

Dholpur District Human Development Profile

**Report prepared under a Joint Programme of the Government of Rajasthan and the
Planning Commission of India, supported by the UNDP**

Institute of Development Studies, Jaipur

2008

Preface

The District Human Development Profile of Dholpur is jointly facilitated by UNDP and the Planning Commission as part of the mainstreaming of the human development approach through the project on Strengthening State Plans for Human Development in Rajasthan. This profile comprehensively discusses the three dimensions of human development, viz., livelihoods, status of education and the health status at the sub district level of Dholpur. The focus of this report remains 'Inclusive Growth'. Aspects of Human development are examined with respect to its distribution across regions, social groups and gender.

The district human development profile is written with the support of the government officials. Human development is a State subject and it is important that the State Government is involved in the preparation of the Human Development Reports. True to the spirit district collector, Shri Ashutosh A.T. Pednekar was very forthcoming with his comments and helpful suggestions. The acting Chief Planning Officer took a keen interest and provided data on the economic and social dimensions. Ms Leela Bhatnagar, Shri D.K.Jain, Directors, and Shri R.K.Pandey; Dy. Director, Directorate of Economics and Statistics, Ms. Alka Singh of UNDP and HDR&C Unit provided all the statistical support for the project.

We take this opportunity to thank a large number of people and organizations who have participated in finalizing this report. First, we express our gratitude to the Planning Commission and the UNDP for providing financial support for the report.

Finally, we would like to acknowledge the contribution of our research team, Shri Ratan Lal and Dr. Jai Singh. While expressing our gratitude to all those who have helped us, we bear the responsibility of the lacunae in this report.

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Executive Summary

This report finds its origins in the facts that: one, aggregate growth at the state level has been uneven in different parts of the state implying thereby a need to focus on the hotspots; and two, regions like Dholpur, with substantial areas under the Dang, there is a need to find alternative sources of sustainable livelihoods. There is a need for direct and more intensive intervention for up-scaling the quality of life and empowerment of the people. Specifically, this report attempts to address the following questions:

1. To assess the extant livelihood status of people in the district: living standards, sources of earning (and uncertainty in the same), migration, endowment levels (incl. land ownership), gender issues and social group-specific details;
2. To diagnose the state of agriculture – land quality and availability (absolute quantity and distribution/access), irrigated area, crops grown, productivity (land and labour), animal husbandry, and such other details;
3. To make an assessment of the state of literacy, extent and quality of education, educational infrastructure, and problems in extending education, specially at the primary level;
4. To evaluate the status of health, nutrition and health extension with special focus on women and children.

After looking at all the developments in the district this report puts forward a number of challenges that are to be met if this district is to acquire a more progressive status on HD. Some approaches suggested below require sheer larger quantities of money; others not so much in terms of money *per se*, but innovation (or better control though better supervision); and yet others are newer programmes.

1. To begin with, there is need to strengthen the statistical base in the district: to get better estimates of sectoral incomes and shares. Revenue data on Agricultural parameters appear inconsistent with the field reality.

Basic data pertaining to each village (as well as the *tehsils*/blocks) and the whole district needs to be collected, up-dated periodically and displayed in display-boards at public places. Next, recording of births, deaths, marriages and pregnancies must be maintained for each village: these would help in better targeting and monitoring. The e-Governance initiated in the district has started some recording on these parameters. Data on land, migration and other identified key variables must also be collected and maintained at the village level. Establishing sentinel surveillance cells at the village/block levels is a useful suggestion here.

The district has many geographical variations and each tehsil has its own characteristics- both social and physical. Bari and Baseri are both Meena dominated areas, whereas the Dang area towards the south-west is dominated by Gujars. This area is rocky and particularly rich in minerals, and also has many mines and quarries. Both Rajakhera and Dholpur, in parts of which the Chambal flows, have comparatively plain topography and a good soil base for agriculture.

Dholpur district has an interesting mix of agriculture and non-farm sector as both contribute equally to the domestic economy. Where on one hand the soil is fertile, the severe water shortages have retarded the growth of farm sector, as evident from the small land holdings and area under cropping. As a result the farmers have taken refuge to subsidiary income by way of animal husbandry. The livestock population in the district is very high and the cattle and buffaloes are a permanent feature

of all village households. The dairy farming is thus well developed and almost all big villages with a population of 5000 and above have got a village dairy for the milk collection. This should further be strengthened for villages with less than 5000 population.

There is need for water saving crops in Dholpur. Barley could also be promoted. Horticultural crops are another option. Soil conservation is also largely required in the district. Vegetable growing should also be promoted as Agra is the nearest big town with demand.

As holding sizes are small in Dholpur, cooperatives of farmer as producers or similar institutions should be promoted. Andhra Pradesh model can be given a try.

In non- farm sector, the occurrence of craft is less and dispersed, involving a small chunk of population at present. A large segment of the population is dependent on stone mining and processing industry, the contribution of which is equal if not more to the district exchequer. Even though a very small segment of this population is involved in the stone crafts (carving), the craft holds enormous potential for reducing poverty by creation of mass jobs and through improvement in quality of work life of artisans. Among other crafts, prominently it is textile- based crafts including Durries weaving, Appliqué and Patch- work and Gotakinari (Embroidery). Incidentally this is the only craft, which has a considerable women's involvement as all others are the male bastions. This craft again offers a great potential for development particularly for inducement of skills among rural women by forming SHGs who can thus contribute significantly to the domestic income. Steps should be taken to strengthen these efforts.

Besides textile- based occupations in the cottage sector, it is crafts like leather shoe making and woodenwares, which hold potential for development in Dholpur. Since the craft base in the district is small, a long- term strategy for inducement of skills and provision of a comprehensive package of credit, materials and marketing is required to sustain such efforts. At the same time it is necessary that the masses are motivated to pursue such occupations, which are rather uninteresting ones for them. Some of them are put below.

2. Efforts to diversifying occupations need to be taken. Young people joining the work force, very often with one or two, to six or seven, years of education, require being productively absorbed. For this, there are two broad approaches proposed here: technical training (not necessarily more than a few weeks or months), and credit to initiate business or activity- for credit. Details of how to initiate training could be worked out once the area of intervention, the locale, scale and costs are worked out.
3. Credit is important for occupational diversification as well as agriculture; hence, credit in this point refers to all rural credit. Like in any modern business, credit is required for agriculture as well as non-agricultural activities. Credit for both fixed capital and working capital is needed with periodicity dictated by production and market conditions.
4. Education of the girl child should assume priority, particularly among ST groups, to the extent that if more than the normal incentives are to be offered, they should be offered.
5. Educational infrastructure must improve. Other than the standard suggestions of building extra rooms in one-room schools and appointing more teachers in one-teacher schools, and so on, there is also need to ensure regular water supply and sanitation in the school premises. For improving quality of the education imparted, it is proposed that interventions like those of Pratham in different parts of western India (incl. in Rajasthan) could be looked into. Additionally, control over the wherewithal of teachers could be brought about through empowering local *panchayats* to inspect schools on a continuous basis. Finally, education could be made more attractive if more science and English teaching are introduced.

6. As private schools out-perform the government ones, it might be an appealing idea to provide subsidies to them- so that they do not charge students any fees- and expect them to manage the schools. This could be tried on an experimental basis.
7. There is need to up-scale health extension to a higher level. The starting point in this for this district is a 'needs-assessment' of the health needs of the local communities.
8. Water and sanitation should receive more funding. One way to go about is to link domestic water schemes with those of irrigation and watershed. Pricing water, forming village water committees for taking charge of distribution of water, and initiating sanitation are some ideas to toy with.
9. There should be higher decentralisation, more innovation and better M&E in nutrition programmes like the ICDS. Experiments with local foods (and varieties) as well as introducing a two-meal programme could be tried out on a pilot basis. Linking up school nutrition with ICDS nutrition could also help in achieving economies of scale and also free teachers from feed-related duties.
10. Promoting HD at the district to set up a mission- HD Mission. The goals of the mission can be linked with those spelt in the Millennium Development Goals as also incorporated in the Eleventh Plan objectives.
11. Women need to be brought out of agriculture for raising their income levels and SHG movement requires strengthening for livelihood purposes.

Chapter 1

Introduction

This chapter attempts to understand the conditions prevalent in the Dholpur district and profiles and educational situation in the district and sample villages.

1.0 District Profile

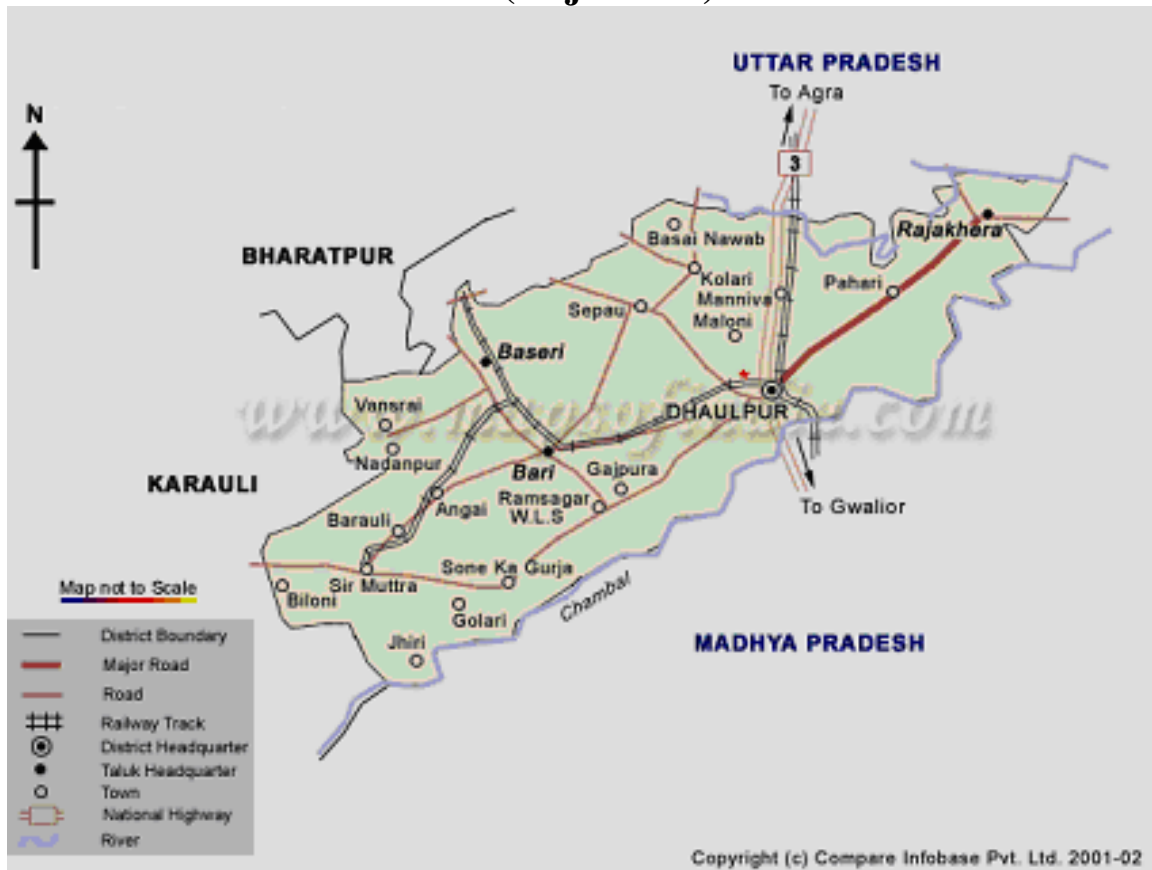
Situated on the North-east border of Rajasthan, Dholpur district was formed in 1982 by merging 4 former tehsils of district Bharatpur – Dholpur, Rajakhera, Bari and Baseri. On the district's north lies Bharatpur and the Uttar Pradesh border. On the south-east is the border with Madhya Pradesh and on the west is the district of Sawai Madhopur. The Agra-Mumbai national highway cuts through the district, which is located 109 kilometres from Bharatpur, 54 kilometres from Agra and 50 kilometres from Gwalior. Dholpur is a junction of the Central Railways and is served by regular bus services of the Rajasthan, Madhya Pradesh and Uttar Pradesh roadways.

Dholpur is said to have derived its name from Dhaulendra or Dhawalpuri Kasbah names after King Dholan or Dhaval Dev. The area was ruled by Jat princes, who supported the Rajputs against the various Muslim invaders who ruled the country. Dholpur was then ruled in succession by Sikandar Lodhi, Babur, Humayun and the Scindias, and ultimately, the British.

The district covers an area of 3, 033 square kilometers and is at a height of 183 metres above sea level. It has 5 sub-divisions, 5 tehsils, 4 panchayat samitis and 3 municipalities. There are 153 gram panchayat and 802 villages in the district. Baseri Tehsil has 196, Bari 171, Dholpur 193, Rajakhera 114 and Sepau has 128 villages. Keeping Dholpur as a central point, Rajakhera is located in the east, Bari is in the north and Baseri is in the north-west with the Dang area in the South-west. The district has many geographical variations and each tehsil has its own

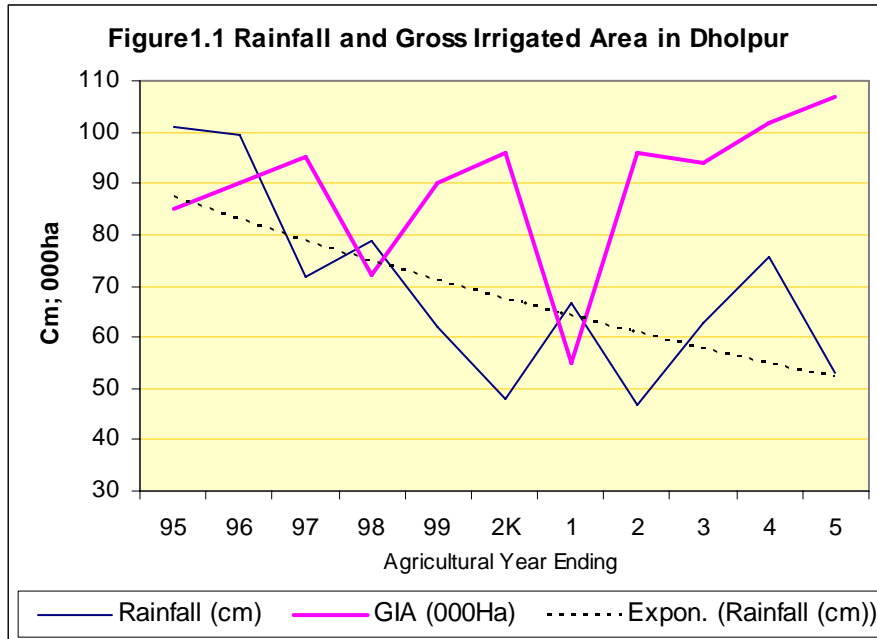
characteristics. Bari and Baseri are both Meena dominated areas, whereas the Dang area towards the south-west is dominated by Gujars. This area is rocky and particularly rich in minerals, and also has many mines and quarries. Both Rajakhera and Dholpur, in parts of which the Chambal flows, have comparatively plain topography and a good soil base for agriculture.

DHOLPUR (Rajasthan)



Dholpur has a dry climate, facing extremes of summer and winter. The monsoon hits the district in July and lasts till mid-September. It is difficult to find reasons but the rainfall of the district observes a continuous decline during the last decade (Figure 1.1). Such a decline could be part of a medium term cycle in precipitation, but it has significant impact on certain variables with the workforce an assessment of which was made in the census 2001.

There is one perennial river, the Chambal, in the southeast of the district and a seasonal river in the north-west, the Parvati. Other small seasonal rivers and the village ponds are the irrigation sources here. There is an irrigation dam on the Parvati, too. The 2 lakes situated in Dholpur town – Ramsagar and Taalabshahi – are also utilized for irrigation.



1.1 Natural Resource Base: Land and Water

The total geographical area of the district is 300905 hectares. Forest land accounts for 9 per cent of geographical area. The stony, rocky soil is covered by sparse, dry shrubs and trees like *ber*. Amongst the aromatic plants, the most important produce of the district is *kebus*. The other trees commonly found here are *dhok*, *kair* and *keber*.

Over 19.4 percent of the area is barren and unculturable and another 5.4 per cent of the area is under non-agricultural use. The land use pattern for the year 2004-05 is given in Table 1.1. With over 50 per cent of its area under agriculture, and a cropping intensity of 137, Dholpur has a better profile in terms of agricultural production and hence rural livelihoods.

Irrigation: Over half of the cultivated area in Dholpur is irrigated, most of it from groundwater. In the year 2003, 107 thousand hectares of the area was irrigated. Groundwater provided irrigation support for 94.6 thousand hectares while another 9 thousand hectares were irrigated from the surface water sources. Tehsil-wise distribution of area irrigated is given in Table 1.2. Except for the year 2001 irrigated area has been increasing although slowly. This has happened in spite of a decline in precipitation during the recent years (see Figure 1.1 that shows a secular decline in rainfall) and is indicative of the pressure being put on the ground water. Three of the four blocks in the district were declared critical with the level of development varying between 108 to 115 per cent in 2001. Dholpur is the only block in the safe limits of groundwater

development (Table1.3). The sharp increase in irrigated area since then would have further compounded the problem.

Table 1.1: Classification of Land Utilization in Dholpur District (2004-05)

	<i>Hectares</i>	<i>percent</i>
Reporting area for land utilization Purpose	300905	100
Forest	27059	8.99
Not available for cultivation		
Area under non-agricultural use	16362	5.44
Barren and unculturable land	58463	19.43
Other uncultivated land		
Permanent Pasture and other grazing land	17872	5.94
Land under miscellaneous tree crops & groves	467	0.16
Land Excluding Fallow Lands		
Culturable Waste Land	11754	3.91
Fallow Lands		
Fallow Lands other than Current Fallow	10553	3.51
Current Fallow	7455	2.48
Net area sown	150920	50.16
Total cropped area	206246	68.54
Area sown more than once	55326	18.39

Source: Statistical Abstract of Rajasthan, 2005.

Table 1.2: Tehsil wise Distribution of Irrigated Area (2004-05) (000 hectares)

Tehsil	Cultivated area	Gross Irrigated area	% of area irrigated
Dholpur	47.74	25.11	52.60
Sapau	36.59	23.81	65.07
Bari	42.88	19.39	45.22
Baseri	44.02	20.36	46.25
Rajakhera	35.01	18.11	51.73
District	206.25	106.78	51.77

Source: District Statistical Outline, 2006.

Table 1.3: Block wise Ground Water Potential in Dholpur District

Block	Total net annual ground water availability (ham)	Existing gross ground water draft for all uses (ham)	Stage of ground water development (%)	Category of block
Dholpur	5362	3409	72	Safe
Bari	6003	6162	108	Critical
Baseri	6218	6672	115	Critical
Rajakhera	6137	6733	115	Critical
District	23720	22976	104	

Source: National Bank for Agriculture and Rural Development Rajasthan Regional Office, Jaipur (2005-06).

1.2 Population and Demographics

In a resource scarce economy, population and demography of the region are closely related to the aspects of human development. One, population stabilization achieved through a health demographic transition reflects good health and a good nutritional status of people, particularly of women. This becomes all the more important in a region where people still derive over 85 per cent of employment through land and livestock based activities. Secondly, demographic changes

reflect gender equality and the care given to the mothers and children; an important component of human development.

Population of Dholpur has been steadily rising since 1931 after a decline from 2.99 lakh in 1901 to 2.47 lakh in 1931. Since then it increased to 7.49 lakh in 1991 and to 9.83 lakh in 2001. The decadal growth rate of population during 1991-2001 was 31.2 per cent (Table 1.4). This is higher than the state average during this period. What is worrying is that the decadal growth rate has continuously increased in the district since 1941. The decadal growth rate of 1941-51 was low at 5.4 per cent. The population growth during the subsequent decades was 20.4, 26.4, 27.3, 28.1 and 31.2 per cent respectively. It is significant that the growth rate is observing a steady increase since 1971 (Figure 1.2).

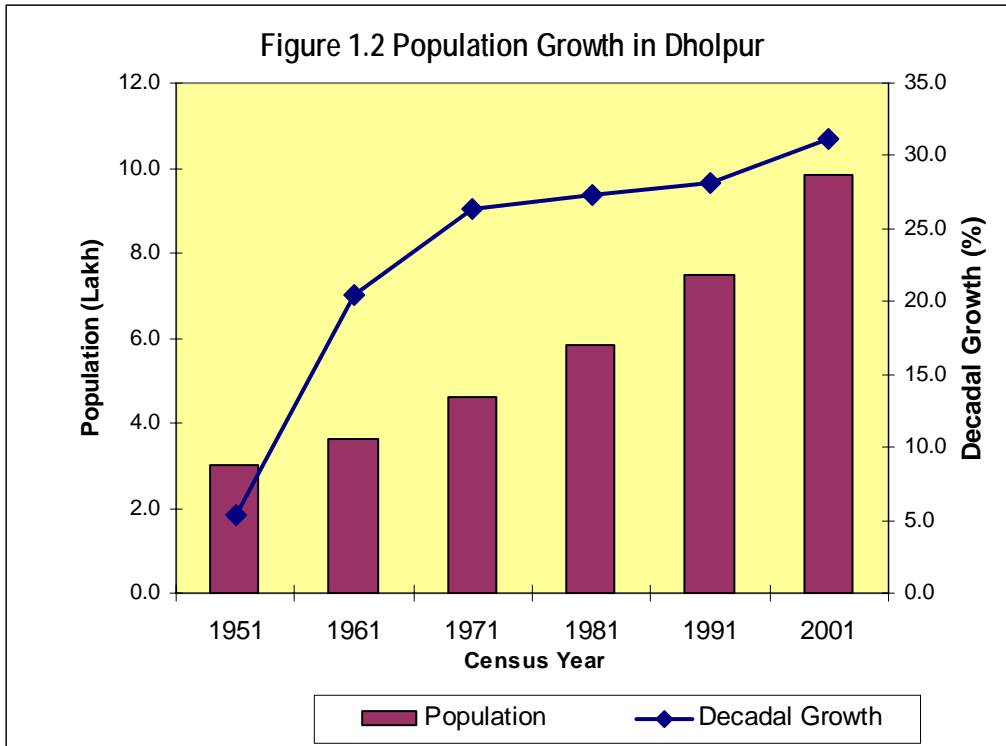
Table 1.4: Decadal Changes in Population 1991-2001

	SC	ST	Non-SC/ST	Overall
Total	30.9	38.3	30.8	31.2
Rural	29.9	37.1	29.4	30.0
Urban	36.7	117.8	36.8	37.1

Source: Computed from Population Census reports.

Yet another significant feature of the district population is the adverse sex ratio. Female sex ratio in the district is amongst the lowest in Rajasthan. However, things seem to be changing as the juvenile sex ratio in the district is higher than the overall sex ratio. Overall sex ratio has improved from 795 in 1991 to 827 in 2001. As against this the juvenile sex ratio declined from 875 in 1991 to 860 in 2001. The differences in sex ratio, juvenile or total are not large across difference tehsils/ blocks indicating the uniformity of the socio-economic space (Table 1.5).

Higher sex ratio in 2001 gets replaced in the difference in the growth rate of population. Female population in the district has a growth rate of 34.1 per cent during 1991-2001 as against the male population growth rate of 28.9 per cent. The differential growth by gender is observed across all the blocks of the district.



As regards the distribution of social groups in total population, scheduled caste in the district have a share of around 20 per cent across the blocks and the district while the share of scheduled tribe, on the other hand, is 4.8 per cent in 2001. At the block level, share of ST population in Baseri and Bari blocks was 15.4 and 7.8 per cent respectively in total population.

Decadal change observed by the scheduled caste population was 30.9 per cent during 1991-2001. Corresponding figure for the scheduled tribe population was 38.3 per cent. More importantly, female population among the SC groups increased faster (36% than the male population 27%).

Table 1.5 Changing Sex Ratio in Dholpur (1991-2001)

Tehsil	Juvenile Sex Ratio		Sex Ratio All Ages	
	1991	2001	1991	2001
Baseri	876	864	789	825
Bari	857	849	782	810
Dholpur	881	857	806	841
Rajakhera	881	861	791	813
District	875	860	795	827

Source: Computed from Population Census reports.

Density of population in the villages indicates Dholpur's social conditions. Due to the terror of dacoits and difficult terrain, people prefer to live in bigger groups – 62.25 per cent of the district's villages have a population of 500- 2,000. A mere 7.05 per cent of the villages have a population of 200 or less than 200. The population of minority groups and slums of Dholpur are not available.

1.3 Human Development Status of the District

The Human Development Update of Rajasthan 2008 puts Dholpur among the least developed three districts of the state. When arranged in descending order of the composite index of Human development (HDI) it ranks 30th. The district observes a value of 0.497 of the human development Index as against the highest value of 0.809 in Ganganagar and the lowest value of 0.409 in Dungarpur. In terms of the individual components, **the district ranks 14th 21st and 31st for the education, health, income development index respectively, when arranged in descending order of magnitude** (Table 1.6 and Figure 1.3).

1.4 Specific Objectives

This report finds its origins in the facts that: one, aggregate growth at the state level has been uneven in different parts of the state implying thereby a need to focus on the hotspots; and two, regions like Dholpur, with substantial areas under the Dang, there is a need to find alternative sources of sustainable livelihoods. There is a need for direct and more intensive intervention for up-scaling the quality of life and empowerment of the people. Specifically, this report attempts to address the following questions:

5. To assess the extant livelihood status of people in the district: living standards, sources of earning (and uncertainty in the same), migration, endowment levels (incl. land ownership), gender issues and social group-specific details;
6. To diagnose the state of agriculture – land quality and availability (absolute quantity and distribution/access), irrigated area, crops grown, productivity (land and labour), animal husbandry, and such other details;
7. To make an assessment of the state of literacy, extent and quality of education, educational infrastructure, and problems in extending education, specially at the primary level;
8. To evaluate the status of health, nutrition and health extension with special focus on women and children.

Based on analyses of above, effort has been made to put forth proposals that might help up-scaling livelihoods and human attainments.

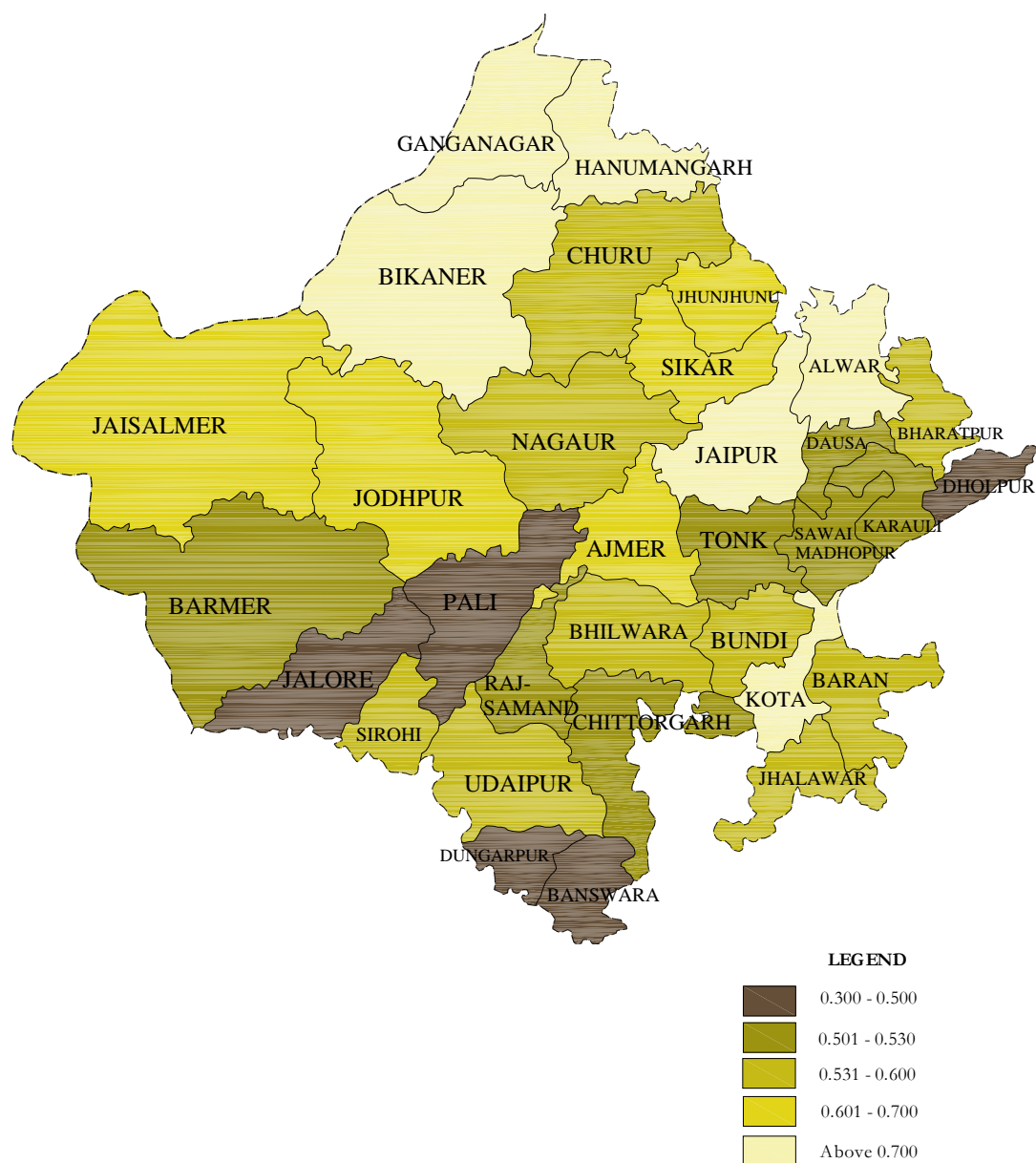
Table 1.6: Relative Human Development Indices in Rajasthan across Districts

DISTRICTS	Education Index	Health Index	Income Human Development Index	Index
Ajmer	0.772	0.574	0.686	0.677
Alwar	0.747	0.776	0.710	0.744
Banswara	0.630	0.309	0.335	0.425
Baran	0.763	0.571	0.624	0.653
Barmer	0.798	0.581	0.355	0.578
Bharatpur	0.762	0.625	0.424	0.604
Bhilwara	0.685	0.396	0.818	0.633
Bikaner	0.718	0.863	0.756	0.779
Bundi	0.722	0.561	0.663	0.649
Chittorgarh	0.705	0.383	0.585	0.558
Churu	0.832	0.759	0.226	0.606
Dausa	0.757	0.591	0.380	0.576
Dholpur	0.758	0.504	0.230	0.497
Dungarpur	0.640	0.282	0.304	0.409
Ganganagar	0.787	0.816	0.825	0.809
Hanumangarh	0.765	0.846	0.673	0.761
Jaipur	0.833	0.688	0.814	0.778
Jaisalmer	0.714	0.641	0.663	0.673
Jalore	0.638	0.497	0.445	0.527
Jhalawar	0.735	0.588	0.520	0.614
Jhunjhunu	0.850	0.850	0.433	0.711
Jodhpur	0.725	0.725	0.609	0.686
Karauli	0.767	0.568	0.364	0.566
Kota	0.875	0.682	0.803	0.787
Nagaur	0.736	0.699	0.396	0.610
Pali	0.692	0.356	0.593	0.547
Rajsamand	0.724	0.440	0.571	0.578
Sawai Madhopur	0.725	0.484	0.474	0.561
Sikar	0.837	0.830	0.428	0.698
Sirohi	0.695	0.487	0.753	0.645
Tonk	0.688	0.443	0.582	0.571
Udaipur	0.761	0.413	0.611	0.595

Source: Human Development Report Update, 2008, Rajasthan.

Source: GoR (2007).

Figure 1.3 : Mapping of Districts by Human Development Index



Source: Income : Directorate of Economics & Statistics, GOR
Literacy : Census of India, 2001
IMR : Census of India, 2001

1.5 Methodology

This report has been largely carried out on the base of existing (published and unpublished) data,

short field visits and talks with officials and non-official personnel – there were no primary household-level/other surveys conducted.

The approach of the report is to first to organize a meeting with the District Core Committee headed by the Zila Pramukh to apprise the members of the human development concepts and seek their help in preparing the report. An interaction with the members of Core Committee provided flavour of the issues facing the district. This was followed by an analysis of secondary data provided by the GoR from its sources. In the second phase, two field visits were conducted to discuss with the Government officials (Collector, Chief Executive Officer, District Education Officer; District Medical and Health Officer, Chief planning Officer) problem areas and major issues in these areas. Meetings with elected representatives were similarly held to get their perspectives on the issues. The third phase of the report involves meetings with people. Focus Group Discussions with beneficiaries of the Public Health System and Public Education and Some village meetings as well, were held.

Field visits were carried out in Rajakhera and Baserdi blocks of the district to conduct in-depth interviews and focus group discussions with public health care service providers at different levels, including the ICDS officer in-charge of the district. In addition, the hospital staff, medical officers and staff in the selected sub-centres and Anganwari centres were visited. A qualitative research approach was adopted, in which personnel at different levels in the health delivery system were interviewed. An assessment of the qualitative and quantitative dimensions of public services is discussed in the sections on education and health.

1.6 Layout of the Report

The presentation of the report is as follows:

This chapter is an introduction, which portrays a sketch of the district in terms of socio-cultural factors, population and resource endowment besides putting the intent and rationale of writing this report.

Chapter 2 presents details on the district economy, livelihood patterns and the underlying challenges;

Chapter 3 examines the status of educational attainment, specifically with respect to supply side constraints.

Chapter 4 lays out attainments in health, women and children with a brief on the infrastructure as well; and

Chapter 5 proposes some planning initiatives within a district planning framework.

Livelihoods in Dholpur

2.0 The Economy

Dholpur represents a typical rural economy with 82 per cent of its population living in rural areas in 2001. Correspondingly, economy of the district is largely based on agriculture and allied activities for sustaining a large proportion of its population. This is a reflection on the development of economy. The status of an economy, in terms of per capita income and the inequality in its distribution is a reflection on livelihood opportunities and its sustenance. The Human Development Index uses per capita income as an important component of Human development. We discuss below structure of the district economy with respect to the composition of district income (District Net Domestic Product) and its growth during the recent past.

2.1 Changing Structure of the District Economy

Structure of an economy is defined in terms of the share of income of the different sectors of the economy. The National Accounts Statistics (NAS) provides an elaborate structure comprising of 13 sectors of the economy. However, due to problems of estimation for some sectors, a district economy may be analyzed with respect to four major categories. This includes Agricultural and Allied sector comprising of crop husbandry, animal husbandry and forestry which dominates the employment structure that defines the livelihoods in a predominantly rural economy. Other sectors of the economy include, Mining and Manufacturing; Transport and Communication and Other services.

The district income at constant prices¹ has grown at the rate of just above 6 per cent annually during 1992-2005. Income from the agriculture and allied sector observes an impressive growth during 1991-92 to 1999-2000. This sector collapses thereafter resulting in a sharp decline in its share in DDP.

Table 2.1 and Figure 2.1 show structure of the district economy. The largely agriculture based economy is showing signs of change. Average share of the agriculture and allied sector has declined from 46.2 per cent during triennium ending 1993-94 to 33.6 per cent during triennium ending 2004-05. Construction sector observes an increase of 5 Per cent points in its share. Other services comprising of 'Real estate and ownership of dwellings' and miscellaneous services observe an increase of 3.2 per cent points in its respective shares during the later period. The major losers besides the agricultural sector include Trade & Hospitality and Banking services.

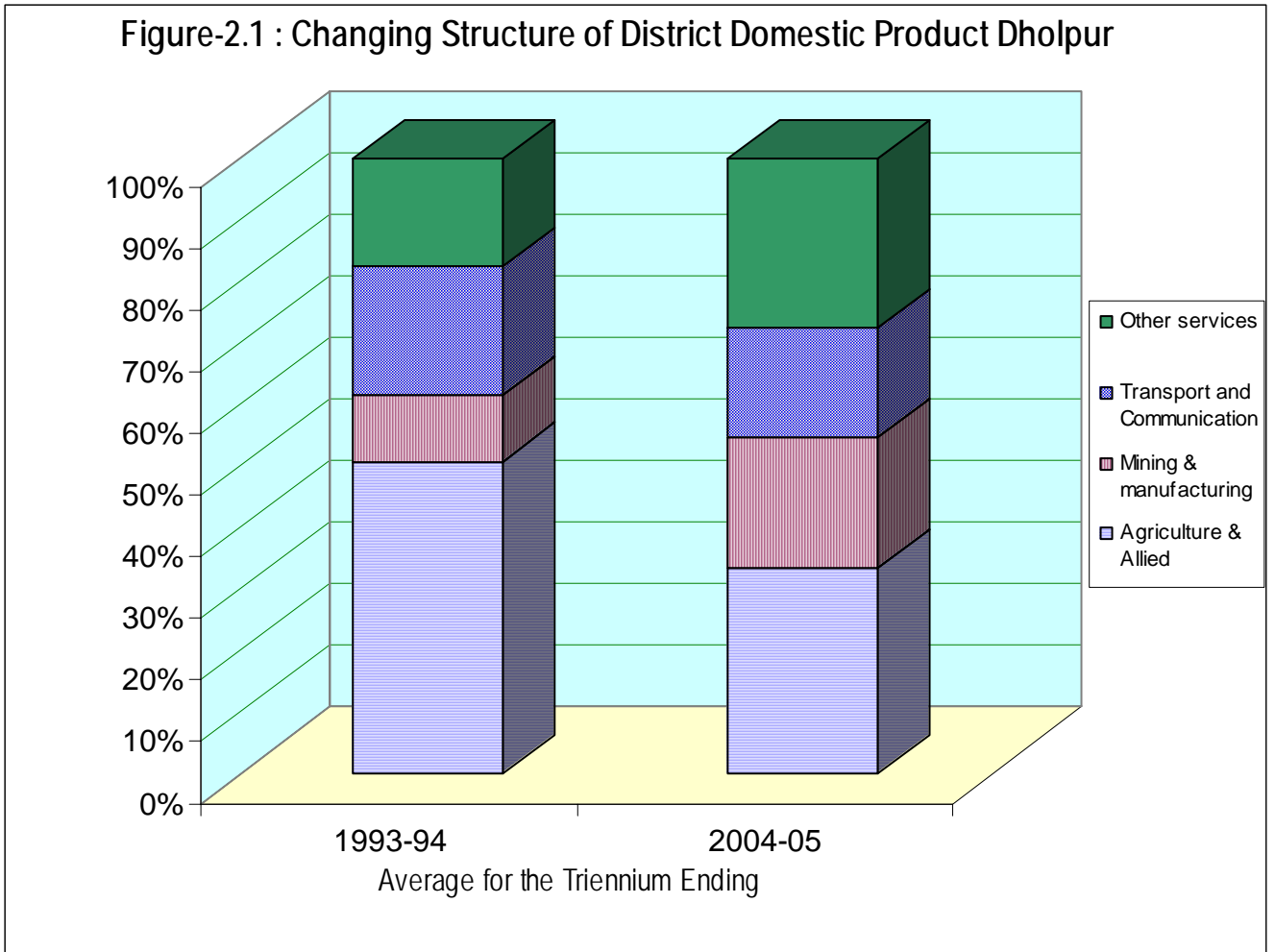
Table 2.1: Net District Domestic Product of Dholpur (Current Prices)

Sector	Average 1992-94	% Share	Average 2003-05	% Share
A: Agriculture & Allied	14111	46.2	37077	33.6
Agriculture	10667	34.9	23239	21.1
Livestock	3027	9.9	11929	10.8
Forestry	368	1.2	1795	1.6
Fisheries	49	0.2	114	0.1
B: Mining & Manufacturing	3958	13.0	22833	20.7
Mining	130	0.4	1054	1.0
Manufacturing Regd.	151	0.5	1431	1.3
Manufacturing Un Regd.	1426	4.7	6295	5.7
Construction	2031	6.7	12808	11.6
Electricity Gas Water Supply	220	0.7	1244	1.1
C: Transport & Communication	6258	20.5	21051	19.1
Railways	829	2.7	2034	1.8
Other Transport	263	0.9	3869	3.5
Storage	0	0.0	65	0.1
Communication	328	1.1	1378	1.2
Trade, Hotel & Restaurant	4838	15.8	13705	12.4
D: Other Services	6205	20.3	29378	26.6
Banking & Insurance	946	3.1	2104	1.9
Real Estate & Ownership of Dwelling	1422	4.7	8729	7.9
Public Administration	1195	3.9	6443	5.8
Other Services	2642	8.7	12103	11.0
Net District Domestic Product	30532	100.0	110339	100.0

Source: Estimates of District Domestic Product of Rajasthan, DES.

Mining sector observes some growth in its share of NDP. However, this is restricted to quarrying and stone mining. Growth in the mining sector may have negative impact on the components of human developments in as much as it impinges on the environmental degradation and may have implications for the mine workers. However, growth in the non-farm sector comprising of construction, transport and other miscellaneous services has a healthy shift in the share of income.

¹ District income at constant prices is obtained by deflating DDP at current prices by the implicit NDDP deflator at the state level.



2.2 Distribution of Income: Assets

In order to assess the strength and sustainability of livelihoods, growth in district income and its structure needs to be evaluated from the perspective of inter personal distribution of income. However no such data are available at the macro (district level). Estimates of the distribution of consumption income may be drawn from the district sample of NSS consumption expenditure surveys. However the district sample is too small to provide meaningful estimates. Scholars therefore use distribution of assets primarily land as a measure of distribution of income. Such a measure served its purpose as long as land was the primary source of income for the rural masses. With the agriculture sector loosing its importance in the district income, as discussed above, distribution of land becomes a poor proxy for the distribution of income. We therefore draw inferences by comparing changing structure of employment vis-à-vis income along with the distribution of land holding. However, this needs to be supported by secondary information as generated by small/large household surveys conducted within the district.

Distribution of holdings shows high inequalities. At the district level, 56 per cent of the holdings are below 1 hectare and another 23 per cent are 1-2 hectares. What is interesting in Dholpur is that the structure of land distribution observes small variation across blocks (Table 2.2).

Table 2.2: Distribution of Land Holding in Dholpur (2000-01)

Holding Size (hectare)	Tehsils/Blocks					District
	Bari	Baseri	Dholpur	Rajakhera	Sapau	
Less than 1	56.0	55.8	49.4	59.3	59.6	55.9
1-2	23.0	22.3	25.6	21.7	20.3	22.6
2-4	14.9	14.6	17.4	13.6	14.2	14.9
Above 4	6.2	7.3	7.7	5.5	5.9	6.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Agricultural Census 2001-02 Revenue (Agricultural Census) Department, GOR, 2006.

2.3 Employment and Work Force Structure

Employment Structure of an economy is defining in terms of (a) Work Participation Rate and (b) The Sectoral distribution of workforce. There is a further classification of WPR in terms of main and marginal workers. Main workers are defined as those employed for more than 210 days in a year in a given activity.

Work participation rate (WPR) shows the proportion of population actively engaged in productive work/services include work done for monetary gains. Accordingly work done by a woman with in the household for which she is not paid is not included in WPR. This also shows proportion of the population dependent on workers (earners). A high dependency ratio is indicative of the dilution in household income. However, in the Indian workforce structure; where women are engaged in a non-earning but productive domestic activities such as cooking, rearing children, fetching water besides milking of livestock and similar other activities; WPR does not truly reflect the strength of working population. Any change in WPR induced by an increase in women WPR therefore needs to be evaluated with some caution. This is particularly true for an economy facing weather induced variations in agricultural production. In the event of crop failure woman, particularly of the lower income range take up paid employment outside the household. This tends to increase WPR. Since such data as Census or NSS are available once in five or once in 10 years, the resulting change in WPR needs to be interpreted in the light of change in agricultural productions.

Dholpur typically represents such a situation. Female WPR increases significantly in the year 2001. At the district level Female WPR has increased from 6.6 per cent in 1991 to 34 per cent in 2001 implying an increase of 27.4 per cent points. Across various blocks increase in female WPR

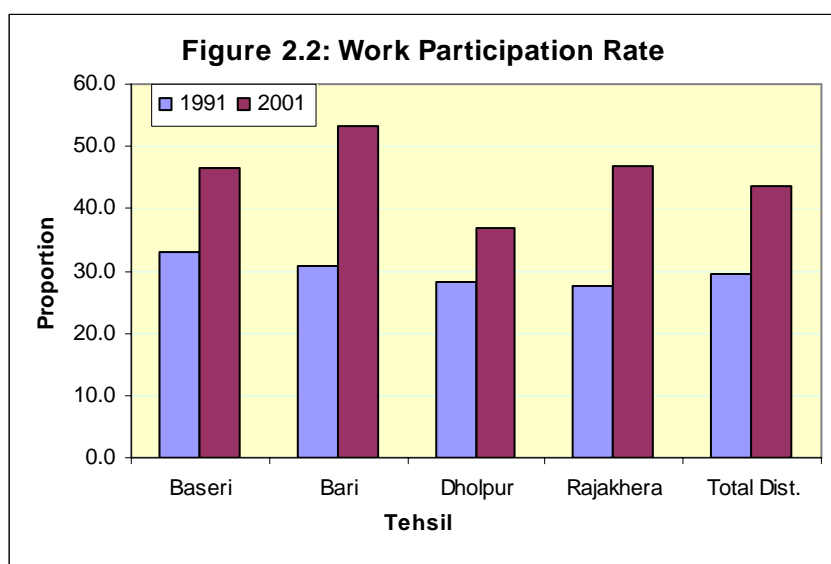
varies between 21 per cent in Dholpur Tehsil to 38 per cent in Bari (Table 2.3). Two thirds of the increase in workers in Dholpur is contributed by the marginal workers. Block-wise WPR for 1991 and 2001 are shown in Figure 2.2.

Table 2.3: Work Participation Rate in Dholpur

Tehsil/ District	1991			2001			% points change in Female WPR
	Person	Male	Female	Person	Male	Female	
Baseri	32.9	48.3	13.4	46.5	52.3	39.4	25.9
Bari	30.7	47.9	8.8	53.3	58.9	46.4	37.6
Dholpur*	28.2	47.6	4.2	37.0	47.3	24.8	20.6
Rajakhera	27.5	48.0	1.5	46.8	54.1	37.9	36.3
District	29.6	47.9	6.6	43.7	51.7	34.0	27.4

Note: *- Including Sepau in 2001.

Source: Population Census, 2001.



Population census in India provides a very elaborate sectoral distribution of the workforce. However, for our purpose will take only the broad classification in terms of four categories—comprising of cultivators, agricultural labor, households industry and other workers. Among the main workers largest increase occurs in workers outside the usual categories, viz., agricultural and household industry. Such workers put in the category of ‘Other Workers’ increase overall while the male workers in this category increases by 133 per cent during the decade ending 2001 (Table 2.4 and Figure 2.3).

Diversification of workforce is defined in terms of a shift in workforce away from agriculture and a decline in workforce dependent on agriculture. This is so because labor productivity and resulting income from agriculture is observed to be very low for most of the workers dependent on agriculture (see distribution of agricultural holdings in the earlier section). At the state level,

labor productivity in non-agricultural occupation to agriculture has increased from 3 to 5 during the last decade (GOR, Human Development Update, Rajasthan 2008). It is significant that the number of main workers dependent on agriculture is below 60 per cent in Dholpur. Other workers representing the non-farm sector along with workers engaged in household industry add up to 40.2 per cent of the main workers in the district. Similar structure of the work force is observed across all the Tehsils in Dholpur. This is also the category of workers which observes a near doubling of main workers in 2001 when compared to 1991 (Tables 2.5 & 2.6 & Figure 2.4).

Table 2.4: Distribution of Workers in Dholpur District (2001)

Category of	Distribution of Workers (%)			% Change over 1991-01		
	Total	Male	Female	Total	Male	Female
Main Worker	63.6	81.8	30.2	32.4	36.8	29.7
Cultivator	55.4	58.9	38.2	7.0	-30.3	35.1
Ag. Labor	4.4	4.4	4.3	-2.2	-6.5	1.0
Household Industry	1.5	1.2	2.8	2.9	3.2	2.7
Other Worker	38.7	35.5	54.6	92.3	133.6	61.3
Marginal Worker	36.4	18.2	69.8	67.6	63.2	70.3

Source: Population Census, 2001.

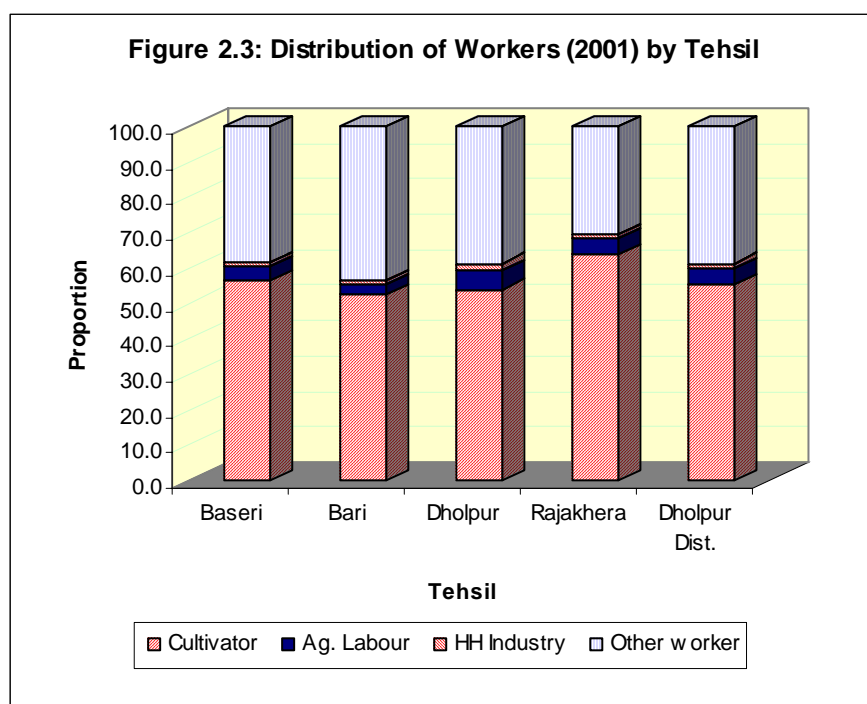


Table 2.5: Distributions of Workers by Tehsils (2001)

Category	Baseri	Bari	Dholpur	Rajakhera	District
Main Worker	58.4	62.4	70.2	56.5	63.6
Cultivator	56.6	52.5	54.0	63.8	55.4
Ag. Labor	3.7	3.1	5.4	4.5	4.4
HH Industry	1.2	1.1	1.9	1.4	1.5
Other Worker	38.5	43.4	38.7	30.3	38.7
Marginal Worker	41.6	37.6	29.8	43.5	36.4

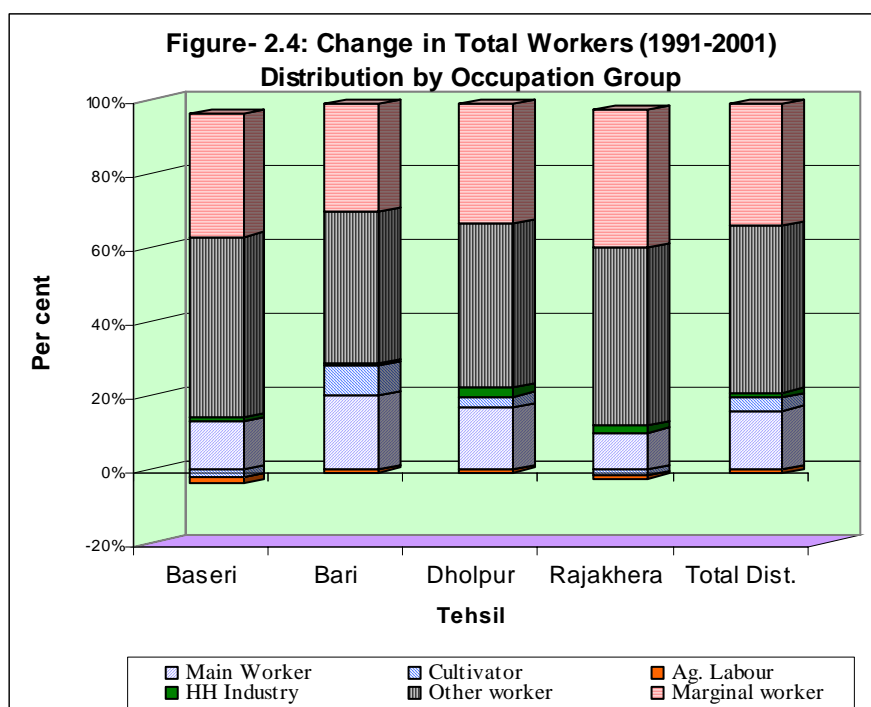
Note: Dholpur includes Sepau Tehsil.

Source: Census of India 2001.

Table 2.6: Percentage Distribution of Change in the Number of Workers (1991-2001)

Category	Baseri	Bari	Dholpur	Rajakhera	District
Main Worker	28.2	40.5	33.8	21.1	32.4
Cultivator	-4.5	17.0	6.2	-3.3	7.0
Ag. Labor	-3.4	-1.9	-2.0	-2.0	-2.2
HH Industry	2.2	0.9	5.1	3.5	2.9
Other Worker	105.8	83.9	90.7	101.8	92.3
Marginal Worker	71.8	59.5	66.2	78.9	67.6

Source: Census of India 2001.



What appears to be lacking is the diversification of the workforce. The district needs far more opportunities in the non-farm sector to provide sustainable livelihoods to its people. There is a large potential for such diversification.

Strengthening of livelihoods and sustained growth of incomes of the household dependent on cultivation may be achieved either by a sustained growth in the farm sector over and above the growth in workers or diversification of workforce to the other sector of the economy. A sustained growth in the income of the farm sector requires both the growth in productivity and diversification of farm activities (significant diversification of crop husbandry has taken place in Dholpur during the last three decades). We shall examine below performance of the farm sector and potential for its growth in same details.

2.4 The Farm Sector

Compared to many other districts, farm sector still has the largest share in district income while the share of main workers engaged in the farm sector is lower than the state average. Further development of this sector should provide the basis for a sustainable livelihood profile for the district. We discuss below, farm sector development in terms of growth, diversification and its potential for providing sustainable livelihoods.

2.4.1 Crop Husbandry

2.4.1.1 Cropping Pattern

Dholpur district has an interesting mix of agriculture and non-farm sector as both contribute equally to the domestic economy. Where on one hand the soil is fertile, the severe water shortages have retarded the growth of farm sector, as evident from the small land holdings and area under cropping. Tables 2.7 and 2.8 present crop-wise area under kharif and rabi seasons. It appears that bajra is the major crops in Dholpur during kharif season as since 1991-92 the share in total area has gone up from 77.42 per cent to 91 per cent in 2006-07. Cereal crops together accounted for 79.56 per cent area that improved to 91.5 per cent in 2006-07. The other crop of any significance is oilseeds (til), but has lost ground over the years. Pulses too have lost ground as the area under it fell from 4.24 per cent in 1991-92 to 1.32 per cent in 2006-07. This reflects on the dependence of Dholpur agriculture on rainfall. We have seen that three blocks of the four blocks in Dholpur are critical zone.

Table 2.7: Distribution of Area under various Kharif Crops

Crops	1991-92	1995-96	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Rice	1.39	1.60	1.39	1.67	0.93	1.05	0.96	1.10	0.72
Jowar	0.72	0.47	0.73	0.70	0.30	0.33	0.24	0.44	0.10
Bajra	77.42	77.68	83.59	82.70	91.26	91.07	90.93	89.89	90.67
Cereals Total	79.56	79.75	85.73	85.11	92.51	92.46	92.17	91.45	91.50
Arhar	2.12	2.59	2.07	1.81	1.34	1.20	1.04	1.12	0.87
Urad	0.52	0.63	0.39	0.52	0.45	0.43	0.29	0.30	0.22
Pulses Total	4.24	4.54	3.27	2.59	1.92	1.79	1.53	1.57	1.32
Sesamum	7.89	2.23	2.21	3.37	2.05	2.20	3.60	4.42	5.14
Groundnut	0.56	1.78	0.51	0.97	0.20	0.20	0.31	0.35	0.24
Oilseeds Total	8.48	4.02	2.77	4.34	2.26	2.41	3.91	4.79	5.39
Sugarcane	0.17	1.57	0.30	0.19	0.17	0.10	0.10	0.14	0.23
Others Total	7.55	10.11	7.93	7.78	3.15	3.24	2.30	2.06	1.55
Total Area (ha)	58107	50063	81610	70676	67681	74074	67441	76230	74424

Source: computed www.rajkrishi.nic.in.

Under dry conditions there will be less moisture available for rabi crops. It is found that rabi cropping pattern is dominated by cereals and oilseeds. In 1991-92, 29.1 per cent of total rabi area

was under cereals that peaked at 43.79 per cent in 2000-01, a drought year and later declined to 31.93 per cent in 2004-05 and was 40.44 per cent in 2006-07. Among cereal crops, wheat is the major crops that had share of 39.62 per cent of total rabi area in 2006-07. And this share has been fluctuating but increasing over the years. Area under pulses has also been fluctuating. Among oilseeds, rapeseed and mustard is the major crop; 60.1 per cent share in rabi area in 1991-92 which declined to 55.69 per cent in 2006-07. Thus, rabi season is limited to a few crops. Dholpur has suffered because of lack of canal system and small holdings which restrict new technologies' introduction.

Table 2.8: Distribution of Area under various Rabi Crops

Crops	1991-92	1995-96	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Wheat	27.78	27.31	43.01	36.87	39.04	35.37	31.46	36.17	39.62
Barley	1.33	0.74	0.78	0.69	1.06	0.75	0.47	0.72	0.82
Cereals Total	29.11	28.07	43.79	37.56	40.11	36.12	31.93	36.89	40.44
Gram	2.64	5.17	5.57	5.76	3.60	3.86	2.32	1.53	1.57
Pulses Total	2.85	5.94	5.92	5.94	3.75	4.02	2.46	1.56	1.60
Rape & Mustard	60.07	61.10	48.81	55.26	54.40	58.02	64.62	60.19	55.69
Taramira	4.42	1.64	0.60	0.71	0.46	0.57	0.00	0.00	0.00
Oilseeds Total	64.52	62.74	49.40	55.97	54.86	58.60	64.62	60.19	55.69
Others Total	3.30	3.03	0.02	0.00	0.02	0.04	0.02	0.02	0.03
Totat Area (ha)	122826	131391	73238	120818	113716	126102	133492	128892	120274

Source: same as table 2.7.

Tables 2.9 and 2.10 present data on triennium basis which reduces the annual variability. It is found that bajra area has increased in each triennium and that of pulses gone down. Oilseed area has also declined. In the rabi season, wheat has observed changing area from TE1993-94 to TE 2006-07. The same is the case with rapeseed and mustard. Potato as a crop appears to emerging in Dholpur but is a water-consuming crop.

Table 2.9: Area and Production by Triennium Ending (Kharif)

Crops	TE 1993-94		TE 1999-00		TE 2006-07	
	A	P	A	P	A	P
Rice	734	757	1226	1490	673	1011
Jowar	312	103	288	108	192	71
Bajra	46917	38880	54794	63266	65776	125777
Cereals Total	47982	39758	56327	64885	66657	126877
Arhar	1461	903	1915	2607	732	725
Urad	382	111	402	143	196	58
Pulses Total	2853	1315	3169	2974	1069	821
Sesamum	4045	663	1582	174	3208	1423
Groundnut	786	645	563	608	219	325
Oilseeds Total	4859	1333	2163	803	3434	1755
Sugarcane	135	8299	291	19468	115	6328
Others Total	5026	5274	8786	12426	1425	2523
Gross Total	60854	55979	70736	100556	72698	138304

Note: A- area and P- production.

Source: computed.

Table 2.10: Area and Production by Triennium Ending (Rabi)

Crops	TE 1993-94		TE 1999-00		TE 2006-07	
	A	P	A	P	A	P
Wheat	35370	79777	48785	157695	45422	149987
Barley	1351	2524	836	1647	845	2025
Cereals Total	36721	82301	49622	159343	46267	152012
Gram	4917	3684	7656	5891	2319	2702
Pulses Total	5252	4187	9856	9971	2410	2814
Rape & Mustard	74740	60445	64981	65487	76937	106092
Taramira	3542	4187	1182	377	0	0
Oilseeds Total	78294	64641	66167	65866	76938	106093
Potato	320	4259	734	6219	1894	32890
Others Total	3899	97	5252	424	28	22
Gross Total	124524	155694	131704	242005	127553	293848

Note: A- area and P- production.

Source: computed.

2.4.1.2 Production

As area has been fluctuating, so would be the production of various crops. Tables 2.11 and 2.12 present information on production of various crops. In 1991-92 total agriculture production during kharif season was 40869 tonnes which went up to 160311 tonnes in 2004-05 and stood at 126185 tonnes in 2006-07. This production has come about because of mainly bajra. The bajra production in 1991-92 was 30749 tonnes that increased to 114031 tonnes in 2006-07.

Table 2.11: Production of Kharif Crops (tonnes)

Crops	1991-92	1995-96	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Rice	688	676	1066	1469	510	1287	960	1228	845
Jowar	93	55	119	205	27	174	75	96	43
Bajra	30749	34425	97510	87975	101922	119951	150204	113096	114031
Cereals Total	31546	35157	98707	89685	102471	121431	151272	114431	114929
Arhar	255	727	855	646	89	440	978	680	516
Urad	10	131	92	134	55	168	71	55	48
Pulses Total	305	1053	1096	835	150	679	1085	753	624
Sesamum	780	116	248	777	83	738	808	501	2959
Ground Nut	262	660	386	837	94	230	323	418	235
Oilseeds Total	1047	782	720	1618	179	978	1131	934	3200
Sugarcane	6774	40076	22123	4423	4288	3892	4120	9505	5359
Others Total	1197	2669	10123	8948	1500	2092	2703	2792	2073
Gross Total	40869	79737	132769	105509	108588	129072	160311	128415	126185

Source: same as table 2.7.

As far as rabi crops are concerned a total production of 160427 tonnes was recorded in 1991-92 which improved to 301736 tonnes in 2006-07, the highest ever. The major contributors to this change have been wheat contributing 82219 tonnes in 1991-92 and 159087 tonnes in 2006-07 and rapeseed and mustard. This contribution of rapeseed and mustard has widely fluctuating over the years.

Table 2.12: Production of Rabi Crops (Tonnes)

	1991-92	1995-96	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Wheat	82219	120925	115721	176784	145417	155008	142513	148361	159087
Barley	3714	1942	1030	2148	2811	2125	1478	2106	2491
Cereals Total	85933	122901	116751	178932	148228	157133	143991	150467	161578
Gram	4449	4575	2395	5283	3098	3081	3419	2049	2637
Pulses Total	4821	7039	2566	5448	3232	3434	3730	2059	2653
Rapeseed & Mustard	56588	83129	34066	92280	71818	85729	108628	106203	103446
Taramira	5425	901	164	367	223	418	0	0	0
Oilseeds Total	62025	84031	34230	92650	72042	86148	108631	106203	103446
Potato	7246	3193	2799	2753	1390	2270	30070	34584	34016
Onion	350	266	33	24	80	14	18	3	2
Others Total	39	58	19	0	47	45	31	0	34
Gross Total	160427	217524	156403	279818	225045	249062	286489	293319	301736

Source: same as table 2.7.

2.4.1.3 Yield Rates

The yield rates have been relatively across crops as seen from tables 2.13 and 2.14. Since 1991-92 the peak yield rate of bajra has been in 2004-05 at 2449 kg per hectare while that of groundnut has been 1565 kg per hectare in 2003-04. During rabi season, wheat productivity was maximum in 2001-02 at 3968 kg per hectare and the lowest at 2410 kg per hectare in 1991-92. Barley though not an important crop in Dholpur has productivity ranging between 1813 kg in 2000-01 and 2526 kg per hectare in 2006-07. This crop should be promoted in Dholpur with contract farming. Grams have fluctuating yield rates throughout. Rapeseed and mustard though have significant area share in rabi season have low productivity ranging between a low of 767 kg per hectare in 1991-92 and a high of 1545 kg per hectare in 2006-07. Potato is another crop that has future only in pockets, which have assured water.

Table 2.13: Yield of Kharif Crops (kg/ha)

Crops	1991-92	1995-96	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Rice	853	843	937	1247	812	1652	1484	1467	1576
Jowar	221	236	199	414	131	713	463	286	551
Bajra	684	885	1429	1505	1650	1778	2449	1650	1690
Cereals Total	682	881	1411	1491	1637	1773	2434	1642	1688
Arhar	207	560	506	506	98	494	1399	800	799
Urad	33	419	287	363	182	523	359	244	293
Pulses Total	124	463	411	456	116	512	1053	631	635
Sesamum	170	104	137	327	60	453	333	149	773
Groundnut	799	742	923	1225	686	1565	1553	1548	1306
Oilseeds Total	212	388	318	528	117	548	429	256	797
Sugarcane	69835	50858	90298	33508	37287	52595	61493	90524	31157
Others Total	273	527	1565	1628	704	872	1744	1778	1796
Gross Total	703	1593	1627	1493	1604	1742	2377	1685	1695

Source: computed.

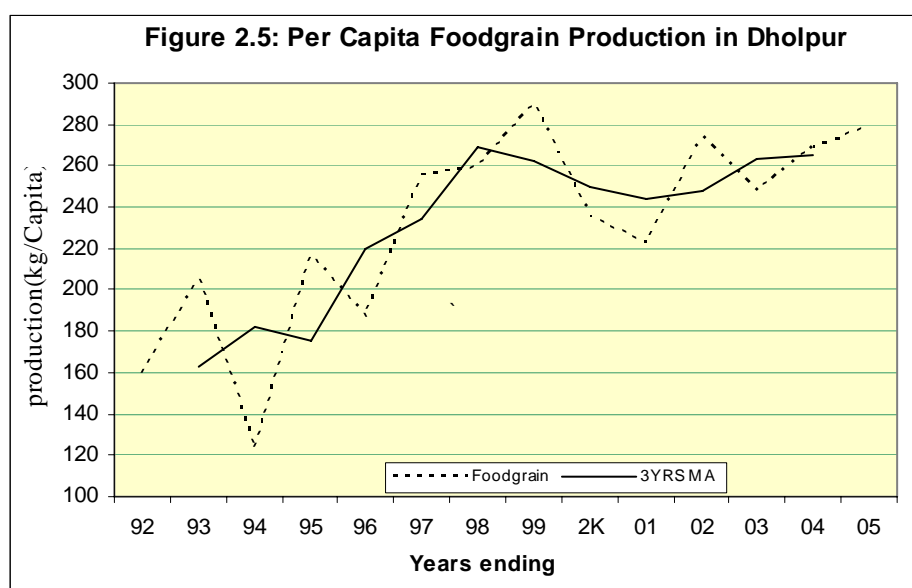
Table 2.14: Yield of Rabi Crops (kg/ha)

Crops	1991-92	1995-96	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
Wheat	2410	3370	3674	3968	3275	3475	3393	3183	3339
Barley	2272	1986	1813	2572	2329	2249	2380	2272	2526
Cereals Total	2403	3333	3641	3943	3250	3450	3378	3165	3322
Gram	1373	673	587	759	757	633	1102	1041	1399
Pulses Total	1377	902	592	759	757	678	1135	1021	1378
Rape & Mustard	767	1035	953	1382	1161	1172	1259	1369	1545
Taramira	998	419	374	430	428	577			
Oilseeds Total	783	1019	946	1370	1155	1166	1259	1369	1545
Coriander	1091	857		0	1000	1167	1000	1000	1200
Spices	1000	1286	1333	688	963	1200	947	750	1167
Potato	29576	13823	4500	4506	1000	1496	23960	19991	12613
Onion	19444	9172	3300	2667	5000	778	1200	3000	2000
Others Total	10	15	1357	0	1741	1000	1033	0	1000
Gross Total	1306	1656	2136	2316	1979	1975	2146	2276	2509

Source: computed.

Dholpur is among the best performing districts in this respect. What is significant of the food grain production performance is that much of the growth has occurred in kharif cereals mainly bajra as against the heavily irrigation based wheat crop. Overall growth in food grain production is largely contributed by the spectacular growth in the production of bajra. Also, such growth is contributed, almost entirely, by the growth in crop productivity. Growth performance of oilseeds, the other major crop group, comprising largely of mustard has been uneven partly due to the public policies on prices and agricultural trade during the reference period. Per capita production of food grain has increased from 160kg to 269 kg. (Figure 2.5).

However, recent observations on agriculture, pose doubts on the sustainability of such an impressive performance. *Among the important technical inputs both irrigation and fertilizer use observe a declining trend in the new millennium.*



2.4.2 Animal Husbandry

A supporting farm activity with lower annual fluctuations is animal husbandry. Dholpur belongs to the livestock sub-region of the state dominated by buffalo population instead of small ruminants- cattle combine of the western and north Rajasthan. Buffalo is the predominant livestock in the district and accounts for 47 per cent of the livestock population in 1992. This characteristic of the district gets strengthened during the decade ending 2003 (Table 2.15). As a result its share in livestock has increased its share to 64 per cent in 2003. Cattle population, which accounted for 20 per cent of the total livestock population in 1992, reduces its share to 12 per cent. Between 1992 and 2003 cattle population of the district declines by 31 thousand heads implying a decline of 41 cattle per 100 households. Declining bullock population caused by mechanization of agriculture is the major factor contributing to this decline.

A better way of understanding the impact of such change on the livelihoods is to convert such numbers in terms of the livestock per hundred households. In that case all types of livestock per hundred households, *other than buffalo*, have declined during 1992-2003 (Table 2.15). Thus number of cattle, goat and sheep per 100 households has declined by 41, 34 and 7 while the number of other livestock has declined by 9. Buffalo population (mostly female) has more than kept pace with the growth in the human population and has increased from 187 to 213 per hundred households during the same period. Over all, number of animals per household declined by 65 per 100 households. Converting all animal units to cattle units the estimated decline is only 65 cattle units per hundred households.

Table 2.15: Growths in Livestock Population in Dholpur District

Livestock type	Total (000 No.)			(per 00 HH)		
	1992	2003	Change	1992	2003	Change
Cattle	87	56	-31	80	39	-41
Buffalo	203	303	100	187	213	26
Goat	111	96	-15	102	68	-34
Sheep	15	10	-5	14	7	-7
Other	9	9	0	9	6	-3
Total	425	474	49	392	333	-59

Source: Statistical Abstract, Rajasthan.

Across Dholpur district decline in livestock population, in term of cattle units, is the highest in Rajakhera, the highest livestock intensive block of the state (Table 2.16). Every household suffers a loss of more than two cattle units during the reference period. Dholpur is the only block where the number of livestock units per household has marginally increased. Decline in number of livestock needs to be explored with respect to the carrying capacity of the district and has

significant implication in term of sustainability of rural livelihoods. However, if the decline is due to a decline in now redundant bullock population caused by farm mechanization, the loss would have lower impact on livelihoods.

Table 2.16: Declining Livestock by Blocks

Tehsil	Cattle Units (per 00 HH)		
	1991	2001	Change
Dholpur	239	245	6
Bari	476	401	-75
Baseri	529	423	-106
Rajakhera	591	361	-230
District	398	285	-113

Source: Calculated from table 2.9.

2.5 Non-Farm Activities

Dholpur is an industrially backward district of the state. There are however, signs of change. Share of registered manufacturing sector in the district has increased from 0.5 per cent during triennium ending 1993-94 to 1.3 per cent during triennium ending 2004-05. The share of unregistered manufacturing sector has marginally increased from 4.7 per cent during triennium ending 1993-94 to 5.7 per cent during triennium ending 2004-05. Largest growth has occurred in the construction sector, which increases its share from 6.7 to 11.6 per cent during the reference period (Table 2.1). District statistical Outline reports limited information of industrial activity. The district has 1745 registered small- scale industrial units till 2005-06, employing 8178 persons. These include agricultural based units producing mustard oil and mustard cake; dairy products and units processing masonry stones etc. Mining is an important activity of the district but the activity is largely restricted to non-metal minerals mainly the masonry stones including 'Dholpur/Karouli Stone'.

The district headquarters has 2 glass factories and an ammunition factory. RIICO has developed 2 industrial centers in Dholpur and Bari. Since most of the district is rocky and full of Kachchar, there is abundance of building stone, sandstone and limestone. The excise duty on these items has been the chief source of revenue for the State Government from here. The bajri, found all over the Chambal valley, is also a source for generating employment, trading in this construction material is lucrative for the people. Dholpur's location on a major railway junction also helps these trades flourish. Dholpur and Bari are the main trading centers of the district besides being agricultural marts.

Industry in Dholpur

There are three large- scale industries in the district namely, the High-tech Precision Glass factory, Dholpur; Dholpur Glass Works Ltd., Dholpur and Rajasthan Explosives Limited Dholpur.

The High-tech Precision Glass factory, Dholpur; Dholpur Glass Works Ltd., are public limited concerns. They went in to production in April 1964 with an authorized share capital of Rs.50 and Rs.10 lakh respectively.

Dholpur Glass Works Ltd. was established under a special agreement with erstwhile Dholpur State as a proprietary concern in 1943. Later in the year 1945, it was converted in to a public limited company. In the year 1956, it started manufacturing laboratory and hospital glass-wares, as well as penicillin vials providing employment to the nearly 900 workers.

Raw materials used are sand soda ash, borax, dolomite, felspar, selenium, black powder etc.

During the last century, Dholpur remained industrially backward. It mainly depended on agriculture and only a few cottage industries were in existence. No authentic record is available to give precise information regarding these industries but it seems that talent did exist, which reduced with the passage of time due to lack of patronage on the part of the Government of the time and also owing to waning interest and changing taste of the local population in the context of the better finished goods available in the more advanced industrial towns in the neighbourhood.

Quarrying of building stone was the only activity which provided employment to the comparatively large number of persons. Baroli, Bari, Baseri, Sarmathura were important places where building and millstone were quarried. These quarries have been famous for quality stone and have been worked on for several centuries. The reason for the decline and backwardness of the industries in the district are not far so seek. None of industries were properly organized. They were mostly cotton industries subsisting on the patronage of village communities. People, however, started using imported machine-made goods from the neighboring commercial and industrial centers such as Agra, Mathura, Delhi and Gwalior. The better and cheaper mill-made cloth adversely affected the handloom, spinning, dyeing and weavings. Bangles made of transparent glass lured the women folk to give up their crude glass and lac bangles. Further more, the monopoly of arts and crafts by individuals meant that the skills died with them, in the absence of regular, organized inheritance of such skills.

Moreover, many persons are engaged in weaving, pottery, leather tanning, carpentry, black smithy, rope making etc. In rural areas of the district, Rajasthan Khadi and Village industries board, provide guidance and financial help. There are other agencies too, to encourage such units. Village ghanis, moodha industry, sugar cane-crushers, khas distillation are the other units,

which keep persons employed and provide opportunity to local crafts men and artists to come forward.

2.6 Women and Livelihood

Women are increasingly contributing to the income of the households be it through working in NREGA, SHG activities or participating as entrepreneurs and workers in other economic activities. Micro finance is a major intervention to empower women. Dholpur district has a variety of women's groups. There are large number women and child department groups. As per the Department of Women and Children, Rajasthan, since inception, there are 1564 SHGs in the district with saving of Rs.56.88 lakh and loans worth Rs.1366.5 lakh.406 SHGs were reported to be engaged in income generating activities (26% groups). However, 291 SHGs are defunct also (18.61%). As these are mainly women's groups, there is lot of potential for women gaining from groups.

2.6.1 Women in Economic Activities

Some indication of women in economic activities is available in economic census of 2005. In Dholpur as per the 2005 economic census, there were 41480 workers engaged in non-agricultural establishments. Of these 4046 were women (9.75% of total workers). Further, there were 12926 persons usually working in rural non-agricultural establishments. Of these 2064 were females. There were 11954 hired workers of which 2033 were females. This means that hired female workers constituted 98.50 percent of all female workers. In urban non-agricultural establishments, there were 11706 workers. Of these 808 were females. There were 9471 hired workers of which 755 were females. This means that hired female workers constituted 95.92 percent of all female workers. In case of combined non-agricultural establishments, there were 24632 persons usually working. Of these 2872 were females. There were 21425 hired workers of which 2808 were females. This means that hired female workers constituted 97.77 percent of all female workers.

There are two types of enterprises- own account enterprises and establishments- for which data is available as shown in tables 2.17 and 2.18. In case of own account enterprises (with no hired workers) in Dholpur there were 21061 enterprises that employed 32828 workers (table 2.17). Of these 18.38 percent were females. There were 15018 rural own account enterprises (OAE) that had 25148 workers of which 21.99 percent were females. Among the rural OAEs, 7393 were non-agricultural enterprises that employed 10046 workers. Of these 8.44 percent were female

workers. There were 7625 agricultural OAEs that had 15102 workers of which 31.00 percent were female workers. In urban OAEs, 7680 workers were employed in 6043 enterprises. Of these 6.56 percent were female workers. There were 5573 urban non-agricultural enterprises with 6802 workers. Of these 3.38 percent were females.

Table 2.17: Female Employment in OAEs- 2005

Districts	Enterprises	Workers Total	Female Workers	% Female workers to Total
Agricultural- Rural				
Dholpur	7625	15102	4682	31.00
Non-Agricultural- Rural				
Dholpur	7393	10046	848	8.44
All- Rural				
Dholpur	15018	25148	5530	21.99
Agricultural- Urban				
Dholpur	470	878	274	31.21
Non-Agricultural- Urban				
Dholpur	5573	6802	230	3.38
All- Urban				
Dholpur	6043	7680	504	6.56
Agricultural- Combined				
Dholpur	8095	15980	4956	31.01
Non-Agricultural- Combined				
Dholpur	12966	16848	1078	6.40
Combined- All				
Dholpur	21061	32828	6034	18.38

Source: Economic Census 2005, GoR, July 2008.

In case of establishments, Dholpur had 9099 enterprises that employed 27225 persons with 12.70 percent being females. The non-agricultural establishments were 7975 that had 24632 workers with 10.84 percent being female workers. In agricultural establishments (1124), there were 2593 workers that had 30.43 percent female workers. Now in rural establishments (5410), 15308 workers are employed of which 17.14 percent are females while in case of non-agricultural rural establishments (4357), 12926 workers are engaged of which 14.53 percent are females. There are 1053 rural agricultural establishments that had 2382 workers with 746 female workers. In urban establishments (3689), 11917 workers were engaged. Of these 7.00 percent are females. In case of urban non-agricultural establishments (3618), there were 11706 workers with 6.76 percent female workers. There are 71 urban agricultural establishments that employed 211 workers and 43 females.

The above information shows that in Dholpur women constitute a reasonable proportion of workforce be it own account enterprises or establishments. However, women are mainly in agricultural enterprises, though in rural areas they are significantly involved in non-agricultural enterprises.

Table 2.18: Employment in Establishments- 2005

Districts	Enterprises	Total	Female	% Female
	Workers	Workers	workers	workers of total
Agricultural- Rural				
Dholpur	1053	2382	746	31.32
Non- Agricultural- Rural				
Dholpur	4357	12926	1878	14.53
All- Rural				
Dholpur	5410	15308	2624	17.14
Agricultural- Urban				
Dholpur	71	211	43	20.38
Non-Agricultural- Urban				
Dholpur	3618	11706	791	6.76
All- Urban				
Dholpur	3689	11917	834	7.00
Agricultural- Combined				
Dholpur	1124	2593	789	30.43
Non-Agricultural- Combined				
Dholpur	7975	24632	2669	10.84
All- Combined				
Dholpur	9099	27225	3458	12.70

Source: Economic Census 2005, GoR, July 2008.

2.7 Incomes, Food Security and Poverty

The baseline survey under the DPIP has thrown some light on the status of poor and non-poor households in terms of the consumption pattern including food and calorie intake both for the Below Poverty Line (BPL) households as well the non-BPL households. The sample of BPL households comprised of the households selected under the BPL Census of **1997** of the Government of Rajasthan. Average income of the BPL households in the sample villages was reported to be lower than the non- BPL households in the reference year, which happened to be a drought year. For a normal year the difference between the Average BPL income and the average APL income was larger at 40 per cent (Table 2.19). While there was insignificant difference in the consumption of food grains among the BPL and APL households, consumption of superior foods such as milk, ghee and sugar etc. was found to be lower by 25 to 35 per cent in the BPL households. It is difficult to assess the incidence of nutrition poor among the BPL households in the absence of complete distribution on the income-nutrition scale. However, it is worth mentioning here that a significant part of nutrition of the BPL households was coming from the superior food. Since then number of BPL households in the district has declined from 31 thousand in 1997 to 25.5 thousand in 2002 (Table 2.20 for BPL Census- 2002).

Table 2.19: Per Capita Income (Rs./annum) and Consumption (Kg/capita /month) of BPL Households in Dholpur

	Project Villages		Control Villages	
	APL	BPL	APL	BPL
Grains	14.83	14.16	13.54	12.77
Milk and milk products	29.81	20.50	29.28	21.77
Oil and ghee	0.67	0.46	0.64	0.52
Sugar	1.0	0.87	0.89	0.81
Pulses	0.47	0.39	0.38	0.36
Per Capita Calorie intake/day	3085	2608	2885	2498
Per capita income				
Current year	10504	3830	10943	4253
Normal year	14103	4854	14423	5108

Source: DPIP Baseline Survey; 2002.

Table 2.20: Distribution of BPL Households by Social Group 2002

Block/ Tehsil	Total BPL Households	Share of BPL HHs in the respective total HHs			
		SC	ST	Other	Total
Dholpur	3577	12	49	14	13
Bari	3797	19	14	17	17
Baseri	9770	40	37	30	33
Rajakhera	8375	50	7	53	53
District	25519	28	29	27	27

Source: DES, Rajasthan.

Chapter 3

Status of Education

3.0 Introduction

In the areas around falling in Dholpur State, traditional mode of education was being followed in the earlier stages. Later the Education Department was set up in 1863 and education was imparted free. Thereafter, hardly anything was done to expand the educational facilities and in 1900-01, there were only six schools in the state, one was at Dholpur where English was taught in addition to Hindi, Persian and Urdu and one each at Bari, Baseri, Rajakhera, Kolari and Angai. The total average attendance of students in that year was 308 while the number of teachers was 16 and the state spent a total sum of Rs.2523 on them.

A high school at Dholpur and some primary schools elsewhere in the state were opened in 1910. The total number of scholars in the 31 institutions in 1910-11 was 1,773 including 60 girls who were taught arithmetic in addition to sewing, knitting and cooking. High school was affiliated to the Allahabad University for the matriculation examination and the Inspector of Schools acted as the Head Master. Science and Drawing classes were added to it in the year 1915-16.

Later to encourage the students to pursue higher studies, scholarships were granted to those going outside the state for studies, as well as, to those studying in the state. At the time of the merger of the state with the Matsya Union, there were 61 educational institutional in the state. The spread of modern education stayed at a low key for most of the post-independence period in most of Rajasthan and Dholpur was no exception. The initial thrust to vitalise primary education programmes was provided by the *Shiksha Karmi* project, started in the district during the late eighties. The programme had a strong local component in the form of manpower. Evaluation reports of the *Shiksha Karmi* project show significant success in reaching out to children in remote villages. However, overall achievement in terms of the literacy rate was still less than 22 per cent in 1981 and 35 per cent in 1991.

The second push to the improvement of educational status of the district was provided with the launching of *Lok Jumbish* in 1992. Although evaluation studies on *Lok Jumbish* (LJ) have largely lauded the programme, the real success of LJ along with the initial thrust provided by the *Shiksha Karmi* gets reflected in the achievements in literacy in the year 2001. Finally, *Sarv Shiksha Abhiyan* launched in the year 2002 tried to further increase the thrust of the literacy campaign, addressing the hitherto weaknesses in the earlier programmes.

The success of educational programmes as reflected in the current educational profile of the district is discussed here. In the process, issues related to strengthening educational programmes and identifying supply side gaps- both quantitative and qualitative- for sustaining development in education sector have been put forth.

3.1 Status of Literacy

3.1.1 Literacy

Literacy rate in Dholpur was 22 per cent with a dismal 8.3 per cent for the female population of the district as against 32.8 per cent for the male population. Literacy rates improved significantly both for male (50.5%) and female (15.3%) population but were far short of achievements elsewhere. The major thrust in the improvement in literacy occurred during the nineties as reflected in the literacy outcomes from the 2001 census. Overall literacy rate in 2001 was 60.1 per cent (Table 3.1 and Figure 3.1). The gap between male and female literacy rate has declined from 35.2 per cent in 1991 declined to 23.3 per cent in 2001. Similarly, scheduled caste (SC) and scheduled tribe (ST) population gained more than the non-SC/ST population during the nineties. Literacy rate of the ST population increased from below 30 per cent to 57 per cent as against the non-SC/ST population improving its literacy rate from 36.2 per cent in 1991 to 48.6 per cent in 2001 (Table 3.2 and Figure 3.2). ***This is typically, an example of inclusive growth with respect to both the gender and deprived social groups.***

Table 3.1: Literacy Rate (1981-2001)

Census Year	Overall	Male	Female
1981*	22.0	32.8	8.3
1991	35.1	50.5	15.3
2001	60.1	75.1	41.8

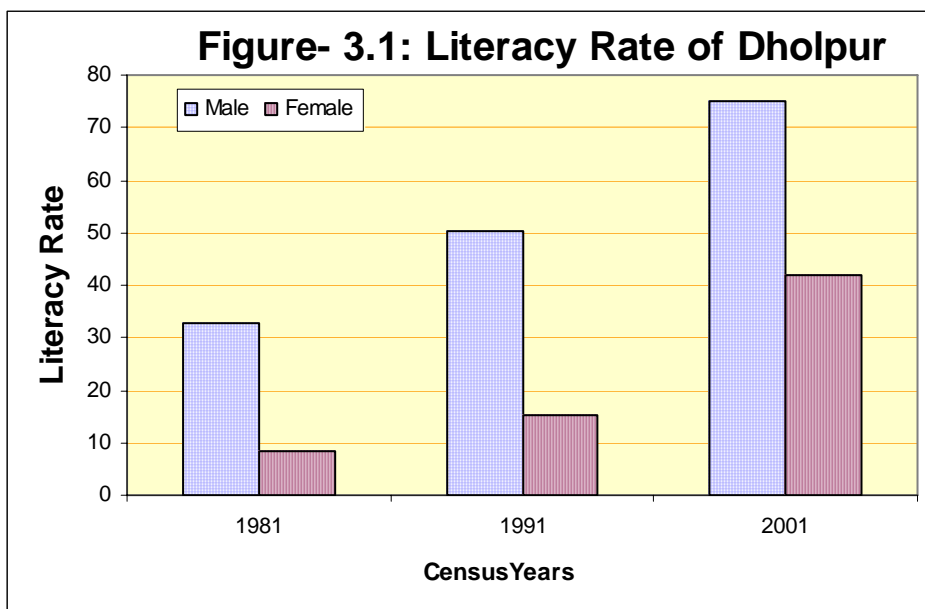
Note: *- General literacy rate.

Source: Population Census, 1981 to 2001.

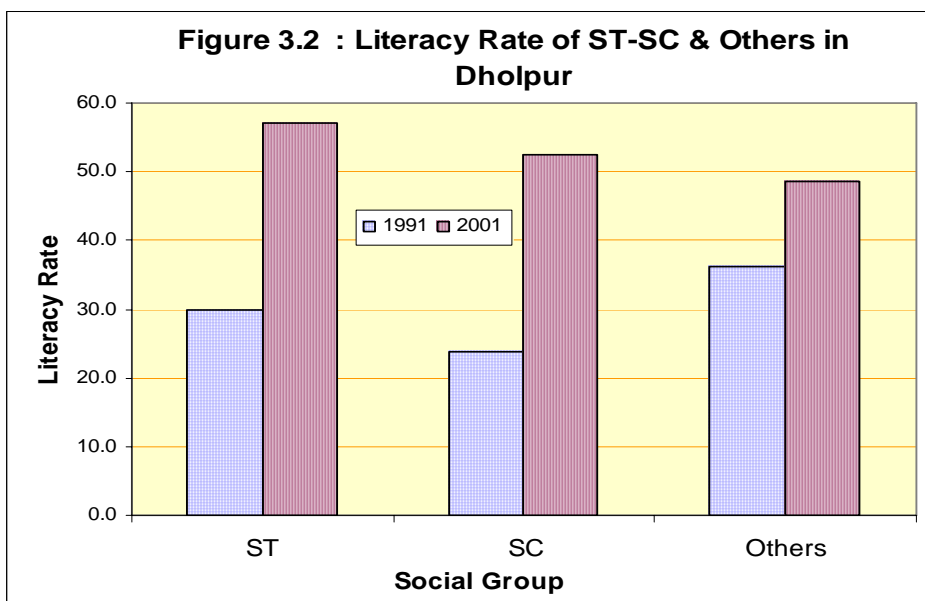
Table: 3.2 Literacy Rates of ST/SC & Others Population

	ST	SC	Others
1991	29.8	23.8	36.2
2001	57.0	52.6	48.6

Source: same as table 3.1.



However, bulk of the illiterates in Dholpur as elsewhere, are the carryovers from the past. Since most of the literacy and educational programmes target only the 6-14 years of age group, one should not expect illiterates aged >15 years in 1991 to get education and be part of the literate population in 2001. A better way to assess the success of educational programmes would be either to estimate the number of literate among the 6-14 years of age group or compare increase in the number of people to the increase in number of literate over the decade 1991-2001.

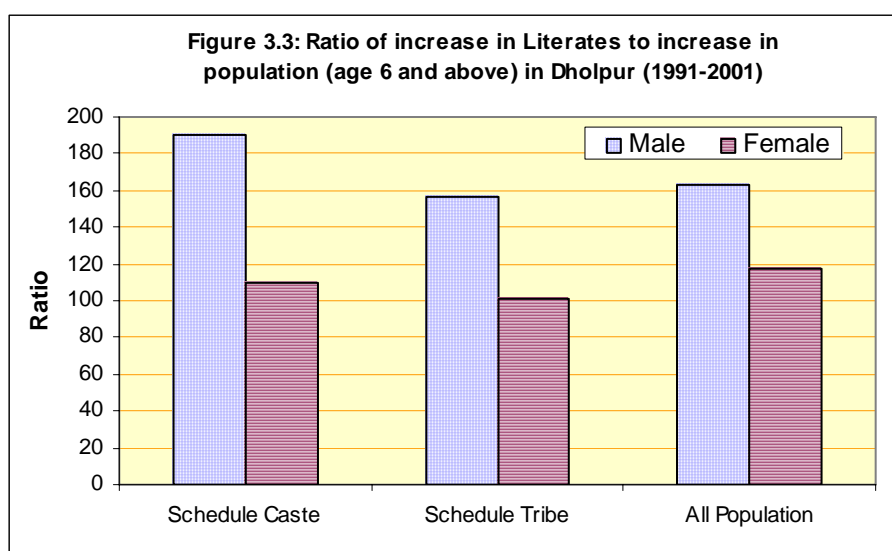


An ‘incremental literates’ to ‘incremental population (above 6) ratio’ (ILIP ratio) at 141 per cent is impressive. However, such gains in literacy are not equitably distributed across social groups, gender and regions within districts. Table 3.3 also shows incremental literacy rates by the social groups. Clearly the SCs have outperformed others- SCs are way above others, at 148 per cent and STs, with a much smaller population in Dholpur, at 130 per cent- while the remaining populations match perform poorer, in spite of an initial higher literacy base. It is argued that second generation of literates have a higher potential to be literate and further grow educationally- this does not seem to have happened in Dholpur (Figure 3.3). What is significant, however, is that the incremental gains of the SC and ST populations are not gender neutral. If one was to compute the ratio of ILIPRs of the male population to the female population, any value in excess of 100 would show gender bias in literacy achievements and vice versa. Such ratio is 134 for all the all population groups but is much larger for the SC population at 170 implying a greater gender bias among the scheduled population groups in Dholpur.

Table 3.3: Ratio of Increase in Literates to Increase in Population (> age 6) by Social Group (1991-2001).

Social Group	Incremental Literate / Incremental Population Ratio (%)		
	Total	Male	Female
Schedule Caste	148	190	110
Schedule Tribe	130	157	101
All Population	141	163	117

Source: calculated.



3.1.2 Regional Variations

Gains in literacy are not uniform across different blocks/*tehsils*. The overall ILIPR varies between 131 in Dholpur tehsil to 154 in Baseri, a backward Tehsil of the district. However, nowhere in Dholpur the ILIPR for girls is higher than the ILIPR of boys. The ratio of boys to girls ILIPR, if 100, indicates gender neutrality in literacy achievements. This ratio varies between 129 in Rajakhera to 146 in Bari and Baseri, the two relatively backwards tehsils of the districts (Table 3.4 and Figure 3.4).

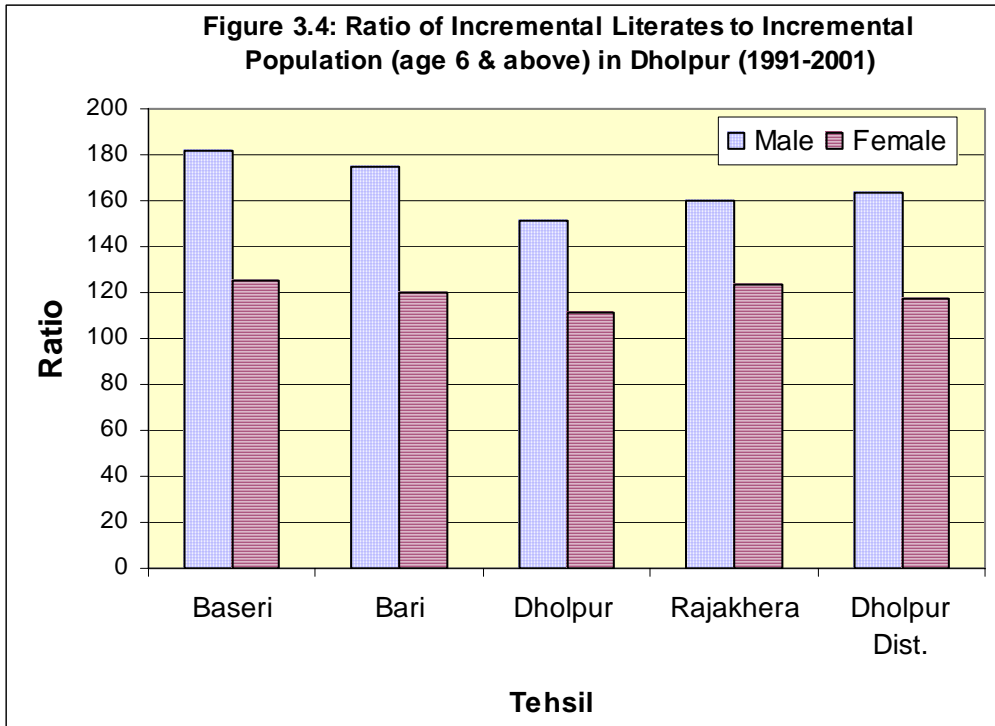
Table 3.4: Regional Variation in Incremental Gains in Literacy (1991-2001)

Tehsil	Incremental Literate to Incremental Population (age 6 and above) Ratio (1991-2001)			Ratio of Male to Female ILIPR
	Total	Male	Female	
	Baseri	154	182	125
Bari	148	175	120	146
Dholpur	131	151	111	136
Rajakhera	143	160	124	129
District	141	163	117	139

Source: Calculated.

3.2 Enrolment and Retention

Literacy rate or the incremental literacy rate as defined above reflects the outcomes of the past efforts, both public and private in achieving the basic or the bare minimal levels of learning. Enrolment provides an assessment of the present by relating the number of boys enrolled in the schools to the total population in the age group 6-14 years. Gross Enrolment Ratio (GER) and the Retention Ratio (RR) are two indicators of the success of primary education programmes. Gross Enrolment Ratio (GER) is defined as the ratio of total enrolment in Grades 1-5 to Population in the age group 6-11 years.



Dholpur observes a healthier trend in enrollment rates, when compared to the state average. The gross enrolment ratio for class 1-5 is estimated at 105 for the entire district. However, there is small variation in GER across different Blocks. For the upper primary classes GER was 112 and for the entire primary schooling the ratio was 106 in 2006, according to the DISE report of the GOR. Net enrolment ratio lies just below 100 in the three categories. Assuming that identical number of students enters class 1 every year, the data shows low decline in enrollment from class 1 and class 5. Total enrolment drops to 42.6 thousand in class 2 and further to 33.2 thousand in class 5 from 45.6 in class 1.

Thereafter it drops sharply to 18 thousand in the class 8. However if one corrects the enrolment data for the growth in the population eligible for enrolment in the subsequent classes the drop would be lower. The difference in the 1-5 and 5-8 rates of retention may be explained in terms of the gender disparity during the later years. The ratio of ILIPR of girls to boys moves around 0.9 during lower primary. However, it declines sharply to 0.51 during the upper primary class. (Figure 3.6 and for details see Appendix Table A3.1). Figure 3.5 to 3.7 provide a graphics based on data provided by the Government of Rajasthan (DISE) for an assessment of the GER. Figure 3.5 shows declining enrollment by blocks. The performance of enrollment judged as by this figure by the rapidly declining slope of the curves after the 5th class.

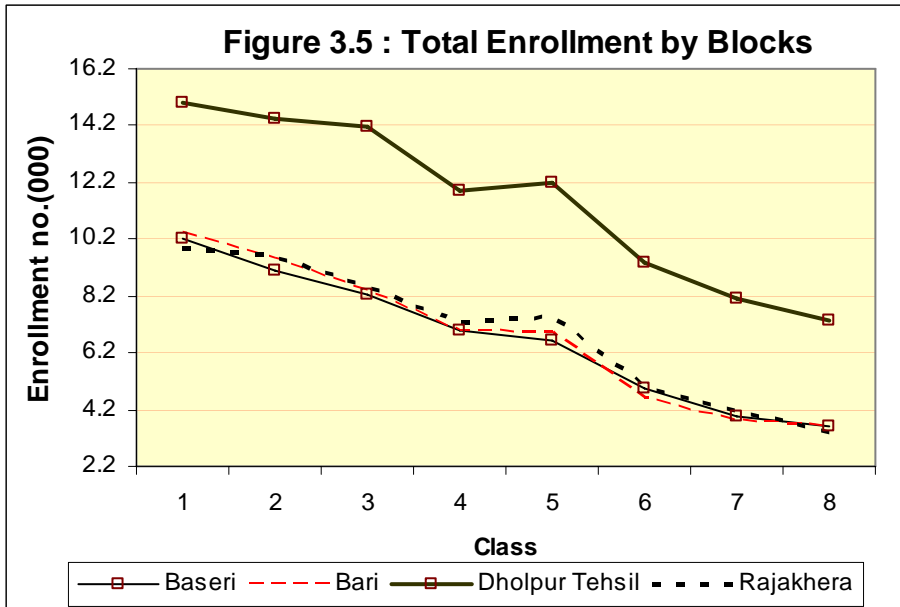


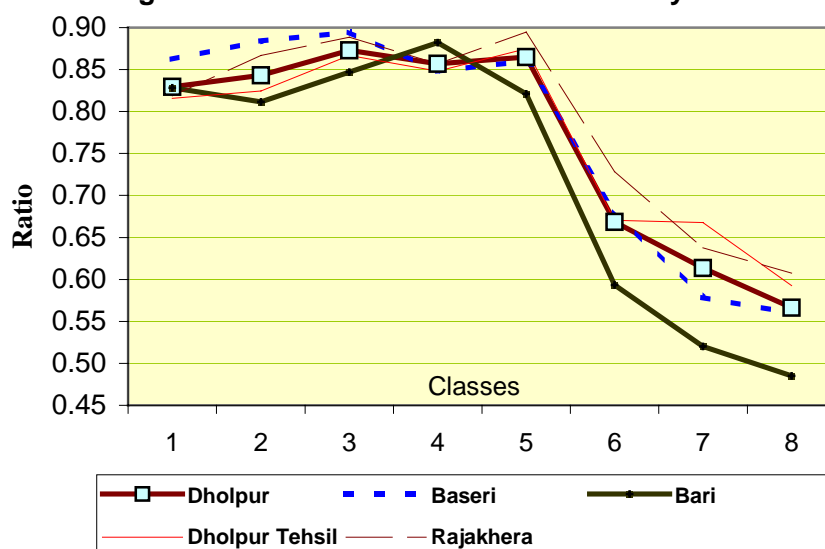
Figure 3.6 shows ratio of girls' enrolment to the boys' enrollment (numbers). It is easy to discern the two trends for lower primary and upper primary students. With a juvenile sex ratio of **875** girls per 1000 boys, one may expect lower enrollment of girls than the boys. The ratio of girls to boys' enrollment therefore starts at 0.83 and improves thereafter to 0.87 in the class 3 but declines to 0.86 in class 5. This implies that all the children, irrespective of gender, are fully enrolled in the lower primary schools. The decline after class 5 is fast to 0.57 in the class 8. Similar situation is observed at the block level. In Baseri this ratio increases from 0.86 in Class 1 to 0.89 in class 3 and 0.86 in Class 5 but declines to 0.56 in class 6 (Figure 3.6). The sharpest decline during the upper primary is in Bari (from 0.82 to 0.49) (Table 3.5).

Table 3.5: Ratios of Girls to Boys Enrollment (2006)

Class	District	Baseri	Bari	Dholpur	Rajakhera
1	0.83	0.86	0.83	0.82	0.82
2	0.84	0.88	0.81	0.82	0.87
3	0.87	0.89	0.85	0.87	0.89
4	0.86	0.85	0.88	0.85	0.86
5	0.86	0.86	0.82	0.87	0.89
6	0.67	0.68	0.59	0.67	0.73
7	0.61	0.58	0.52	0.67	0.64
8	0.57	0.56	0.49	0.59	0.61

Note: These Ratios have been obtained by dividing number of Girls Enrolled in a particular class by the boys enrolled in the class. Under the assumption of gender equality such ratio must approximate one.
Source: District Information System for Education Rajasthan.

Figure 3.6: Enrollment Ratio : Girls to Boys - 2006



Source: DISE, 2006.

While the ST population is increasing faster in Dholpur, the SC population maintains parity with the non-SC/ST population in terms of decadal growth during the nineties. One of the reflections of such gains may be observed in the ratio of SC/ST enrollment to the non- SC/ST population. Ratio of SC/ST population to non- SC/ST population in the 0-6 age-group was 0.33 in 1991. However, the ratio of SC/ST students to non- SC/ST students exceeds this ratio during most of the lower primary classes. This means that more SC/ST students are enrolled in lower primary classes than their share in the relevant age group (Figure 3.7).

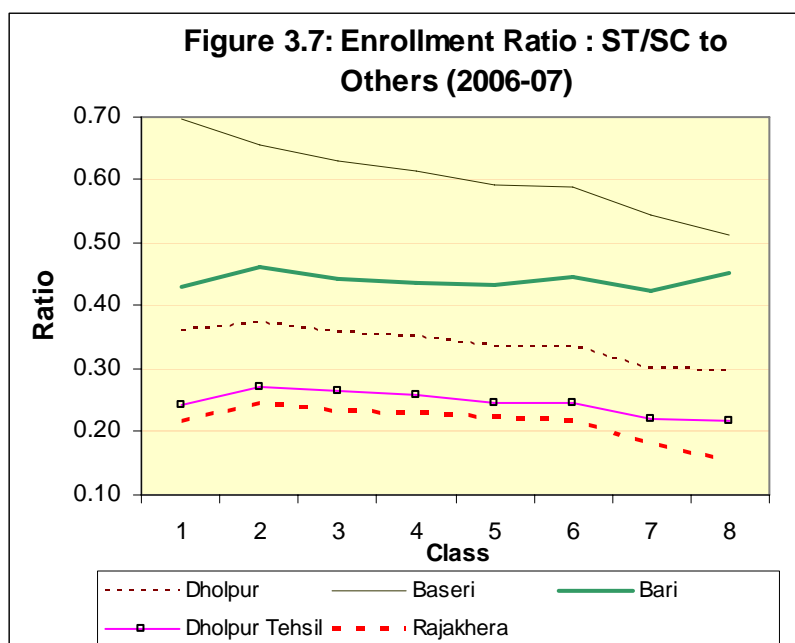
Such phenomenon is observed across all the blocks. Except for Baseri and Rajakhera, where the ratio of SC/ST non-SC/ST students drops significantly in the VIII class other tehsils maintain the class-1 ratio. This implies that the performance of SC/ST students largely matches the performance of the Non-SC/ST students (Table 3.6 and Figure 3.7).

Table 3.6: Ratio of SC/ST Enrollment to non-SC/ST Enrollment (2006-07)

Class	District	Baseri	Bari	Dholpur	Rajakhera
1	0.36	0.70	0.43	0.24	0.22
2	0.37	0.65	0.46	0.27	0.25
3	0.36	0.63	0.44	0.27	0.23
4	0.35	0.61	0.44	0.26	0.23
5	0.34	0.59	0.43	0.25	0.22
6	0.33	0.59	0.45	0.25	0.22
7	0.30	0.54	0.42	0.22	0.18
8	0.30	0.51	0.45	0.22	0.15

Source: Same as Table 3.5.

One of the reasons for the good performance of SC/ST students, both in terms of growing literacy rates as well as enrollment, was the monetary incentives in the form of scholarships given to the children of these social groups besides the proximity of government schools to the locality of backward castes. This came to the focus during the field visit of Rajakhera and Baseri blocks.



3.3 The Demand Side

The demand for education depends upon costs and benefits. The costs could be valued in terms of incomes foregone if children are engaged in household/production activities, as in low-income households (or those who reside in a pre-industrial mode); a high premium is attached to such time. On the other hand demand for education increases if children are compensated in part, e.g. mid-day meals or through scholarships as in the case with SC/ST students. The positive impact of mid-day meals scheme has been widely discussed in literature. The impact of scholarship gets reflected in the performance of the students belonging to socially backward students. The incremental literates to incremental population ratio for SC/ST population during 1990's exceed non- SC/ST population (Table 3.3). Similarly, an enrolment ratio for the SC/ST population exceeds 0.33 even though its population ratio is lower than that.

With agriculture increasingly losing the most important employer status due to stagnant productivity and alternative employment opportunities absent within the blocks, seasonal

migration becomes imperative for ensuring livelihoods. Such a situation requires innovative educational programmes for children belonging to the migrating households. This includes, for example, schools focusing on migrant child labour as a special category, for which extra classes/effort need to be made to bring them at par with the other students. One way to raise attendance is to provide quality education (the supply side), the returns on which (even when discounted) are higher than the current income. On the converse, an indifferent supply side management of educational services would compound the problem- poor attendance in government schools and high attendance in private schools is evidence to the quality factor.

The difference in students' achievements, whether in the secondary and higher secondary examinations or at the primary level, is one indicator of the performance of the government schools. A perception of better quality of education in private schools is reinforced by the in Pratham's ASER (2005) report on the status of education, which shows significant difference in the level of skills acquired in private and the government schools.² Seventy two per cent of the class 5 private school students, as against 59 per cent of the government school students, could read a text of class 2. The difference was even higher (65% against 43%) for class 5 students, who could undertake an arithmetical calculation. One does not expect a change in the differential performance between private and government schools even at the district level, for which similar data are not available. This perception of better education in private schools also gets reflected in the gender differential in the number of students in private and public schools. The report shows that the ratio of boys to girls (1.78) in private schools is significantly larger than the ratio in government schools (1.38) in Rajasthan; given that there is a distinct male preference for quality education.

The Pratham report (2005) shows Dholpur in a rather poor light. Accordingly, 62 per cent of the class 3 to 5 students cannot read class 2 text. Forty two per cent of such students could not solve subtraction problem.

3.4 Supply Side Management

3.4.1 Educational infrastructure:

While government aims to provide educational facilities across all the villages and habitations private schools are beginning to grow in numbers and enrollment particularly at the upper

² ASER, Annual Status of Education Report, <http://www.pratham.org>.

primary level. Of the total 1612 schools in Dholpur district, 386 or 24 percent schools were private schools in 2006. However share of teachers in private schools was 36 percent while the share of students in private schools was 26 percent (Table 3.7). Number of primary government schools in Dholpur was 1226 in 2006. Most of the villages in the district have lower primary schools. Only 61 Villages were without any school. Highest number of villages without any school was observed in Rajakhera at 15 per cent. In Baseri, on the other hand, no village was without a school (Tables 3.8 and 3.9).

Table 3.7: Share of Private Schools, Teachers & Students 2006

Block/ Tehsil	Total Schools	Private		
		Schools	Teachers	Students
Dholpur	585	210 (36)	1231 (39)	33316 (33)
Bari	327	62 (19)	527 (38)	13939 (26)
Baseri	349	65 (19)	381 (30)	11846 (22)
Rajakhera	351	49 (14)	378 (29)	8853 (16)
District	1612	386 (24)	2517 (36)	67954 (26)

Source: DISE 2006.

Table 3.8: Accessibility of Rural Schools 2006

Block/ Tehsil	Total Village Habitations	Within Village School	
		Primary	Upper Primary
Dholpur	234	213 (91)	92 (39)
Bari	171	159 (93)	63 (37)
Baseri	197	200(100)	65 (33)
Rajakhera	203	172 (85)	79 (39)
District	805	744 (92)	299 (37)

Note: Parenthesis indicate that the percentage of primary & upper primary school within the village. Remaining schools in different blocks are prescribed limit of 1 km for primary & 3 km for upper primary schools respectively.

Source: DISE 2006.

Table 3.9: Villages by Availability of Education Facilities in Dholpur Dang (%)

	Primary School			Upper Primary School		
	Within village	Up to 1 km	More than 1 km	Within village	Up to 3 km	More than 3 km
Bari	97.4	2.6	0	31.2	39.0	29.9
Baseri	94.4	3.2	2.4	24.6	46.8	28.6
Dholpur	98.6	1.4	0	45.1	47.9	7.0
Rajakhera	97.4	1.7	0.9	38.5	49.6	12.0
Total	96.7	2.3	1	33.8	46.3	20.0

Source: Bench Mark Survey, 2005, Institute of Development Studies, Jaipur, a report submitted GOR.

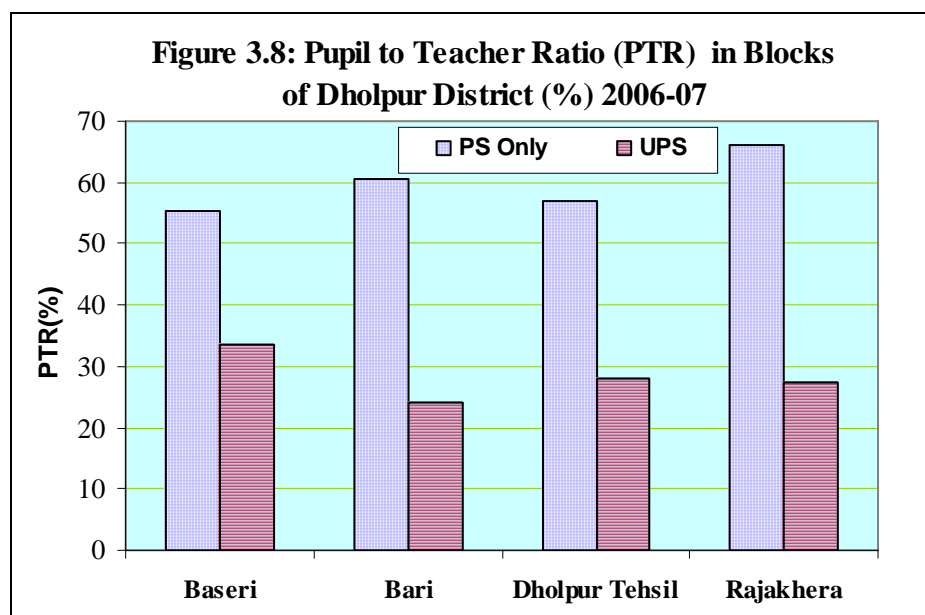
Pupil to Teacher Ratio in lower primary schools needs to be maintained at 40. It varies, however, between 55 in Baseri (Khanpur) to 66 in Rajakhera. This has a direct impact on the quality of education and also an enrolment and literacy. Similarly, pupil to teacher ratio varies between 24 in Bari to 33 in Baseri for the *upper primary* schools in Dholpur (Table 3.10 and Figure 3.8).

Table 3.10: Pupils to Teacher Ratio (PTR) 2006

Blocks	PS Only	UPS
Baseri	55.43	33.55
Bari	60.45	24.12
Dholpur Tehsil	56.83	27.88
Rajakhera	66.09	27.31

Source: Calculated from the data given in DISE Report (2006-07).

Table 3.8 shows supply side facilitating factor for lower and upper primary education. It is expected that these schools would provide sample space for students of different classes, adequate number of teachers to cover all the classes, potable drinking water and clean toilets for students lack of such facilities particular obstructs upper primary girl students. At the lower primary level 42 per cent of the schools have only one teacher. Number of single room schools, however, is low at 6 per cent. Half of the lower primary schools have common toilets and another 31 per cent schools have separate toilets for girls. Sixteen per cent schools do not have the drinking water facility.



The situation improves considerably although still inadequate for the upper primary schools, in which case 54 per cent schools have separate toilets for girls. Ninety two percent of the upper primary schools have drinking water facility. Surprisingly, even at the upper primary level 1 per cent schools are one- teacher schools and one percent school have a single classroom.

Across blocks, number of schools having a toilet facility varies between 82 per cent in Bari to 98 per cent in Baseri. Availability of potable drinking water varies between 84 and 89 per cent. This is very high when compared to other areas of the state (Tables 3.11 and 3.12).

Table 3.11: Percentages of Schools Having: Facilitating Factors 2006-07

School Category	PS Only	UPS	Total
Single Classroom	61 (6)	4 (1)	65 (5)
Single Teacher	419 (42)	3 (1)	422 (31)
Drinking Water	843 (84)	326 (92)	1169 (86)
Separate Girl's Toilets	309 (31)	193 (54)	502 (37)
Total common Toilets	502 (50)	123 (35)	625 (46)
Total Govt. Schools	1004	355	1359
Share of Private Enrolment	4	41	26

Note: Figures in parenthesis indicate the percentage of schools having facilitating factors.

Source: District Information System for Education, Rajasthan.

Table 3.12: Primary School in Rural Dholpur with Amenities 2006-07

Block/Tehsil	Total Primary Schools	Schools with		Per cent of Schools		
		Drinking Water	Toilets	Pucca Buildings	Drinking Water Toilets	
Dholpur	239	210	214	99	88	90
Bari	184	155	151	98	84	82
Baseri	200	178	195	100	89	98
Rajakhera	196	173	166	95	88	85
Dholpur (Rural)	819	716	726	99	87	89

Source: DES, Rajasthan.

Appendix Table A3.1: Total Enrollment by Blocks (000)

Class	District	Baseri	Bari	Dholpur	Rajakhera
1	45.46	10.2	10.4	15.0	9.9
2	42.6	9.1	9.5	14.5	9.6
3	39.4	8.3	8.4	14.2	8.5
4	33.2	7.0	7.0	11.9	7.3
5	33.2	6.6	6.9	12.2	7.5
6	23.9	4.9	4.6	9.4	5.0
7	20.0	4.0	3.8	8.1	4.1
8	18.0	3.6	3.6	7.4	3.4

Source: DES, Rajasthan.

Health and Nutrition

4.0 Introduction

Capacity to live a long, healthy and fulfilling life is an important aspect of human development. Several proximate factors as status of public health and hygiene, maternal and child health, accessibility to health care services- public and private in terms of costs and availability and regional endemicity of disease if any. An assessment of the health status requires information in a health outcome such as life expectancy, malnutrition among mother and child as well as access to health delivery system- public and private. Limited information is available however, on most of these aspects of the health status at the district level on a continuous basis. We shall therefore focus on public health delivery and the prevailing pattern of morbidity in the districts.

4.1 Public Health Structure

4.1.0 Allopathic Institutions

Modern Allopathic medical services rapidly expanded after independence in and around Dholpur, which was cut out of the Bharatpur district 1992. Table 4.1 shows public health infrastructure in Dholpur. At the district level, there were 184 health centers, comprising of a district hospital at Dholpur, five Community Health Centers, two at Baseri and one each at Dholpur, Bari and Rajakhera; 21 primary Health Centers and 153 health sub-centers. Community Health Centers or Hospitals with specialists are well distributed across various blocks. A better way of analyzing accessibility of health services is in terms of provisions defined by the World Health Organization and approved by the Government of India. A Community Health Center is to be provided for one lakh population as per recommended of WHO accepted by the Government. Primary Health Centers need to be provided, per 20000 populations in a tribal area and per 30000 populations in non-tribal areas (Table 4.2). Ratio of PHCs per CHs varies between 5 for tribal and 3 for non-tribal areas. Similarly, as per WHO norm, for every PHC

there should be 6 sub- centers serving a population of 3000 in tribal, hilly or back and area and 5000 in non tribal areas. There is, however, no water tight pattern of the utilization of health services on the lines of NHS of the U.K. Therefore, people living in one block can always avail services available in another block due to proximity or better health delivery. This is typically the case with Dholpur as discussed below. However, from an overall perspective it is useful to assess if these is adequate supply of health delivery institution/persons. Number of PHCs across tehsils in the district varies between *three* each in Bari and Baseri to *six* in Rajakhera and *nine* in Dholpur. Accordingly, number PHCs of per CHC varies between 1.5 in Baseri to 6 in Rajakhera. The distribution of health sub-centers is, however, more even. This number varies between 31 in Bari to 48 in Dholpur. Number of SCs per PHC varies between 5.3 in Dholpur to 12 in Baseri.

Table 4.1: Health Institutional Structure of the Health Care System: 2006

Block/Tehsil	Total Health Institutions	PHCs	Community Health Center	Sub-Center
Dholpur	63	9 (14)	2 (3)	48 (76)
Bari	35	3 (9)	1 (3)	31 (89)
Baseri	40	3 (8)	2 (5)	35 (88)
Rajakhera	46	6 (13)	1 (2)	39 (85)
District	184	21 (11)	6 (03)	153 (83)

Note: Parentheses indicate the percentage of PHCs, CHC & Sub- center.

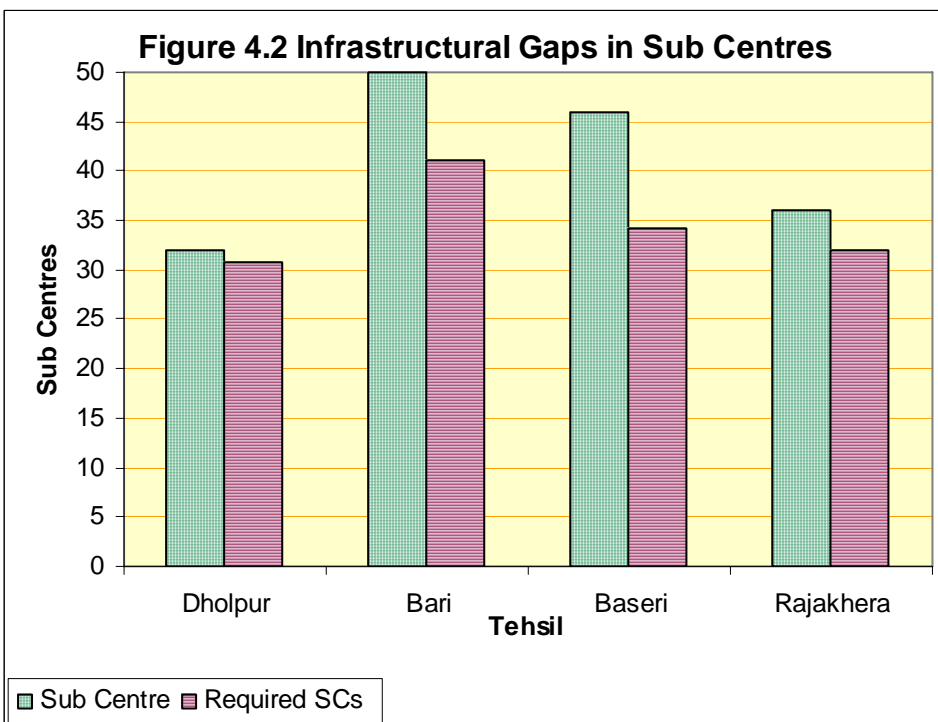
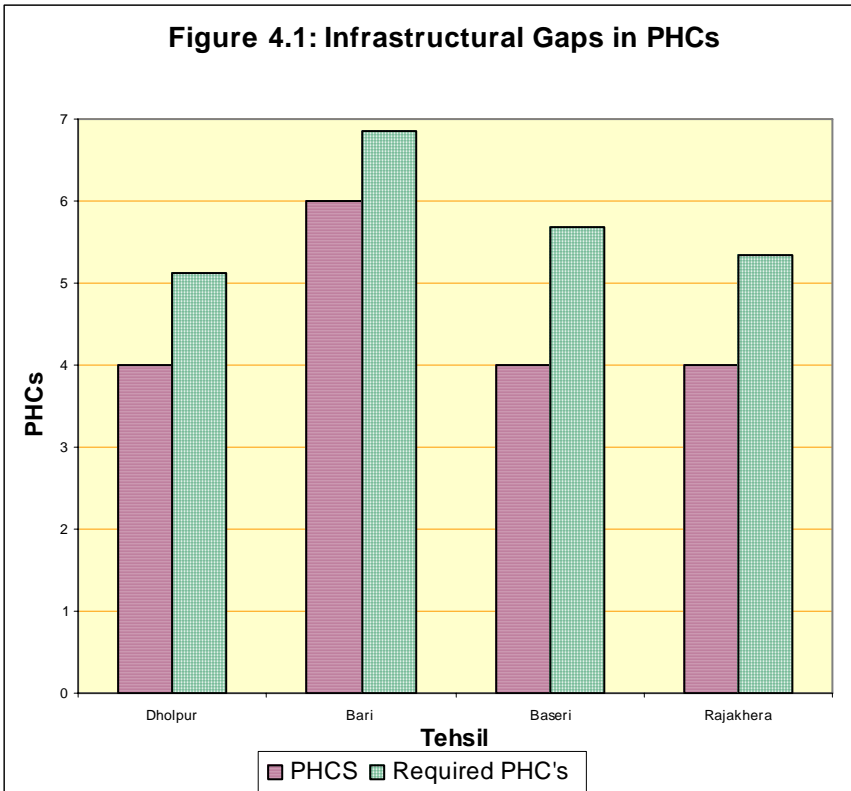
Source: DES, Rajasthan.

Table 4.2: GOI/WHO Norms for Health Delivery Institutions

Item	Norm
One Trained Dai.	For each village
One Trained Village Health Guide	For each village per 1000 population
One SC	For 5000 population in plain area and for 3000 population in tribal, hilly and backward area
One PHC	For 30000 population in plain area and for 20000 population in tribal, hilly and backward area
One Community Health Institution	For every 1- 1.20 lakh population, serving as a referral institution for 4 PHCs

4.1.1 Infrastructure Gaps

Table 4.1 provides estimates on infrastructure gaps as per WHO norms. As per data provided by CPO (Dholpur), every block in the district is short of PHC. The gap varies between one in Dholpur, Bari and Rajakhera and two in Baseri as per WHO norms. On the other hand it has more sub-centers than the required number (Figures 4.1 and 4.2). Provision of health centers appears to be satisfactory in this context.



4.1.2 Health Personnel: Provisioning and Availability

Table 4.3 shows regional distribution of health personnel in Dholpur. Of the 41 sanctioned posts of medical officers (doctors), more than half are stationed at Dholpur district hospital, CHC and

the PHCs in the block. Remaining posts are distributed across the remaining three blocks. As a result, availability of the medical officers at the district headquarter is substantially higher than elsewhere. Similar is the situation with respect to nurses. However, a better way of assessing the distribution would be the population covered per doctor or per nurse. Population covered by a medical officer in the district varies between 18 thousand in Dholpur to and 46 thousand in Bari and Baseri. Distribution of nurses, however, is more uniform with a nurse per 11 thousand of population in Dholpur to 16 thousand in Bari and Baseri.

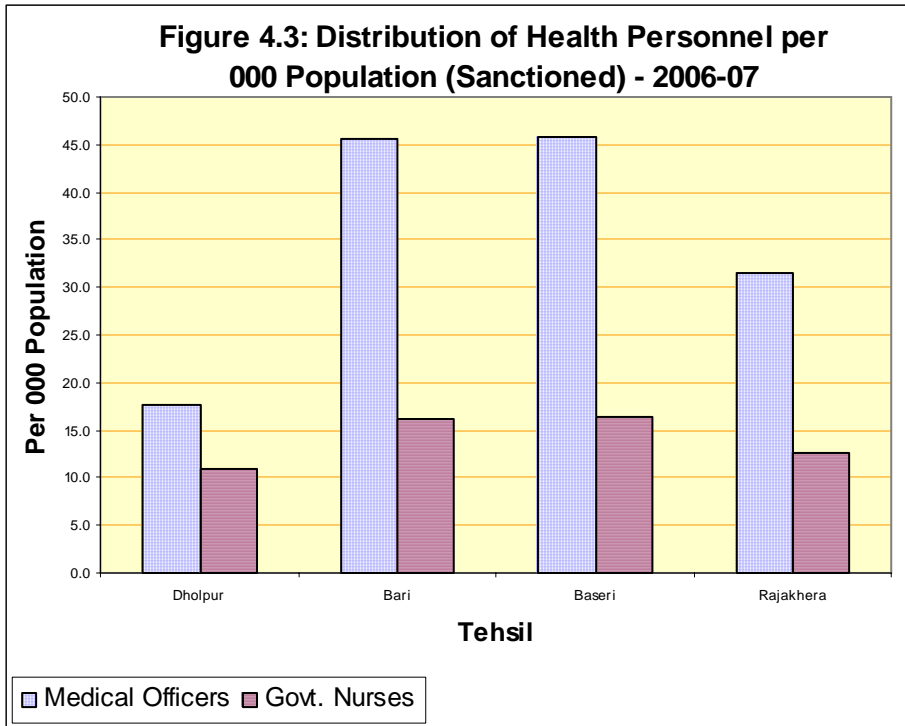
Table 4.3: Distribution of Health Personnel in Dholpur (2006-07)

Block/Tehsil	Medical Officers	Govt. Nurses	Per 000 population	
			Medical Officers	Govt. Nurses
Dholpur	23	37	67	107
Bari	5	14	33	93
Baseri	5	14	25	69
Rajakhera	8	20	73	182

Source: DES, Rajasthan.

An issue constantly articulated with respect to poor health care services in Dholpur is vacant posts of doctors in the district. Staff adequacy on paper does not translate into functional staff availability in this area; it is not uncommon to find that some staff members are away from the place of work on account of leave or another reason. Places like Bari and Baseri are not an attractive posting, and staff invariably seeks a transfer for a number of reasons. One, such places are not very attractive from the point of view of social and economic infrastructure; there is often no *proper* schooling facility for children and there are few facilities for families. There is also an apprehension that if once anyone joins here, s/he would not be easy to get transferred out.

Performance of a referral hospital system is evaluated in terms of Bed utilization assessed in terms of the two indicators; viz., bed occupancy rate and bed turn over rate. Bed turn over rate is defined as the number of times a 'health facility bed' on the average, changes occupants during a given period of time. Bed occupancy rate on the other hand is a calculation used to show the actual utilization of an in patient health facility for a given period of time say, one years. BOR is expressed as a ratio of total in patient service days in a year to the available bed days.



4.1.3 Utilization of Public Health Services

Referral health care systems are normally designed to operate with a proportion of slack in order to accommodate exceptional situations or emergency. The standard ratios for the two indicators therefore are 25 per cent lower than the maximum. Such indicators, however, need to be calculated for each referral hospital in the district every year. This information is not available for Dholpur. Therefore conclusions are based on the basis of a ratio of in-patients per bed. The number of patients per bed varies between 7 in Rajakhera to 145 in Dholpur (Table 4.4). Estimated bed occupancy of 145 indicates the pressure under which the district centers are operating. On the other hand, occupancy of 7 to 17 in other blocks of the district clearly indicates under utilization of health services. This is far below the expected number of patients that the system can serve in a year. Medical studies³ conducted on bed occupancy indicate that the Bed Occupancy Rate varies between 3 to 5 days for different ailments. Assuming an average of 4 days per patient, 90 to 100 patients can use the same bed in a year. Bed occupancy rate of 19 or 22 is far too low to justify optimal use of resources.

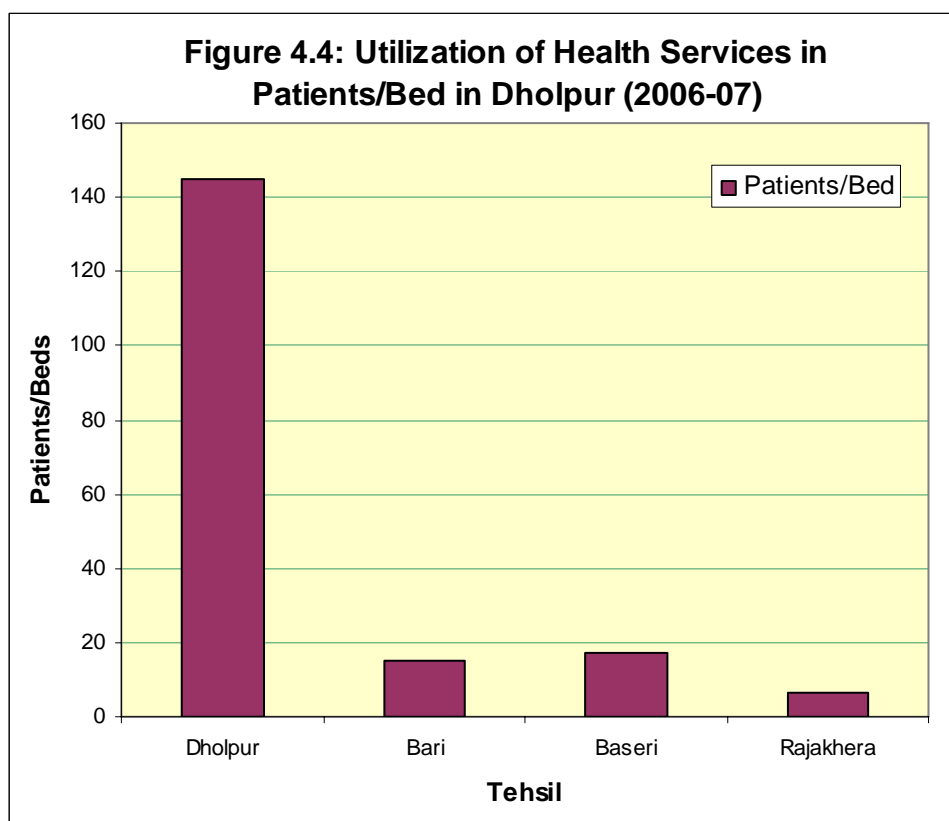
³ See Ravi Kiran *et al* (2004) "Utilization of Beds in a Territory Hospital" *Journal of Association of Hospital Administrators*, Vol.. XV, No.2.

Table 4.4: Utilization of Health Services: Patients/Bed by Blocks (2006-07)

Block/ Tehsil	Total Beds	Total Patient		Patients/ bed
		In Patients	Out Patients	
Dholpur	314	45433	143788	145
Bari	88	1314	21617	15
Baseri	48	817	19342	17
Rajakhera	56	373	18644	7

Source: Same as Table 4.3.

Reasons for low occupancy vary between absence of medical doctors or other medical personnel leading to collapse of in-patient services partially, if not fully, or dissatisfaction with the services. Field visits to Basedi and Rajakheda indicate large number of vacant position of medical doctors. The problems of in-patients get compounded if a significantly number of doctors' positions is vacant in a low-density block. This is typically the case non-Dholpur blocks of the district resulting in low occupancy (Figure 4.4).



Field Observations

Buildings of the health centers are dilapidated and not used. (ANM centers, Nathanpur, Tajpur (Baserdi Block) Machbaria (Rajakbera).

People go to Dholpur for Institutional deliveries because of sub-standard health delivery in rural areas – both with respect to health infrastructure and the manpower.

Not many health personnel are willing to stay in the rural health centers for institutional deliveries.

People in the villages visited by the study team appear to have greater faith in the medically untrained RMP doctor staying in the villages. Such doctor is approachable 24 hours and therefore is more reliable in emergency.

Baseline Survey conducted under the District Poverty Initiative (DPIP) Project of the Government of Rajasthan observes that 72 per cent of the Above Poverty Line (APL) households as against 64 per cent Below Poverty Line (BPL) households in Dholpur go to the doctors at the Primary Health Center (PHC) in the project villages. More BPL households (70 per cent) avail services of PHC doctors than APL households in the control villages (64 per cent). On an average 17 per cent of the households in Dholpur consult private medical practitioners. Main reason for not consulting a PHC doctor was the lack of empathy for the patient among such doctors. More than 90 per cent of the households going to private practitioners cite it as the main reason. People's assessment of the government health services was found to be satisfactory in 63 per cent of the villages surveyed for the baseline information. However, Anganwari services were reported to be satisfactory only in 17 per cent of the project villages and 62 per cent of the control villages.

4.2 Private Health Services

Besides, public sector health infrastructure a number of private hospitals have come up in urban areas. However, information on these doctor or dispensaries is not available. A major advantage of these private health centers is that they provide medicines also which is in perpetual shortage in sub-centers.

Table 4.5: Utilization of Alternative Systems of Medicines

Years	Outdoor Patient	Other Systems
1997-98	452345	709235
1998-99	532840	728986
1999-00	523685	904805
2000-01	296984	709517
2001-02	272214	1007364
2002-03	292213	948917
2003-04	264378	832419
2004-05	296799	741968

Source: District Statistical Outline: 2002, 2006.

4.3 Prevailing Health Problems

4.3.1 Maternal and Child Health

Infant mortality Rate in Dholpur is estimated by the DLHS (2002-04) at 70. This is the 12th highest in IMR for different districts of the state. The main causes of infant mortality in Dholpur district, as elsewhere in the state, are low birth weight, anaemia, pneumonia, dehydration and diarrhoea. Each of these has its origin either in early marriage and poor postnatal care (poverty, illiteracy, lack of extension services), or low quality drinking water supply- all lying in the realm of prevention; pointers towards solutions are thus clear. The mean age of marriage for girls at 17.4 years compares well with the other districts of the state. (DLHS 2002-04).

The Health Department in the district reports that immunisation of children against DPT, polio and measles is conducted from time to time. Vitamin A doses are also given. Reported cases of immunization in the district are low (Table 4.6). The field situation, however, depicts a somewhat different picture, particularly in Baseri block visited by the research team. There were some hamlets (and households) in remote and inaccessible *Dang* areas, in which children- of mainly low income households with uneducated mothers- were not inoculated (mother's literacy was found to be central to achieving higher inoculation here (as elsewhere). Common sense suggests as well, that the vital statistics would be better than if all children had effectively been reached.

Table 4.6: Reported Immunization Coverage (2006-07)

Blocks	Population (2001)		RI Coverage (Number)			
	Total	0-6 Years	BCG	OPV3	DPT3	Msls
Dholpur	406185	61931	12436	10643	10643	10154
Bari	227731	45706	7166	6877	6877	5708
Baseri	228505	46117	7200	6407	6407	5353
Rajakhera	251266	30232	7215	6938	6938	8498
Dholpur Dist.	1113687	183986	34017	30865	30865	29713

Note: Estimated Birth Rate in Dholpur is 29.

Source: District Statistical Outline: 2002, 2006.

Field observations confirm that infant mortality rates are higher among children whose mothers did not receive any of the recommended types of maternity-related medical care or scientific advice, compared to children whose mothers received one or more types of maternity-related medical care/advice. As is reflected in the high IMR/CMR, survival rates of the children up to five years age is alarming. It was pointed out that positive results could be achieved if efforts are made to reach out to mothers- for antenatal care, delivery care, and postnatal care, so as to improve the health of mothers and hence the chances of survival of their children- at the (reproductive) age extremes (<20 years and >30 years) i.e. first pregnancy and fourth (or more). Janani Suraksh Yojana (JSY) is a successful initiative in this direction. The role of NGOs such as

JSY Helpline needs to be emphasised for the success of JSY. A high growth in institutional delivery is reported after the introduction of the scheme (Appendix A4.1).

4.3.2 Drinking Water and Health

Water-borne diseases like acute diarrhoea are responsible for higher morbidity and mortality among all age- groups in the population, especially during rainy season. Eating and food storage habits also matter: many households do not cover their food, and also eat leftover (unpreserved) food in their next meal; unprotected food, left for long periods, is susceptible to bacterial and fly-borne infections.

Dholpur seems to have faltered on drinking water targets. Of the total 1801 habitations less than a quarter of the habitations are fully covered with the drinking water supply in the district. Another 69 per cent of the habitations are partially covered (Table 4.7). Share of fully covered blocks, however, varies between 17 per cent in Baseri to 32 per cent in Rajakhera. Only 9 per cent of the habitations in the district are not covered by the drinking water supply.

Table 4.7: Status of Drinking Water Supply (2006-07)

Block	Total Habitations	Percentage of Habitation Coverage			
		Fully Covered	Partly Covered	Not Covered	
Dholpur	488	69 (14)	414 (85)	5 (1)	
Bari	462	133 (29)	320 (69)	9 (2)	
Baseri	459	79 (17)	368 (80))	12 (3)	
Rajakhera	392	127 (32)	128 (33)	137 (35)	
District	1801	408 (22)	1230 (69)	163 (9)	

Note: These do not match a number of habitations given in the table on accessibility of rural schools.

Source: District Statistical Outline: 2002, 2006.

Poor sanitation (e.g. improper disposal of human and animal excreta, or living in the same shelter along with cattle) contributes to unhygienic environmental conditions and hence, water-borne diseases, skin problems and malaria. The problem is perpetuated by low literacy coupled with unscientific cultural beliefs. Lack of access to medical facilities further aggravates health problems. The status of sanitary latrines in the district is however poor. Only 4.3 per cent of the households in Dholpur had sanitary latrines in the house before the total Sanitation campaign initiated in the district. The number varies between 0.5 per cent in baseri to 7.3 per cent in Rajakhera. No significant progress is achieved under the TSC till October 2007 (Table 4.8).

Table 4.8: Status of Households Sanitary Latrine in the District

Block	Percentage of Households Having Latrine Before TSC*	Construction as New Latrine as Percentage of TSC Target (Oct. 2007)	Total No. HHs
Dholpur	5.96	0	43565
Bari	1.92	0.24	32410
Baseri	0.50	0.04	25701
Rajakhera	7.28	0.03	34530
District	4.30	0.07	136206

Note: Total Sanitation Campaign of the GoI under which monetary help is provided to the households for construction of latrine.

Source: District Statistical Outline: 2002, 2006.

4.3.3 Other Diseases

Beyond water and sanitation-related problems, local populations- adults and children alike-also suffer disproportionately from tuberculosis, anaemia and nutritional deficiency diseases. Women suffer from gynaecological and anaemia-related problems. Table 4.9 contains data on outdoor treatments made in different outlets of the government hospitals and dispensaries. For one, there is huge fluctuation in the incidence of ailment events from one year to another; strangely, the category 'others' had almost 290 thousand cases in 2000-01, but a small fraction of this number (or even zero) in some years. A data recording error here cannot be ruled out. ENT, eye problems, diarrhoea and malaria are significantly present- an observation made in the field visits as well. Lastly, there is a general reduction in the incidence of reported cases in almost all the diseases: reporting problem, improvement in health status or increased problems of access? This aspect needs investigation.

Table 4.9: Number of Registered Patients by Type of Diseases in Dholpur

Type of Disease	1998-99	1999-00	2000-01	2001-02	2002-03
T.B	2710	2695	988	1422	1426
ENT	878	898	814	8497	9473
Eye	2285	2165	1012	14116	16677
Communicable	2710	1056	-	12	15
Others	-	-	2187	85439	89343
Gastritis	27481	28395	1201	2288	17786
Diabetes	3163	3255	1328	342	4090
Seasonal Fever	76543	85233	477735	24697	46980
Others	416970	446685	-	12541	49747

Source: CMO, Dholpur.

4.4 The Integrated Child Development Scheme (ICDS)

ICDS is an important state sponsored programme meant for strengthening nutrition among 0-6 years age group children and pregnant women/lactating mothers. It is a major effort to not only strengthen childhood it is also an important anti-poverty programme. Central to this programme are *anganwaris*, nutrition supplements and the *anganwari* worker.

Table 4.10 presents data on a *panchayat*-specific distribution of *anganwaris* as on March 2008. This table suggests that there are 857 *anganwaris* and all operational. Further, the number of CDPO/ACDPO sanctioned in the district were 6 as on March 2008 and 3 were in position. It is Bari, Baseri and Rajkakhhera that all sanctioned CDPO/ACDPO positions are not in position. As regards the number of supervisors, the sanctioned number stood at 38 while 30 were in position.

Table 4.10: Anganwaris and Staff

District/Block	No. of Anganwaris			Reporting	No. of CDPO/ACDPO		No. of Supervisors	
	Sanctioned	Operational	% operational		Sanctioned	In Position	Sanctioned	In Position
Bari	137	137	100	137	1	0	6	5
Baseri	211	211	100	211	1	0	9	6
Dholpur City	110	110	100	110	1	1	4	3
Dholpur	210	210	100	210	1	1	9	8
Rajakhera	189	189	100	189	2	1	10	8
District Total	857	857	100	857	6	3	38	30

Table 4.11 presents data on the nutritional status of children reporting to the ICDS centres in 2008. To begin with, it must be stated that nutrition provided at ICDS centres is usually availed by relatively poorer sections of the society and hence should not be taken as a representative of the district. Grade 1 malnutrition stands at 34.86 percent in the district and varies between 32.82 percent in Rajakhera and 37.11 percent in Baseri. Grade 2 malnutrition percentage ranges between a low of 16.88 percent in Dholpur and a high of 24.30 percent in Bari. There are children in Grade III & IV level also. Overall, less than 50 percent of children are in normal nutrition status situation.

Table 4.11: Classification of Nutritional Status for 0-5 year Children

	Normal	%	Grade-I	%	Grade_II	%	Grade-III& IV	%	Total No of Children Weighted
	Bari	8994	41.79	7158	33.26	5230	24.30	139	0.65
Baseri	12511	43.64	10640	37.11	5470	19.08	50	0.17	28671
Dholpur City	7197	44.18	5948	36.51	3136	19.25	9	0.06	16290
Dholpur	13260	47.05	9784	34.71	4758	16.88	382	1.36	28184
Rajakhera	11779	45.14	8565	32.82	5745	22.02	4	0.02	26093
District Total	53741	44.50	42095	34.86	24339	20.16	584	0.48	120759

Appendix Table A4.1

Janani Suraksha Yojana Helpline in Dholpur

“Whose faces are behind the numbers? What were their stories? What were their dreams? They left behind children and families. They also left behind clues as to why their lives ended so early”

Every minute a woman dies as a result of pregnancy or childbirth. The loss per annum of 500,000 women⁴ is mind-boggling. A maternal death is the outcome of a chain of events and disadvantages throughout a woman's life. Every time a woman in the third world becomes pregnant, her risk of dying is 200 times higher than the risk run by a woman in the developed world. The world has come a long way from the times when a woman surviving childbirth was considered to be blessed with a 'second life' to the present when, as the WHO theme for the year 2005 states, "every mother counts"! Maternal mortality figures have plummeted from thousands till a century ago to single digit values in some parts of the modern world. Unfortunately there is a big divide between the developed and developing world on this score of maternal mortality.

Rajasthan State Profile

Rajasthan, with a geographical area of 3.42 lakh square kilometers is the largest state, constituting 10.43 per cent of the total area of the country. The Population of the State is 56.5 million according to the 2001 census, which is 5.50 per cent of the national population. The ratio of the rural and urban population is 77:23. The growth rate of population in the state (28.33%) was higher than that of the country (21.34%). Population density was 165 as compared to 324 for India according to census 2001.

Rajasthan ranks second in the country in Maternal Mortality where JSY has not been particularly very effective in the following years. Some of the reasons for this are poor infrastructure, low literacy, and lack of trained manpower at the grass root level, customs & traditions and diverse social & geographical conditions.

Dholpur District Profile

Dholpur is a newly formed district of Rajasthan, carved out of Bharatpur district. It is bound on the north-east by Agra district of Uttar Pradesh, on the south by Morena district of Madhya Pradesh, on the west by Sawai Madhopur district and on the north by Bharatpur district of Rajasthan. It covers 0.89 per cent area (3034 sq.kms) of the State.

A large proportion of maternal and peri-natal deaths result from poorly managed deliveries, and many such deaths could be avoided if suitable referrals were made on time or the deliveries were institutional. Janani Suraksha Yojna (JSY) under the overall umbrella of National Rural Health Mission (NRHM) is being proposed by way of modifying the existing National Maternity Benefit Scheme (NMBS). JSY integrates the cash assistance with antenatal care during the pregnancy period, institutional care during delivery and immediate post-partum period in a health center by establishing a system of coordinated care by field level health worker.

The safe motherhood programme Janani Suraksha Yojna Helpline aims to bring about a reduction in maternal mortality through an improvement in the quality of maternal and child health services. More specifically, it aims to: identify substandard care factors for poor maternal health indicators; strengthen link between sub centers, Primary and Community health centers, district hospital and district health office; increase in institutional deliveries and strengthening JSY scheme in Bari block.

⁴ WHO, UNICEF, UNFPA. Maternal Mortality in 2000: Estimates Developed by WHO, UNICEF, UNFPA. Geneva: WHO 2003

Dholpur Indicators

1. Population Data, 2001 Census

Population (in lakh)	9.8
Percentage of scheduled caste/scheduled tribe	25
Decadal population growth rate (1991-2001)	31.19

2. Marriages*

Mean age at marriage for girls	16.8
Percentage of girls married at age less than 18	50.7

3. Fertility

Mean children ever born to women aged 40-44	6.11
Total fertility rate (TFR) (State)	3.96
Birth order	
1	18.7
2	15.3
3	17.2
4+	48.8

4. Delivery Characteristic

Institutional delivery	38.5
Government health facility	23.2
Private health facility	15.2
Safe delivery	42.6

Vision

To decrease the overall Maternal Mortality Ratio and Infant Mortality Rate in pregnant women.

The Overall Goal

The overall goal of this project is to reduce the maternal and infant mortality by undertaking the issue of three delays in seeking health care at the level of deciding to seek health care, in reaching the health facility and in receiving treatment at the health facility by establishing the JSY Helpline in the entire Bari Block.

Specific Objectives

The specific objectives of this project are as follows:

- To strengthen the vision of *Janani Suraksha Yojana* through the JSY-Helpline.
- To promote 24/7 service for Emergency Obstetric Care (EMOC).
- To increase institutional deliveries and Antenatal check up
- Safe delivery and Neonatal care

Strategies Adopted

- Establishing a JSY Helpline office with adequate staff at the Bari block Dholpur district.
- Networking with the vehicle owners for resource mapping and negotiation of rates.
- Implementing the JSY Helpline block level programme.
- Liaison and coordinate with the local level area Police, District Health Authorities, PRI and community.
- Ensuring registration and assisting health worker in preparing birth plan of all pregnant women.
- Promotion of Voluntary Blood Donation
- Providing moral and security support to ASHA-Sahyogini.
- Organize social auditing of maternal mortality.
- Organizing block level quarterly meetings with various stakeholders for feedback & suggestions.
- Participation in local melas time to time to enhance the IEC activities.

Brief of Dholpur JSY Helpline Project

Mangalam Sewa Samiti, an NGO took up the initiative to develop the *Janani Suraksha Yojana* Helpline, one of the best initiatives towards this mission. In order to establish the JSY helpline, a resource mapping of the nearby villages was done to identify the existing material resources in the village in terms of the number of vehicles, (jeep, tractors, scooters, bikes, *jugaar*) mobile phones and telephone connections. The local health workers resolved to strengthen the referral transport thereby; they held a sensitization workshop with the drivers and the vehicle owners to charge minimum fare for the Emergency Obstetric Care (EMOC). They ensured augmented transport with the police department involved in the EMOC with *Janani Suraksha Yojna* stickers pasted on the vehicles as an identification mark.

A 24 hours helpline was established with support from the District Health Society, Dholpur & UNICEF office in Jaipur, Rajasthan.

Moreover, a list of the number of beneficiaries (pregnant women) as required under the *Janani Suraksha Yojna* was prepared so as to be in a better position to gauge the amount of resources to be provided and when.

The District Administration, Health Department, police, vehicle owners, UNICEF, and the community were involved for cooperation, support and ownership of the effort.

The JSY Helpline was formally launched by Ms. Shubra Singh, Secretary Health and family Welfare, Government of Rajasthan on April 11, 2006 on the auspicious day of safe motherhood.

Progress Made

The JSY Helpline has been able to support in finalizing birth plans of 1263 pregnant women of Bari block till July 15, 2006. This is the only block in entire Dholpur to have birth plans. In the span of six months 560 JSY beneficiaries have been registered. This accounts for more than 50 percent of JSY registration of the entire district. Bari block represents 20 percent population of the Dholpur district. In the period of six months, JSY Helpline has helped in transportation of 248 beneficiaries to health centers of Bari and District hospital Dholpur. Out of these 248 cases, 25 cases were identified as complicated emergency obstetric cases. 17 of these complicated cases had caesarian section. The same time period in the year 2005 had hardly 4 C-sections at Bari block. From the implementation of JSY Helpline 5 cases of maternal death have been noticed and only one case out of these is reported by government health system.

	6-Jan	6-Feb	6-Mar	6-Apr	6-May	6-Jun	6-Jul	Cumulative
Birth Plan prepared	0	0	108	149	287	490	229	1263
No. of JSY registered cases	51	64	67	66	95	118	99	560
No. of beneficiaries paid SY benefit	0	0	0	119	39	34	40	232
No. of beneficiaries utilizing JSY Helpline transport	0	25	28	38	57	60	40	248
JSY Helpline assisted normal delivery at institutions	45	58	61	60	89	112	81	506
JSY Helpline assisted complicated emergency obstetric cases	3	1	3	6	6	6	0	25
No. of C-sections	1	0	2	4	5	5	0	17
No. of maternal deaths	0	0	0	1	3	0	1	5

Note: July 2006 report is till July 15, 2006.
3 maternal deaths at Private nursing homes each at Dr. Mangal's clinic, Dr. Rakesh clinic (both at Bari) and at Dr. Sita Ram Bansal's Dholpur clinic
one maternal death at Bari CHC
one maternal death on the way.

Constraints of JSY Helpline Bari

- Some remote villages do not have communication facilities. District administration is to be given feedback on this and Panchayat of these areas may be equipped with telephone facilities.
- A need of technical person skilled in midwifery is felt.
- ASHA-SAHYOGNIS are not given proper welcome at the health centers. This needs to be built up.
- Meetings with community on JSY need to be strengthened.
- Proper follow of Birth Plan needs to be supervised.
- IEC of JSY Helpline needs to be strengthened.
- Health personals still need to be sensitized on the issue.

Conclusion

Key indicators of the success of this Helpline depends on the (i) increase in the proportion of pregnant women being assisted by skilled birth attendant at birth backed up by an efficient referral system (ii) reduction in neonatal mortality and still births (iii) the prompt establishment of and access to properly equipped and staffed referral facilities in places which handle complex emergencies. The Janani Suraksha Yojna Helpline emerged as a powerful campaign for women's health. It highlighted the potential for improved care for pregnant women and better functioning health services to reduce the burden of maternal ill health.

Conclusions: Looking Ahead

This report puts forward a number of challenges that are to be met if this district is to acquire a more progressive status on HD. Some approaches suggested below require sheer larger quantities of money; others not so much in terms of money *per se*, but innovation (or better control though better supervision); and yet others are newer programmes.

1. To begin with, there is need to strengthen the statistical base in the district: to get better estimates of sectoral incomes and shares. Revenue data on Agricultural parameters appear inconsistent with the field reality.

Basic data pertaining to each village (as well as the *tehsils*/blocks) and the whole district needs to be collected, up-dated periodically and displayed in display-boards at public places. Next, recording of births, deaths, marriages and pregnancies must be maintained for each village: these would help in better targeting and monitoring. The e-Governance initiated in the district has started some recording on these parameters. Data on land, migration and other identified key variables must also be collected and maintained at the village level. Establishing sentinel surveillance cells at the village/block levels is a useful suggestion here.

The district has many geographical variations and each tehsil has its own characteristics- both social and physical. Bari and Baseri are both Meena dominated areas, whereas the Dang area towards the south-west is dominated by Gujars. This area is rocky and particularly rich in minerals, and also has many mines and quarries. Both Rajakhera and Dholpur, in parts of which the Chambal flows, have comparatively plain topography and a good soil base for agriculture.

Dholpur district has an interesting mix of agriculture and non-farm sector as both contribute equally to the domestic economy. Where on one hand the soil is fertile, the severe water shortages have retarded the growth of farm sector, as evident from the small land holdings and area under cropping. As a result the farmers have taken refuge to subsidiary income by way of animal husbandry. The livestock population in the district is very high and the cattle and buffaloes are a permanent feature of all village households. The dairy farming is thus well developed and almost all big villages with a population of 5000 and above have got a village dairy for the milk collection. This should further be strengthened for villages with less than 5000 population.

There is need for water saving crops in Dholpur. Barley could also be promoted. Horticultural crops are another option. Soil conservation is also largely required in the district. Vegetable growing should also be promoted as Agra is the nearest big town with demand.

As holding sizes are small in Dholpur, cooperatives of farmer as producers or similar institutions should be promoted. Andhra Pradesh model can be given a try.

In non- farm sector, the occurrence of craft is less and dispersed, involving a small chunk of population at present. A large segment of the population is dependent on stone mining and processing industry, the contribution of which is equal if not more to the district exchequer. Even though a very small segment of this population is involved in the stone crafts (carving), the craft holds enormous potential for reducing poverty by creation of mass jobs and through improvement in quality of work life of artisans. Among other crafts, prominently it is textile-based crafts including Durries weaving, Appliqué and Patch- work and Gotakinari (Embroidery). Incidentally this is the only craft, which has a considerable women's involvement as all others are the male bastions. This craft again offers a great potential for development particularly for inducement of skills among rural women by forming SHGs who can thus contribute significantly to the domestic income. Steps should be taken to strengthen these efforts.

Besides textile- based occupations in the cottage sector, it is crafts like leather shoe making and woodenwares, which hold potential for development in Dholpur. Since the craft base in the district is small, a long- term strategy for inducement of skills and provision of a comprehensive package of credit, materials and marketing is required to sustain such efforts. At the same time it is necessary that the masses are motivated to pursue such occupations, which are rather uninteresting ones for them. Some of them are put below.

Criteria for Development	Scope for Development			
	Leather Shoe making	Stone Carving	Wood work	Textile based
Additional/alternate employment generation	High	Medium	Medium	Very High
Potential for domestic demand	High	Medium	High	High
Potential for export demand	Low	High	Low	High
Scope for women's involvement	Medium	Low	Low	Very High
Use of local resources/ skills	High	High	Medium	Medium
More number of poor involved	High	Medium	High	High
Inclusion of non-artisan communities	Low	High	High	High
Use of better technology	High	High	Medium	Medium
Scope for overall development	High	High	Medium	Very High

2. Efforts to diversifying occupations need to be taken. Young people joining the work force, very often with one or two, to six or seven, years of education, require being productively absorbed. For this, there are two broad approaches proposed here: technical training (not necessarily more than a few weeks or months), and credit to initiate business or activity- for credit. Details of how to initiate training could be worked out once the area of intervention, the locale, scale and costs are worked out.
3. Credit is important for occupational diversification as well as agriculture; hence, credit in this point refers to all rural credit. Like in any modern business, credit is required for agriculture as well as non-agricultural activities. Credit for both fixed capital and working capital is needed with periodicity dictated by production and market conditions.
4. Education of the girl child should assume priority, particularly among ST groups, to the extent that if more than the normal incentives are to be offered, they should be offered.
5. Educational infrastructure must improve. Other than the standard suggestions of building extra rooms in one-room schools and appointing more teachers in one-teacher schools, and so on, there is also need to ensure regular water supply and sanitation in the school premises. For improving quality of the education imparted, it is proposed that interventions like those of Pratham in different parts of western India (incl. in Rajasthan) could be looked into. Additionally, control over the wherewithal of teachers could be brought about through empowering local *panchayats* to inspect schools on a continuous basis. Finally, education could be made more attractive if more science and English teaching are introduced.
6. As private schools out-perform the government ones, it might be an appealing idea to provide subsidies to them- so that they do not charge students any fees- and expect them to manage the schools. This could be tried on an experimental basis.

7. There is need to up-scale health extension to a higher level. The starting point in this for this district is a 'needs-assessment' of the health needs of the local communities.
8. Water and sanitation should receive more funding. One way to go about is to link domestic water schemes with those of irrigation and watershed. Pricing water, forming village water committees for taking charge of distribution of water, and initiating sanitation are some ideas to toy with.
9. There should be higher decentralisation, more innovation and better M&E in nutrition programmes like the ICDS. Experiments with local foods (and varieties) as well as introducing a two-meal programme could be tried out on a pilot basis. Linking up school nutrition with ICDS nutrition could also help in achieving economies of scale and also free teachers from feed-related duties.
10. Promoting HD at the district to set up a mission- HD Mission. The goals of the mission can be linked with those spelt in the Millennium Development Goals as also incorporated in the Eleventh Plan objectives.
11. Women need to be brought out of agriculture for raising their income levels and SHG movement requires strengthening for livelihood purposes.