activities of the Government of India. The objective of IAY is to help construction of dwelling units for the rural poor. Families below poverty line are the target group, SCs and freed bonded labourers are to be given priority. An amount of Rs. 22,000/- is given in the kandi region to each family for the construction of a house, a sanitary latrine and smokeless chullah. The amount of grant is 20,000/- in the plain area. The amount of grant-in-aid is shared by the Government of India and the State Govt. in 75:25 ratio. The characteristic feature of the scheme is that the house constructed under IAY should either be in the name of the women member or jointly with the male member.

Upgradation of Houses Under (IAY). An amount of Rs. 10,000/- is given to a family who does not have a pucca house or a house which is not worth living. The amount is provided to upgrade, renovate the house and to provide rural latrine and smokeless chullah. Grant in aid of Rs. 12.08 lakhs received during 1999-2000 has been distributed to the families. An amount of Rs. 6.04 lakhs has been received recently. Proposals are being obtained.

National Food for Work Programme (NFWP) was introduced by Government of India NFWP is 100 percent Centrally Sponsored Scheme in 150 identified most backward districts of the country. In State of Punjab, Hoshiarpur District has been taken under this Programme. The main objectives of the programme is generation of supplementary wage

employment and providing of food security through creation of need based economic, social and community assets. Food grains are also provided free of cost by Government of India. Rs. 716.32 lakhs and 7355 tonnes of wheat was released to District Hoshiarpur during the year 2004-05.

During the year 2004-05, Rs. 698.45 lakhs and 4962 tonnes of wheat has been released for execution of 524 Works such as development of ponds, flood work control/protection works, tree plantation, land development, water conservation and drought proofing etc.. Up to September, 2005, complete grant and wheat has been utilized for these works.

To sum up, Hoshiarpur district due to following features is one of the backward districts of Punjab State. More population (80.28 percent) is in rural areas having agriculture as the main occupation. Cropping intensity is 171 percent and 72 percent net sown area is irrigated. Paddy and maize crops are the chief Kharif crops (40 percent and 43 percent) while wheat is Rabi Crop (92 percent).

The Lambra Kangri Co-operative Multipurpose Service Society Limited-A Success Story

The Lambra Kangri Co-operative Multipurpose Service Society Limited was registered on 27th July 1920 under registration no 21 in district Hoshiarpur. This society was adopted by National Co-op Union of India (NCUI) in 1995 for overall development of the society. The operational area of the society is confined to four villages: Lambra, Baggewal, Bairon Kangri and Dadiana Kalan. Main functions of the society are: to provide loan to its members for agriculture and non agriculture purpose such as bee keeping, fishery, opening of shops, purchase to trucks, tempo and other domestic necessities etc. The society has six self help groups with the help of NCUI project Hoshiarpur of 120 women of the area, Kisan club which is carrying economic, social and environmental activities (awarded best award for four times).The society has two generators, two spray pumps, agricultural machinery, Vermin compost pits, stitching and sewing centre, beauty parlour centre, computer systems, and health club etc.

Financial Particulars of the Society (in Lakhs)

Earnings	**2001**	**2003**	**2005**	**2007**
Membership	1040	1205	1327	1472
Share Capital	2.97	4.58	7.39	10.03
Deposit	241.31	388.45	512.00	718.36
Loan	71.23	199.56	330.58	427.39
Savings & FD	13.72	17.21	62.60	42.98
FD in CB &other Bank	155.72	169.86	140.00	273.13
Sale of Fetilizers	10.23	55.32	138.56	208.61
Profit	2.65	2.90	15.14	14.03
Working Capital	259.46	417.00	606.40	854.33

Summary

The district contributes nearly 5 percent in the state's net domestic product (NSDP). District domestic production experienced a growth rate of 3.5 over the last ten years, lower than the growth rate of many other district. The rate of growth was also lower than that of Punjab State as a whole. Per capita income in the district is also lower than the average income of the state. This district falls in the category of less developed districts and is at the bottom among the districts so far per capita income is concerned. Per capita income of the district is also growing at a very slow rate (2.0 percent) in the last ten years. The structure of economy of Hoshiarpur is predominantly agrarian. The share of agricultural and allied sector in the district income has declined over time and the major decline is in forestry/logging and live stock sector. The share of industrial sector has increased over time but it is contributing only one fifth of NDP of the district. In Hoshiarpur district net sown area is 60 percent of the total geographical area of the district and out of this 85 percent is irrigated with 170 cropping intensity compared to 188 for the state as a whole. Half of the cultivators are marginal and small farmers, having land holdings less than 2 acres. There is inter-block variation in the area irrigated. In Kandi blocks only one forth of the area is irrigated. Wheat, rice and Maize are the main crops sown in the district. The productivity of major crops is much lower in the district than the state average. The land productivity measured by value of 45 crops is the

lowest in the district among all the districts. Factors responsible for lower productivity are the lack of irrigation facilities, degradation of land in the kandi area due to soil erosion. The size of land holdings is another problem causing lower productivity.

CHAPTER VI
THE WAY AHEAD

The diversification of farm economy is not only essential to maintain the tempo of output growth but has policy implications. At the policy level, "public as well private investment has to be stepped up in agricultural research, especially technology focusing on the new activities and the favorable areas. Much of the production being highly perishable there is a need for the development and up-gradation of infrastructure for roads, markets, storage and processing" to add dynamism to the so-called green revolution.

The ongoing development process in the 'post reform period' has attracted industrial investment in the district, which has policy implications. In the recent past, the leaf-frog growth of "Peri-urban Areas" has drastically influenced the ecology of the region/district. The policies regarding urbanization, in general, and "Peri-urban Areas", in particular in the state at district level need to focus on the 'Perspective Urban Planning' at least of potential urban centers to create adequate infrastructure for future industrialization.

The constitutional amendments providing framework to prepare comprehensive area plan by every local body so that the funds could be allocated under the decentralization programme "as per the schedule of the Ninth Five-Year-Plan" should be done on priority basis.

In district as a whole, the rapid fall in the ground water table levels has made large number of pump-sets redundant in a short span. Consequently, the replacements of shallow water tube-wells have been found to be beyond the reach of individual small and marginal farmers. In the state as a whole, at the policy level, institutional support both financial as well as technical is essential for replacing the massive irrigation infrastructure to take the agricultural operation back on rails.

Among the geographical regions of the district, the Hilly Upland Areas has less than half of the arable land under irrigation. Moreover, more than 80 percent of the population in Kandi areas is residing in rural areas and more than 70 percent of the people depend either on the 'subsistence agriculture' and live stock rearing or on 'out migration'. In the recent past, in the district as a whole, priority has been accorded to the irrigation and community

development blocks in this backward region, i.e., Kandi area especially under the water shed programme. The over all infrastructures such as power, roads, education and health institutions etc. have improved to a great extent. At the same time because of lack of employment avenues, and income generating activities, the intra-district disparities have widened. When exposed to education and health facilities this has generated strong "push factors" which has further perpetuated disparities rather than narrowing down. An inference suggests that the Government should formulate policies for the development of small scale and cottage industries, in the Foothill Plains through out the state along the Shivalik ranges.

Education

The educational policies lay stress on the universal, compulsory and free primary education. The broad base schooling will certainly reduce educational inequalities and will act as catalyst of change.

District Hoshiarpur has the distinction of having the highest literacy rates in the Punjab State (81 percent). District Hoshiarpur has the highest literacy rates for the total, rural and urban population as well as for males and females. Nearly 81 percent of males and three fourths of females are literate. Over a period of one decade (1991-2001) the gender gap in literacy rate has declined from nearly 17 percent points to 11 percent points, which indicates awareness among people of the importance of girls' education.

To achieve the goal of universal literacy more efforts are required. To cover adult illiterate population under the ambit of literacy, more Adult Literacy Centres need to be established and made fully functional. It is suggested that the involvement of NGOs can go a long way to achieve total literacy.

To keep the children in the school basic infrastructure is a pre-requisite. Proper classrooms with tables/chairs/benches are needed. In majority of the primary schools children sit on coir mats/rugs which is rather uncomfortable during winter season. The surroundings within and around the schools should be neat and clean.

For each class one room and one teacher is required at primary level to improve quality of education. Enrollment in schools is important but to retain the enrolled students till completion of school education is more important and needs extra efforts. Syllabus should be made more interesting and engrossing. It needs to be ensured that all the children who pass

primary level education can read, write and understand basic arithmetic. All vacant positions of teachers need to be filled on merit basis to ensure quality of education. Local trained teachers should be appointed particularly in remote areas, to minimize the absenteeism among teachers.

The members of the district planning committee and other officials at district level including the District Education Officer (primary level) suggested that the government should appoint one qualified English teacher for every government primary school to improve the standard of education in schools. Also there should be some regulatory mechanism to check the quality of education being imparted in private schools. There should be a transparent system of promotion and transfer of teachers.

Furthermore it was suggested that at block level there should be one teacher who is specially trained to teach disabled children.

Effective strategies for community participation for creating awareness on the importance of education and their involvement in management is desired depending upon the local situations. The role of village panchayats can be explored for effective teaching.

Shortage of classrooms and teachers particularly in primary schools lead to overcrowding, i.e., two to three classes are managed by one teacher. As a result the syllabus of each class cannot be covered and students are unable to follow, comprehend and complete the prescribed syllabus of their respective class. Hence, serious efforts must be made to fill all the vacant positions of teachers, as 4 out of 10 position of primary school teachers are vacant in the district.

The Block level data analysis shows gender, rural-urban, region/block wise wide disparities in the existing literacy rates in spite of wide spread network of educational infrastructure. Garshankar block has lowest literacy level and wide male female disparity Thus, this needs special attention and additional efforts are required to create awareness about the importance of having the ability to read and write.

Intra block disparity in enrollment rates were observed. For instance the enrolment rate in 6-11 years age group (primary level) ranges from 36 percent in Hajipur block to 118 percent in Dasuya block. The gender differentials at block level are not much revealing. In a

populated country like India to achieve 100 percent enrolment rate at primary level quality of education needs to be emphasised. Precisely, the enrolment rates and dropout rates not only depend on the quality of education but also on incentives such as 'mid-day meal, free uniform and books/stationary, full attendance, and merit scholarships' etc.

At present, it has been observed that the commuters to and from schools to residence needs well-defined transport facility to make the schooling system functionally more viable.

To improve the nutritional level of primary school children Midday Meal Schme has bee introduced in government schools. However it was reported that this scheme hampers the studies of the children as often teacher send children to collect wood for fuel to cook the meal which is time consuming. Also in rainy season the meal is cooked in school verandah and the smoke emitted from firewood is not healthy for children. Thus it is suggested that MDM scheme should be outsourced. This will also save the time of teachers.

Health

Urbanization is relatively low in the district and probably the health status of the people can be improved with more attention to the rural health services. In rural area, the utilization of health facilities in the public sector is low. Emphasis should be to improve the health services both qualitatively and quantitatively in the district and within the district particularly in those blocks where health facility is inaccessible due to lack of availability of public transport and hilly terrain.

Rural health infrastructure is lagging behind on many aspects. Sub centres lack proper infrastructure. Most of the Sub centres are functioning in one room Panchayat buildings. There is a shortage of medicines and diagnostic facilities at CHCs, PHCs, and Sub centres. Various measures should be adopted to strengthen the rural infrastructure, supply of consumables and medicines, and availability of trained manpower around the clock (24x7). If trained manpower is available with proper facilities in rural areas that can lead to reduction in IMR and MMR.

The private health sector is expanding rapidly and there is no check or control to monitor the kind of health care being provided to the masses which is often substandard and expensive and this is prevalent more so in rural areas. In fact, the rural masses prefer to avail

the services of local private doctors/RMPs in villages due to several reasons like easy availability, drugs/medicines and its locational advantage.

Public private partnership should be encouraged and made viable in rural areas.

The district health sector has been lax in implementing health programmes like National Rural Health Mission. The pace of progress of the mission has been sluggish. Efforts should be made to fully implement the scheme which will enable to achieve its goals. At the grass roots level there are lot of bottlenecks being faced by the health functionaries in implementing the scheme. No efforts were made to strengthen and revitalize AYUSH into the public health system.

One of the major goals of National Rural health mission is involvement of Panjayati Raj Institutions and community in management of primary health care. However, through informal discussions with the community and several leaders, it was found that by and large people are not aware of NRHM and its several components like formation of Village Health and Sanitation Committee, appointment of ASHAs in villages and so on. In other words, the IEC activities should be strengthened and the masses should be made aware of the various ongoing programmes from time to time.

It was reported that there has been delay in receiving grants from state government. Consequently, it was reported that some of the health workers have not received their salary for several months. Thus, non payment of salaries of workers tend to hamper the work directly or indirectly. Efforts should be made to get the grant released from the state government in time and also regularize the remunerations of the staff.

Intra district analysis indicates that the Block PHC Paldi and Possi are lagging behind on several parameters. For instance, number of positions of ANMs are vacant in PHC Possi and Paldi. Under maternal care, proportion of ante natal care is lowest in these two blocks. Regarding complete immunization of infants, they are at the lowest end of the ladder. All the vacant positions should be filled. ANMs and ASHA workers should put in more efforts in motivating women to go in for ante natal care and immunization of expectant mothers and children which involves regular home visits and interaction with the community.

Proportion of institutional deliveries is low in the district and more so in rural areas. For instance, in PHC Harta Badla proportion of institutional deliveries was only 10 percent. Hoshiarpur district is way behind the goal of achieving 80 percent institutional deliveries. Sustained efforts by grassroots level workers should be made in counseling pregnant women to go in for institutional deliveries and also make them aware of the cash incentives given to women of underprivileged sections under Janani Suraksha Yojana (JSY).

One of the major health problems is re-emergence of Tuberculosis. In Hoshiarpur district the number of patients suffering from TB is increasing which may be due to influx of migrants who probably stay in slums. People should be made aware of the disease and motivate them to go in for complete treatment which is free of cost. Since concentration of slums is in Hoshiarpur city, the disease is more prevalent there and efforts should be made to sensitize the slum dwellers about the disease. At school level also the students should be sensitized about the prevalent diseases like TB, HIV-AIDs, etc.

Economy and Livelihood

The findings reveal that District Hoshiarpur, with half of its area as sub-mountainous, is a very backward district of Punjab. 80 percent of its population is residing in rural areas. Main economic activity of the workforce in the district is agriculture and that too with low land and labour productivity. Thus there is immediate need to bring changes in the occupation distribution of district from agriculture to other non-farm activities. On the industrial front the district looses on account of location and infrastructure disadvantages. The agricultural economy of the district needs diversification. Agriculture in all the Kandi belt is rain fed. Irrigation facilities especially in five blocks i.e. Talwara, Bhunga, Hajipur, Garhshankar and Mahilpur needs to be strengthened and it is the main reason for low productivity of agriculture in Hoshiarpur District. and the district depends on agriculture and allied activities for their livelihood. Lack of irrigation facilities especially in five blocks. The district needs special attention of the state not only for enhancing irrigation facilities but also for prevention of soil erosion which can be controlled by constructing more check dams. Promotion of crop diversification from wheat-paddy or wheat-maize is possible with the introduction of state owned marketing support for other cash crops such as kinnows, potatoes and vegetables. Promotion of medicinal plants and fruits can help in reducing soil erosion. Soil erosion is also a reason for excessive use of chemical fertilisers in the district which can

be substituted by promoting vermi-compost of cow-dung, kitchen and other agricultural waste, a simple cost effective way to reduce the dependence on costly input in agriculture.

Lastly the members pointed out that public departments at district level are over burdened with work due to shortage of manpower. Some of the department are functioning with 50 percent of the sanctioned staff thus leading to backlog of work. Efforts should be made to fill the vacant positions in various departments so as to streamline the functioning of several departments

BIBLIOGRAPHY

Census of India, (1981) Occasional Paper No. 4 on Indirect Estimates of Fertility and Mortality at the District Level 1981, (1994) Registrar General of India, New Delhi.

Census of India, (1981) Occasional Paper-I of 1986, Study on Distribution of Infrastructural Facilities in Different Regions and Levels and Trends of Urbanization, Office of the Registrar General of India, Ministry of Home Affairs, New Delhi.

Census of India, (1981) Primary Census Abstract, Punjab Directorate of Census Operations, Punjab.

Census of India, (1981) Study on Distribution of Infrastructural facilities in Different Regions and Levels and Trends of Urbanization, Occasional Paper-I of 1986, Social Studies Division, ORG India. New Delhi

Census of India, (1991) District Census Hand Book, Hoshiarpur, Part XII-A&B, Directorate of Census Operations, Punjab.

Census of India, (1991) Primary Census Abstract, Punjab Directorate of Census Operations, Punjab.

Census of India, (2001) Primary Census Abstract, Punjab Directorate of Census Operations, Punjab.

Chikkatur A. and Chakravarty S., (2008) Need for an Integrated Energy Modelling Institutions in India, Economic and Political Weekly, Vol. XLIII, No.21.

Ghosh, M., (2006) Economic Development and Human Development in Indian States, Economic and Political Weekly, Vol. XLI , No.30.

Government of India, (2004) Maternal Mortality in India: 1997-2003, Trends, Causes and Risk Factors, Registrar General of India, Sample Registration System, New Delhi.

Government of India, (2007) Sarv Shiksha Abhiyan Authority Punjab, District Elementary Education Plan, 2006-07.

Government of India, (2004) Human Development Report, Punjab, New Delhi.

Government of India, (2007) Mortality Statistics in India, 2006, Status of Mortality Statistics Reporting in India, A Report, New Delhi

Government of India, (2008) Statistical Abstract of Punjab, 2007, Economic and Statistical Organization, Punjab.

Government of Punjab (2007) District Action Plan – Hoshiarpur. National Rural Health Mission (2005-12).

Government of Punjab (2007) Village Directory (2005-06), Economic and Statistical Organisation, Punjab.

International Institute for Population Sciences (2009) DLHS-3, Reproductive and Child Health, Factsheet, Hoshiarpur, Punjab, Mumbai

International Institute of Population Sciences, (2002) Reproductive and Child Health Project- DLHS-2, Hoshiarpur, Mumbai.

International Institute of Population Sciences, (2007) National Family Health Survey-3 (2005-06), Fact Sheet – Punjab, Mumbai.

Kundu A., (1999) Dichotomy or Continuum: Analysis of Impact of Urban Centres on their Periphery, Economic and Political Weekly, December 14, pp 5039-46.

Ram F. and Sekhar C., (2006) Ranking and Mapping of Districts based on Socio-economic and Demographic Indicators. New Delhi.

Ram F., Sekhar C. and Mohanty S.K., (2005) Strengthening District Level Vital Statistics in India, Integrated Child Development Scheme, Mumbai.

Registrar General of India, (1999) Compendium of India, Fertility and Mortality Indicators 1971-1997 based on Sample Registration System, New Delhi.

Sen, Amartya (2003) “Development as Capability Expansion”, in, Fakuda S., Par and Singh A.K. (eds) Readings in Human Development, Oxford University Press, New Delhi.

Sidhu G.S., Walia C.S., Singh R.P., (2002) Degraded Soils in Rice-Wheat Areas of Indo Gangetic Plain and Their Economic Evaluation-A Case Study of Punjab State, India, Paper presented at 12th ISCO Conference, Beijing

Singh Gurmail, (2008) Growth of Indian Agriculture: A District-wise Study, Planning Commission, Govt . of India,

Singh Sukhpal (2006), Credit, Indebtedness and Farmer Suicides in Punjab Some Missing Links, Economic and Political Weekly, Vol. XLI, No. 30.

Web Portals:

http://www.ssapunjab.org

http://indiabudget.nic.in/es2005-06/chapt2006/chap87.pdf

http://pbplanning.gov.in

http://punjabgovt.nic.in/government/govt754Major.htm

http://punjabgovt.nic.in/TENDERS/2007/july/tmc%20modi.doc

http://punjabrevenue.nic.in/gaz_hsp17.htm

http://timesofindia.indiatimes.com/articlesshow/1500736.cms

http://www.education.nic.in

http://www.gov.ua.nic.in/Nscheduleddata/ns304.pdf

http://www.hoshiarpur.nic.in

http://www.hoshiarpur.nic.in

http://www.indainpediatrics.net

http://www.nrega.nic.in

http://www.planningcommission.nic.in

http://www.punjab.gov.in

http://www.Punjab.gov.in

http://www.punjab.gov.in/general/villagedirectory - retrieved in January 2008

http://www.unesco.org/en/lieracy

http://www.who.int/mediacentre/news/releases/2007/pr37/en/index.html

ANNEXURE

Methodology

In district Hoshiarpur Primary survey has been conducted during March- May, 2008. In the survey, 50 Primary sampling units were taken. From the list of all the villages and urban wards, 40 rural and 10 urban wards were selected by multi stage stratified sampling technique.

Out of total ten CD blocks, four villages and one urban ward from each CD block was selected on the basis of proportion of rural and urban population. Four strata of villages were formed to select villages on basis of population size.

1. villages having population upto 500
2. villages having population upto 500-1000
3. villages having population upto 500-2000
4. villages having population upto 2000+

One village and one urban ward was randomly selected form each stratum.

The second stage involves selection of households from each selected PSU. In each village, households belonging to different occupations were randomly selected according to their representation in the village (2001 census). In total 500 households were covered.

Survey Instruments: Interview schedules were formulated to collect information at village level in district Hoshiarpur depending upon the availability of data on the different parameters:

- Infrastructure
- Education
- Health
- Economic Profile

Separate schedules were prepared to get information of sampled Villages, schools, health facilities- SC/PHC/CHC depending upon the availability in the village.

Besides Focus Group Discussions (FGDs) with service providers and Sarpanches were held in the district.

A list of the sampled villages is given below

List Of Sampled Villages

CD Block	Name of Village	Households	Population
Mukerian	1. Kale Bagh	71	371
Mukerian	2. Mehadpur	157	821
Mukerian	3. Hoshiarpur Kalota	203	1114
Mukerian	4. Mehtabpur	576	2961
Talwara	5. Kartoli	39	184
Talwara	6. Beh Dulo	117	611
Talwara	7. Beh Lakhan	202	1010
Talwara	8. Bham Naur	451	2267
Hazipur	9. Kasra Wan	41	200
Hazipur	10. Badhallan	105	558
Hazipur	11. Singowal	212	1099
Hazipur	12. Sariana	482	2777
Dasua	13. Khokhar	53	245
Dasua	14. Odrah	107	513
Dasua	15. Alampur	309	1648
Dasua	16. Terkiana	631	3449
Tanda	17. Manpur	84	451
Tanda	18. Gill	120	596
Tanda	19. Babak	197	1018
Tanda	20. Miani	1598	7730
Bhunga	21. Niazian	49	256
Bhunga	22. Bhagowal	131	690
Bhunga	23. Barian	195	1024
Bhunga	24. Bhunga	397	2006
Hoshiarpur-1	25. Chalopur	85	526
Hoshiarpur-1	26. Bahid	124	653
Hoshiarpur-1	27. Lambra	306	1576
Hoshiarpur-1	28. Hardo Khanpur	622	3385
Hoshiarpur-2	29. Mochpur	45	212
Hoshiarpur-2	30. Mona Khurd	113	628
Hoshiarpur-2	31. Mandial	179	1050
Hoshiarpur-2	32. Mehlanwali	555	3115
Mahilpur	33. Ladhewal	29	189
Mahilpur	34. Chak Narial	119	572
Mahilpur	35. Badon	308	1512
Mahilpur	36. Bachhohi	388	2293
Garhshankar	37. Chak Gujjran	30	145
Garhshankar	38. Majari	125	571
Garhshankar	39. Khanpur	237	1351
Garhshankar	40. Padrana	397	2105