JHALAWAR
District Human Development Report, 2009

Prepared by:
Department of Planning, Government of Rajasthan &
Institute of Development Studies, Jaipur
Under:
Government of India-UNDP Project, 'Strengthening State Plans for Human Development'.

Jhalawar District
Human Development Profile

Institute of Development Studies, Jaipur
2008

Preface

The District Human Development Profile of Jhalawar is the second study 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 Jhalawar. 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 Vaibhav Garalia and the acting Chief Planning Officer Shri Dilip Shrivastav took a keen interest and provided data on the economic and social dimension. Shri D.K.Jain and Ms Leela Bhatnagar, Directors, and Shri R.K.Pandey; Deputy Director, Directorate of Economics and Statistics, 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, the efforts of the research team comprising of Shri Ratan Lal and Dr. Jai Singh are gratefully acknowledged. We express 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 study finds its origins in the fact that aggregate growth at the state level has been uneven in different parts of the state implying thereby a need to focus on the hotspots. There is thus, need for direct and more intensive intervention for up-scaling the quality of life and empowerment of the people. This study 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.

Specifically, this report attempts to address the following questions:

1. To assess the extant livelihood status of people in the district;

2. 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;

3. To evaluate the status of health, nutrition and health extension with special focus on women and children.

Jhalawar district is an expanse of fertile plain having rich black-cotton soil and is watered by several rivers, giving it a verdant look. The Arawali hills cross the region roughly dividing the plains of Hadoti from the Malwa plateau. These hills and the surrounding areas provide the district exotic flavor with its diverse range of flora and fauna. Jhalawar district is known for the highest rainfall in Rajasthan. An average of 89 cm. of rainfall along with rich soils provides adequate support to the agriculture of the district. There appears to be a declining trend in annual precipitation during the last decade. However, average rainfall in the district has gradually declined from 112 cm during triennium ending 1997 to 91cm during triennium ending 2004.

Growth rate of population at 2.16 per cent during 1951-2001 is lower than the state average. However, the decadal growth rate of population during 1991-2001 has increased to 23.3 per cent from 21.3 per cent during 1981-91. There is variation in population stabilization pattern across various blocks. On the one end is Khanpur, which observes a decadal growth of 18.7 per cent. Jhalrapatan and Aklera on the other hand observe decadal growth at around 26 per cent. Sex ratio in the district has improved from 918 in 1991 to 926 in 2001. What is worrying, however, is the fact that this indicator of the status of woman continues to be dismal if one considers juvenile sex ratio, which declined from 944 in 1991 to 934 in 2001. Tehsils showing improvement in juvenile sex ratio include Khanpur- an economically and socially developed tehsil, and Pirawa.

The Human Development Update of Rajasthan 2008 puts Jhalawar at the middle of the 32 districts, when arranged in descending order of the composite index of Human

development. In terms of the individual components, the district ranks 15th 19th and 17th for the health income and education development index respectively.

The district income at constant prices has grown at the rate of 5 per cent annually. Income from the agriculture and allied sector observes an impressive growth at the rate of 10.7 per cent annually during 1991-92 to 1999-2000. This sector collapses thereafter resulting in a sharp decline in its share in SDP. The largely agriculture based economy is showing signs of change. Average share of the agriculture and allied sector has declined from 57 per cent during triennium ending 1993-94 to 43 per cent during triennium ending 2004-05. Both the transport-communication sector and other services observe an increase of five per cent points each in their respective shares during the later period. 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, particularly in querying and stone mines.

Such change is not visible in terms of the structure of the workforce. The workforce structure appears to lack diversification. Of the total workers 72 percent were main workers-significantly lower than the 1991 figure of 88 per cent of the main workers. The decline in the share of main worker may be attributed to lack of adequate work primarily in agriculture as is reflected in the decline both in the share and absolute number of agricultural labor. Marginal workers accounts for 76 per cent of the total increase in workers. Across tehsils Khanpur and Pachpahar, which observe highest increase in Work Participation Rate, such increase occurs on the strength of the growth in main workers. Pirawa and Gangdhar on the other hand observe almost the entire growth in worker contributed by marginal worker. Such growth of main workers in Pirawa and Gangdhar occurs in the agricultural sector indicating strength and sustenance of this sector.

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.

The Farm Sector, although still with the largest share in the district income is loosing its share. What is more important is that this sector sustains nearly 75 per cent of the population in the district.

Until the beginning of 1990's food grain was the most important crop group and accounted for over half of the gross cropped area. Information on agricultural production at the district level is available by crops only. Food grain accounted for 28 per cent gross cropped area during triennium ending 2006-07. Major food grain in the district includes jowar and maize during kharif and wheat during rabi. Soybean and mustard are the main oilseed crops while coriander is the most important spices crop grown in the district with a share of 12 per cent in gross cropped area in TE2006-07.

Food grain production in the district observes deceleration at the rate of 0.29 per cent per annum during 1991-92 to 2006-07. This is in spite of a significant growth in productivity of food grain at 5.47 per cent per annum. All the three cereals observe statistically significant growth in productivity. The major contributor to the decline in food grain production is the area under it. Share of food grain in gross cropped area deceleration 57 to 28 per cent

during the reference period. The trend rate of decline in area under food grain is estimated at 6.00 per cent during 1992-2007. Deceleration in food grain production implies a 5 per cent annual decline in per capita production of food grain and has serious implication for food security in the district in 'restrictive sense'. Crop diversification in the district, however, more than compensates the decline in per capita food grain production. Most of the area under food grain goes to the oilseed crops Soybean increased its share in gross cropped area from 16 per cent during TE 1993-94 to 40 per cent during 2006-07. Similarly, mustard increases its share for 2.8 to 14.4 per cent.

A supporting farm activity with lower annual fluctuations is in animal husbandry. Cattle is the predominant livestock in the district and accounts for 48 per cent of the livestock population in 1992 but looses its importance (41% in 2003) in the following years due to a declining bullock population caused by mechanization of the agriculture. Number of Cattle per 100 households in the district has declined by 69 units. Buffalo population (mostly female) has almost kept pace with the growth in the human population and has increased from 130 to 131 per hundred households during the same period. Goat population has increased from 2.52 lakh to 3.0 lakh resulting in an increase of 6 goats per 100 households. Number of sheep during the reference period declined from 19 thousand to 1 thousand resulting in a decrease of 5 sheep per 100 households.

Poverty and Food Security: Between 1997 and 2002 numbers of BPL households have declined from 55190 to 34428 implying a 38 per cent decline in the poor households. Incidence of poverty is the highest among Scheduled Tribe households. During 2002 such incidence is estimated at 31 per cent for ST, 13 per cent for SC and 9 per cent for non SC/ST population. Overall the incidence of poverty is 16 per cent by 2002 BPL census. Across blocks incidence of poverty is the highest in Manoharthana at 21 per cent followed by Bakani and Dag at 19 per cent. On the other hand 71 percent of the ST households in Pirawa are poor.

No significant difference between above poverty line (APL) and below poverty line (BPL) households in the consumption of food grains. However consumption of milk and milk products the BPL households is lower by 22 per cent than compared to APL households. Similarly, BPL households consume 11, 9 and 4 per cent lower than the APL households for oil and ghee and pulses respectively.

Main Development Problems or Issues

Jhalawar is industrially a backward district of the state. Even though the district occupies prime position in production of soybean, orange and coriander, agro-processing industry in the district has failed to pick up. The district lacks basic facilities for the development of industries. This includes inadequacy of railway infrastructure, cold storage facilities and a district dairy cooperative.

Most of the water in this highest rainfall district flows out of the district in the absence of water shed development and also leads to soil erosion. Development of watershed, farm bunds and small/medium irrigation plans are needed to use this water for the district. This

is all the more important as five out of six administrative blocks of the district have been declared critical with the state of groundwater development varying between 94 and 110. Only Khanpur block is classified as semi-critical with the stage of groundwater development as 71.

District with an overall literacy rate of 57 per cent in 2001, up from 22 per cent in 1981 and 33 per cent in 1991, shows impressive gains in literacy per cent. The situation remains similar both for male and female literacy rates, at 73 and 40 per cent, respectively. A significant feature of growth in the number of literates is that the backward classes out perform others during the nineties. Literacy rate for the scheduled caste population more than doubled from below 24 per cent to 53 per cent during the nineties. Similarly scheduled tribes population increases its literacy rate from below 30 per cent to 57 per cent while the remaining social groups observe a much lower increase from 36 to 49 per cent.

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 ratio' (ILIP ratio) at 152 per cent is impressive. However, such gains in literacy are not equitably distributed across social groups, gender and regions within districts. Clearly the SCs and STs have outperformed others—SCs are way above others, at 240 per cent and STs at 167 per cent—while the general category populations show a rather poor performance, 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 Jhalawar.

Yet another feature of the gains in literacy in Jhalawar appears to be the gender disparity in Incremental Literate/Incremental Population ratio (ILIPR). 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 population groups but is larger for the SC/ST population at 156 implying a greater gender bias among the scheduled population groups in Jhalawar.

Jhalawar observes a healthier trend in enrollment rates, when compared to the state average. The Gross Enrolment Ratio for Class 1-5 is estimated at 107 for the entire district. However, there is small variation in GER across different Blocks. Enrollment of students declines from 46 thousand for the class 1 to 42 thousand in class 2 and to 35 thousand in class 5. Thereafter number of students decreases rapidly to 17 thousand in class 8. The difference in the 1-5 and 5-8 rates of retention may be explained in terms of the gender partly during lower primary schooling and gender disparity during the later years, of girls to boys moves around 0.9 during lower primary. However, it declines sharply to 0.51 during the upper primary class.

Gender bias is not reflected in the lower primary enrollments as much as in the upper primary enrollment. With a juvenile sex ratio of 944 girls per 1000 boys, one may expect lower enrollment of girls than the boys. The ratio of girls to boys' enrollment therefore

starts at 0.88 and improves thereafter to 0.9 in the class 3 but declines to the original value with class 5. The decline thereafter is fast to 0.51 in the class 8. Similar situation is observed at the block level.

Such a sharp variation in the upper primary and lower primary enrolment is not observed when inclusion is defined with respect to the backward social groups. Ratio of SC/ST population to non- SC/ST population in the 0-6 age- group was 0.45 in 1991. However the ratio of SC/ST students to non -SC/ST students in class 1 is observed at over 0.5 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. One of the reasons for the spirited performance of Scheduled castes and Scheduled Tribes 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. This came to the focus during the field visit of Khanpur and Manoharthana blocks.

There are demand side constraints, particularly originating due to girls joining the work force fairly early. On the supply side while schools have been established, educational facilities and extension work within the educational system are yet not fully in place- physical infrastructure comprising of school buildings, toilets and sanitation on the school campus besides potable drinking water needs further strengthening particularly in Manoharthana and Aklera. Female teachers need to be trained in larger proportions and teacher attendance needs to improve.

In the health sphere, while facilities as per the norms appear complete, there are problems with regard to actual work. Performance of referral hospital system is evaluated in terms of Bed utilization rates. In the absence of such information the report bases its conclusions on the ratio of in-patients per bed. Number of patients per bed varies between 66 and 127 during 2001-05. Across blocks patients per bed vary between 19 in Dag and 22 in Manoharthana to 130 in Khanpur. Except for Khanpur, this is far below the expected number of patients that the system can serve in a year. Medical studies 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 of 19 or 22 is far too low to justify optimal use of resources. 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 Khanpur and Manoharthana indicate a large of vacant position of medical doctors. The problems of in-patients get compounded significantly if a number of doctors' positions are vacant in a low-density block. This is typically the case of Manoharthana and Dag resulting in low occupancy.

Besides public sector health infrastructure, a number of private hospitals have come up in urban areas. During the field visit, however, a number of private doctors/ dispensaries were observed even in villages. However, information on these doctor or dispensaries is not available. A major advantage of these private health centers is that the provide medicines also which is in perpetual shortage in sub-centers.

There are also problems of inadequate infrastructure– buildings, staff quarters, equipment and vehicles, to name a few. Also, there are issues in working capital: the expenses are just not sufficient to buy the necessary drugs, run vehicles, or up-keep the building structures. There is also acute shortage of personnel at all levels: particularly medical personnel.

Programmes like the ICDS hold great promise in alleviating the nutrition status of children and thus providing a link to fighting poverty through the education route. Children, however, do not attend the centres in adequate numbers; nor is the quality of food distributed adequate or of good quality. It appears as if there is poor supervision of the centres besides the centres being under-funded.

The study finds enough data gaps that truly reflect the changes that are taking place 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. Suggestions below require sheer larger fund; 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. Basic data pertaining to each village (as well as the *tehsil*s/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. 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.

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. Drought proofing is an important policy initiative: save at least one crop, plus ensure sufficient drinking water. Wild fluctuations in crop production during the last decade in a place with abundant rainwater indicate the need for an appropriate water management strategy. In this regard, the irrigation potential both through groundwater recharge and surface reservoirs needs stabilization. Jhalawar is the highest rainfall district of the state but most of the water flows out of the district in the absence of watershed development and also leads to soil erosion. Development of watershed, farm bunds and

small/medium irrigation plans are needed to use this water for the district. This is all the more important as five out of six administrative blocks of the district have been declared critical with the state of groundwater development varying between 94 and 110. Only Khanpur block is classified as semi-critical with the stage of groundwater development as 71. Several initiatives, from practices, for instance from *Pani Panchayat* (in Western Maharashtra), could be examined for possible emulation. Next, watershed development requires a different and up-scaled definition in which there is larger stakeholders' participation and more dimensions like cropping pattern, farm and agro-forestry brought in.

5. Both agricultural extension and marketing local produce need strengthening.

6. The extant activities outside crop agriculture are currently restricted to animal husbandry, forest, mining and some rural industries. Each of these require up-scaling. Of specific mention is raise milk production and productivity, for which there is large scope. For this, improvement of breed, better feed and veterinary services are essential. There is no dairy cooperative in the district. Eighty-nine dairy committees are operational in the district which collect and send milk to Kota for pasteurization and packing. Similarly, Cold storage facilities need to be strengthened in the district.

7. The Kota stone processing units in the district are causing significant environmental problems due to the slurry which is thrown around. There is a need to utilize this slurry more usefully for the sake of the environment.

8. 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.

9. 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. If there is shortage of teachers they could be recruited from the southern states as a one-off measure.

10. 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.

11. 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.

12. 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.

13. 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.

14. 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.

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Chapter 1

Resource Base of Jhalawar

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1.0   Introduction

Jhalawar lies at the border of Rajasthan and Madhya Pradesh, nudging its fat belly into neighboring Madhya Pradesh. It is a rock-strewn, scrub-covered terrain, occasionally bright with fields of poppies and citrus-green groves of oranges. Lying in the south-eastern region of Rajasthan at the edge of the Malwa plateau, Jhalawar has rocky but water-laden verdant landscape, unlike much of Rajasthan.

Jhalawar district is an expanse of fertile plain having rich black-cotton soil. It is watered by several rivers, giving it a verdant look. The largest river flowing through the area is Kali Sindh which flows through the territory to join the Chambal, Rajasthan's largest river. Other rivers include Ujaad, Ahu, Parvan, Chavli, etc. The Aravali hills, which are the most ancient folded mountain range in India, cross the region roughly dividing the plains of Hadoti from the Malwa plateau. These hills and the surrounding areas were once thickly forested and teemed with wildlife. The Jhalawar region has an exotic flavor with its diverse range of flora and fauna, with which it is richly-blessed. Red poppy fields add to the vibrant color, while the *Saras* crane breeding grounds spotlight the rich avian life dominating **Jhalawar** territory.

The climate of the area is very much similar to that of the Indo-Gangatic plain, with hot dry summer and delightfully cold winters. The monsoon is, however, quite unlike and very distinct from the oppressive humid climate of the north Indian plains. Jhalawar district is known for the highest rainfall in Rajasthan. An average of 89 cm. of rainfall provides adequate support to the agriculture of the district.

District Jhalawar is situated in the south-eastern part of the State of Rajasthan with an area of about **6322 S**q.km consisting of six Panchayat Samities namely; Khanpur, Pirawa, Jhalrapatan,

Dag, Bakani and Manoharthana (Figure 1.0). It resembles letters 'S' and lay between 23.45^o and 24.52^o N and between 75.27^o and 76.56^o E and is bounded on the south-east by the State of Madhya Pradesh on the north-west by Baran district and on the north-west by Kota district.

The district rises gradually from 1000 ft. above sea level in the north to 1500 ft. in the south. A narrow range of low and fairly wooded hills run in the north and the southern part of the district is generally hilly and intersected by smaller streams, but the rest of the district is a rich undulating plain. The Mukundra hills, enters the district on the boarder of Manoharthana and Bakani Panchayat Samiti leaves it near Khokanda on the Ahu river. Another smaller branch runs parallel to the main range and between it and the main range lies fertile plain round Jhalawar town.

Jhalawar has been gifted by nature in rivers. Many important rivers like, Kalisindh, Ahu, Parwan and Ujar flow through this district. Bhimsagar is the only major irrigation dam on Ujar River. Chhapi Dam is under construction on Arnia River. The yearly average rainfall is 104.47 cm. The climate is fairly dry and healthy. The climate of the southern part of the district especially the Panhayat Samiti of Dag is very similar to Malwa.

The soil of the district is fertile and consist of four varieties (1) Kali or Dumat (2) Dhamni or Mal (3) Lal Pili (4) Pahari or Hilly. River Kali covers Manoharthana, Jhalrapatan, Khanpur and Bakani blocks of the district. The Dhamni is found in Panchayat Samti Dag. The main crops of the district are Jowar, Maize, Wheat, Rice, Gram, Masoor, Dhania, Mustard, Groundnut, Soyabean and Opium. The forest area is about 17.29 per cent of the total land area. The principal trees are Dhak, Dhonkra, Tendu, Kher, Babool and Khejra. The main fruits are Plum, Papaya, Lemon, Mango, Gauva and Orange and in Orange cultivation, the district is known as *Chhota Nagpur* of Rajasthan. Wild animals are seldom seen in the forest. Whatever wild animals available are wild beers. Cheetal, chinkara, neelgai, monkeys etc. Parrots of Gagron are famous all over India although the species is vanishing out due to lack of proper care. The principal mineral deposits are of laterite, copper, calcite, sandy stone, limestone etc.

Figure 1.0: Jhalawar: Administrative Divisions
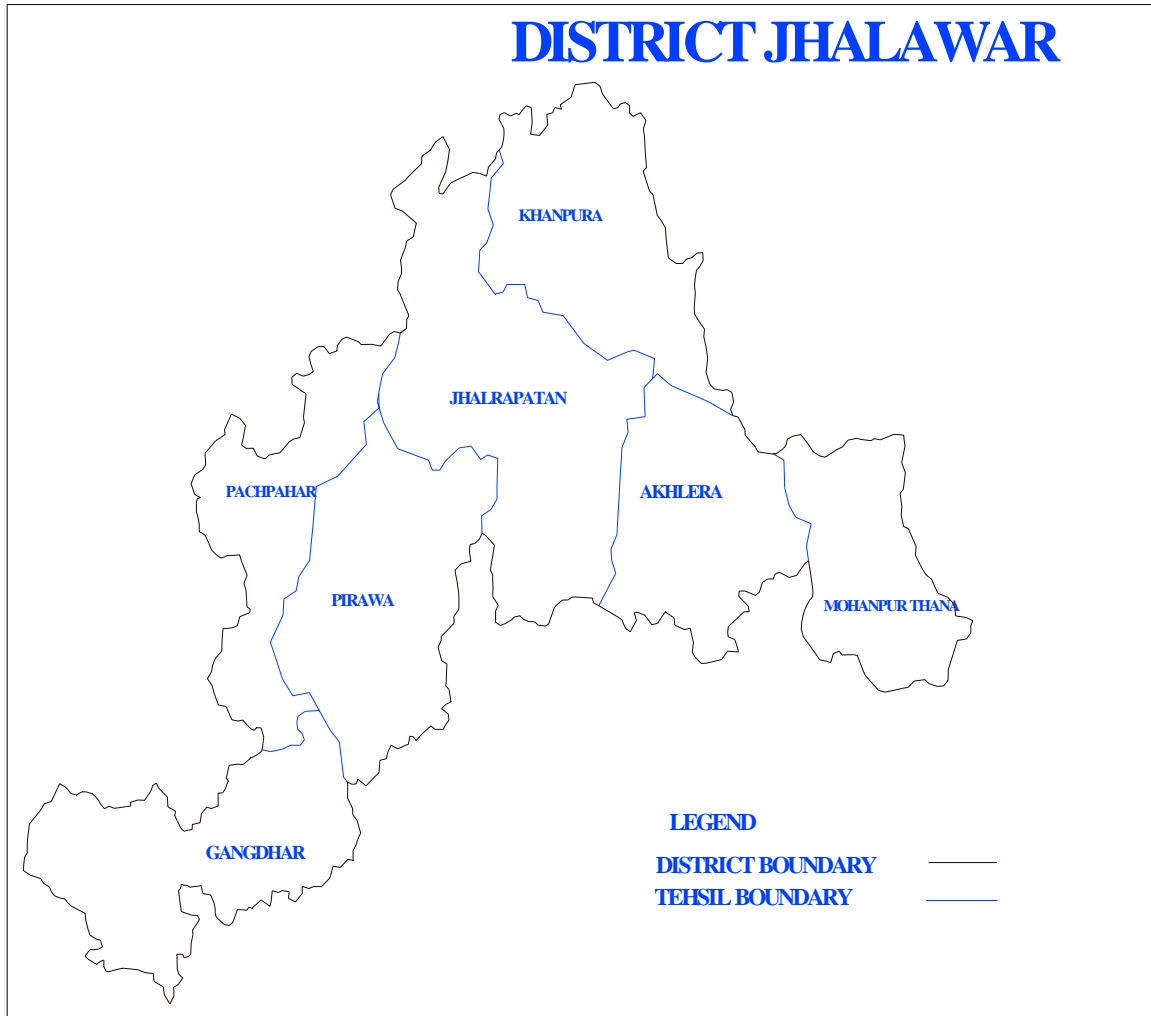
Jhalawar was a part of Malwa Pradesh during the Mughal period. According to the great historian, Abulfazal, Jhalawar was given to Raghav Jhala in Jagir by the ruler of Mandu in the year 1420 A.D. Since then the region is known as Jhalawar or the land of Jhalas. The Princely State of Jhalawar was created in 1838 A. D. after being separated from Kota by the British. It got its name derived from Jhalas, a Rajput clan who ruled Jhalawar. The district combines cultural heritage of the Malwa region and the Rajputana in the western India. With some exquisite pre-historic cave paintings, massive forts, thickly-wooded forests and exotic wildlife variety, Jhalawar boasts of rich historic as well as natural wealth. Culturally, the district is a typical synthesis of Rajasthani and Malwa cultures. It has interesting sites of Shiva temple, Chandrawati temples, Kakunj temple, Gagron fort, Buddhist caves and *Stupas* etc. The languages spoken in the district are as in Table 1.1.

Table 1.1: Spoken Languages in Jhalawar District

Panchayat Samiti	Language spoken
Jhalrapatan	Malvi/Khari-boli
Khanpur	Hardoti
Pirawa	Sondhawari, Dangiwara
Bakani	Malvi and Lodwad
Dag	Sondhwari
Manaharthana	Malvi

Source: District Census 1991.

In the field of art and literature, Jhalawar had been centre of learning Jhalawar Museum, Bhawani Parmanand Library, Bhawani Natakshala and paintings of Garh Palace are its unique examples.

1.1 Population Growth 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 mothers and children; an important component of human development.

Population in the district has increased from 4.05 lakh in 1951 to 11.8 lakh in 2001. This implies an annual growth rate of 2.16 per cent during 1951-2001. This is lower when compared to the population growth in the state. What is worrying is however, is that the decadal growth rate of population during 1991-2001 has increased to 23.3 per cent from 21.9 per cent during 1981-91 (Table 1.2). There is however variation in population stabilization pattern across various blocks. On the one end is Khanpur which observes a decadal growth of 18.7 per cent. Jhalrapatan and Aklera on the other hand observe decadal growth at around 26 per cent. This aspect of population growth is more reflected in the change in the population of 0-6 age group, which is largely stagnant during 1991-2001 in Khanpur.

Over 15 per cent of the population in Jhalawar is the scheduled caste and another 12 per cent is scheduled tribes. The distribution of scheduled tribe population is not identical across tehsils. Aklera and Manoharthana account for over 50 per cent of the Scheduled Tribe population. Similarly, Pachpahar and Gangdhar tehsils account for one third of the scheduled caste

population. The share of scheduled caste population is the least in Manoharthana while the population of scheduled tribes is very small (0.4%) in Gangdhar (Table 1.3).

Table 1.2: Decadal Growth Rate of Population: 1991-2001

Tehsil/Blocks	Total Population		
	Total	Male	Female
Khanpur	18.7	17.7	19.9
Jhalrapatan	25.8	25.3	26.3
Aklera	26.1	25.8	26.6
Pachpahar	24.5	23.9	25.2
Pirawa	21.3	21.0	21.7
Gangdhar	20.1	19.7	20.6
District	23.3	22.8	23.9

Source: Population Census 2001.

Table 1.3: Share of Backward Social Groups in Population (2001)

Tehsil	SC	ST	Total
Khanpur	17.4	14.9	32.3
Jhalrapatan	13.3	13.8	27.1
Aklera	12.1	28.4	40.5
Manoharthana	8.9	19.0	27.9
Pachpahar	19.0	3.1	22.1
Pirawa	16.4	6.1	22.5
Gangdhar	23.1	0.4	23.5
District	**15.6**	**12.0**	**27.6**

Source: Population Census 2001.

1.1.1   Sex Ratio

Sex ratio, defined as the number of women per 1000 men, is one of the indicators of the status of women in a society. Women have been observed to enjoy longer survival rate than men and therefore sex ratio should normally exceed 1000. On an average, the life expectancy of women is five years more than men. Therefore, sex ratios lower than 1000 indicates in general discrimination against women. It reflects roots of patriarchy, which is usually defined as a 'structural system of male domination'. Most countries, except China and those of South Asia have a sex ratio higher than 1000. The reasons for adverse sex ratio in any region include high mortality rates among women, high Maternal Mortality ratio, practice of female foeticide (sex selective abortion) and female infanticide and neglect of the health of the girl child, especially on nutrition front, resulting in higher mortality; besides immigration of single male population to a region. To overcome the impact of immigration of single males to a region, which is the case particularly in urbanized and industrialized regions and states of the country, the 'juvenile sex ratio' is considered in analyzing the status of women. Juvenile sex ratio is the sex ratio of population in age-group 0-6 years, data for which are available in the censuses.

Sex ratio in the district has improved from 918 in 1991 to 926 in 2001 (Table 1.4). What is worrying, however, is the fact that this indicator of the status of woman continues to be dismal if one considers juvenile sex ratio. Juvenile sex ratio in the district has declined from 944 in 1991 to 934 in 2001. It varies between 918 in Jhalrapatan to 958 in Gangdhar in 2001. Tehsils showing improvement in juvenile sex ratio include Khanpur- an economically and socially developed tehsil, and Pirawa.

Table 1.4: Sex Ratio 1991 and 2001

Tehsil	Juvenile Sex Ratio		Sex Ratio All Ages	
	1991	2001	1991	2001
Khanpur	904	935	897	914
Jhalrapatan	939	918	915	922
Aklera	964	928	913	911
Manoharthana		953		930
Pachpahar	930	920	912	922
Pirawa	935	945	933	939
Gangdhar	977	958	941	948
District	944	934	**918**	**926**

Source: Population Census 1991 and 2001.

1.2   The Resource Base: Land and Water

1.2.1   Land

The total geographical area of the district is 6.32 lakh hectares. Forest lands cover 19.8 per cent of geographical area. Area under forests has been gradually increasing during the recent past. So is the land under pastures and fallow (which is 12% of the geographical area). The culturable land is highly susceptible to soil erosion given the high rainfall in the district. The net sown area is 51.1 per cent of the total area. Area sown more than once is 31.25 per cent of net sown area. The land use pattern for the year 2006-07 is given in Table 1.5.

Table: 1.5 Classification of Land Utilization in Jhalawar District (2006-07)

Land use category	Area (sq.km)	per cent
Reporting area for land utilization purpose	6322	100
Forest	1252	19.80
Not available for cultivation		
Area under non-agricultural use	260	4.11
Barren and uncultivable land	349	5.52
Other uncultivated land		
Permanent pasture and other grazing land	486	7.69
Land under miscellaneous tree crops & groves	25	0.39
Land Excluding Fallow Lands		
Culturable wasteland	473	7.48
Fallow Land		
Fallow lands other than current fallow	185	2.93
Current fallow	64	1.01
Net area sown	3229	51.07
Total cropped area	5204	82.32
Area sown more than once (As a ratio of NSA)	1976	31.25

Source: Jhalawar District Statistical Profile, 2005.

1.2.2 Forest

The total forest area is 1220 sq. km which is 19.8 per cent of the total geographical area of the district. Forest area is denuded due to over exploitation and negligence. The main forest produce is tendu leaves valued at approximately Rs.1-2 crore annually. Small amounts of gum, honey, mahua and katha are also produced. The most frequent tree species are dhonkra, sagwan, babool and salar. The Arawali programme will cover the Jhalawar district and is expected to reverse the degradation to some extent.

Sacred Forestry

Jharan Mahadeo sacred grove in Jhalawar is situated along the stream leading to a large tank that ensures round the year supply of water to the city of Jhalawar. This is the only green patch in the area. It is important because it protects catchment that might otherwise be silted very quickly in the absence of vegetation. Rare plants include Bambusa hamiltonii and Scleichera oleosa. It is also important because it is a de facto sanctum sanctorum of threatened plants, all of which have become extinct in the adjoining area outside the grove. The Jharan Sacred Grove is also an indicator and benchmark of forests that might have existed in the region. Today, it is a natural laboratory, a habitat island, a genebank, and a store-house of ethno-medicine. There is a perennial water spring. The Forest Department has run a forest nursery inside the groves for the last 50 years for the production of seedlings for plantations and distribution. This ensures the survival of the grove in its original condition.

1.2.3 Water Resources and Irrigation

Jhalawar gets 952 mm of rainfall and ranks among the districts with the highest rainfall in the state. There appears to be a declining trend in annual precipitation during the last decade (Figure 1.1). Average rainfall in the district has gradually declined from 112 cm during triennium ending 1997 to 91cm during triennium ending 2004.

The district features a crisscross of rivers and rivulets, few of which are perennial. Main rivers flowing through the districts are Kalisindh, Ujar, Parwan, Aahu, Nevez, Chhapi, Chawali, Kalikhor, Piplaz and Gharganga. These rivers form part of the Chambal basin. The total length of these rivers in this district is 358 Km. In additions; there is a network of seasonal rivers and rivulets traversing various parts of the district. In the Jhalawar district some of these rivers are effluent in nature due to hard strata being 20-30 meters below the river–bed. In the course of the river, natural water storage structures are formed called *Deh* where surface water gets stored and can be used for irrigation and drinking. Surface water, so available is the key source of irrigation in the district. Total amount of surface water flowing through the district is estimated to be about 58.00 TMC. Out of this only 4.23 TMC of water is utilized for irrigation. 5.83 TMC water is expected to be utilized when ongoing irrigation projects are completed. The balance 48 TMC water runs off and meets the Chambal River.

Figure 1.1 : Rainfall and Irrigation
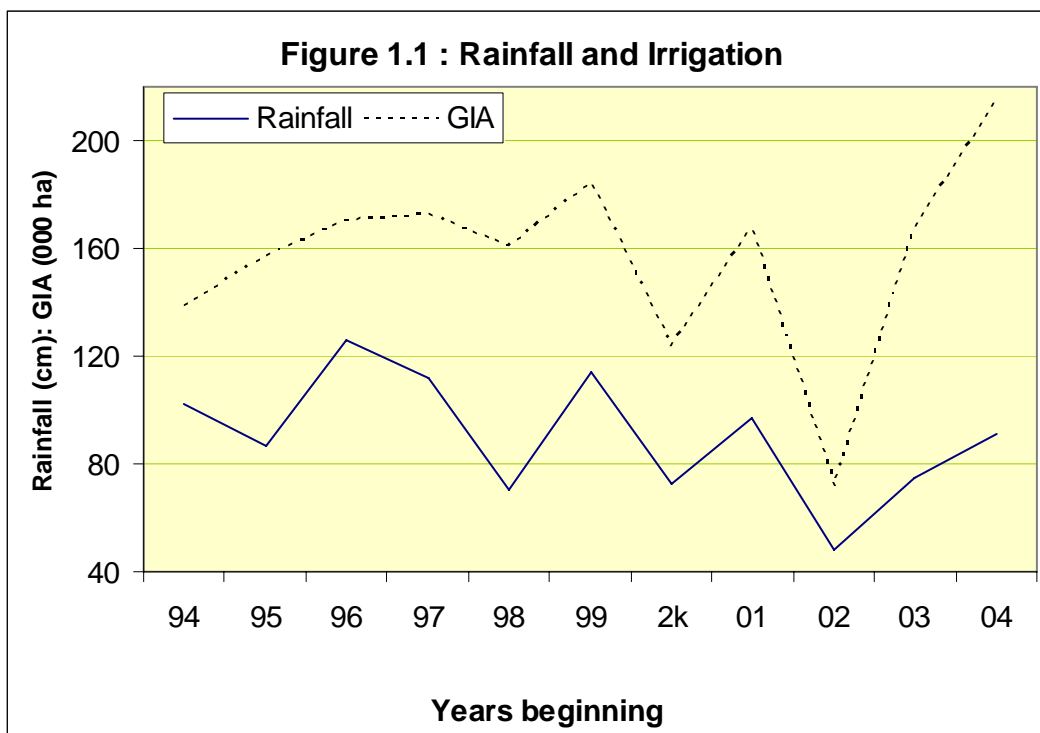
There are two medium irrigation projects viz., Bhim Sagar and Harish Chandra Sagar in the districts along with 26 minor irrigation projects. They together provide a surface irrigation facility covering a total CCA of 20073 hectares of which 13000 is actually irrigated. Two medium irrigation dams- Chhapi and Chavali and 6 minor irrigation ongoing projects are under construction which will add another 15098 hectares of CCA. In addition, there are panchayat tanks, the total command area of which is 748 hectares. Besides these, there are 65894 well out of which 59228 are used for irrigation. The command area is 113,000 hectare. From other sources the irrigated area is 2000 hectares. Thus, the total irrigated area (surface water) after the 6 minor Irrigation schemes are completed will be 143 thousand hectares which is about one-third of the total cultivated area. However, the distribution of irrigated area is unequal between the tehsils. Net irrigated area as a share of net cropped area varies between 25 per cent in Pachpahar to 87 per cent in Khanpur. The percentage of area irrigated out the total cultivated area in each of the tehsils is given in Table 1.6.

1.2.4 Ground Water

The topography of rocks and their water bearing characters determine the availability of groundwater. In Jhalawar water bearing formations are Sandstone and Basalt. The depth of water table ranges between 20-25 metres below the ground level during summers. Average yield of wells ranges between 35-80 thousand liters per day. Ground water potential of the district is

176.04 million cubic meters (mcm) of ground water. Except for Khanpur, all other blocks of the district are in the critical stage of groundwater development (Table 1.7).

Table 1.6: Tehsil-wise Distribution of Irrigated Area (000' hectares) (2004-05)

Name of Tehsil	Cultivated area	Irrigated area	% of area
Jhalrapatan	56.4	44.9	69.1
Pirawa	64.9	42.2	52.3
Gangdhar	44.9	23.7	41.1
Pachpahar	43.1	27.9	49.6
Aklera	32.8	24.9	74.8
Khanpur	56.0	56.7	95.7
Manoharthana	24.6	18.0	72.0
District	**322.9**	**204.9**	**64.7**

Source: District Statistical Outline, 2006.

Table: 1.7 Block wise Ground Water Potential in Jhalawar District, 2001

Block	Total net water availability (ham)	Existing gross draft for all uses (ham)	Stage of ground water development %	Category of block
Bakani	5977	5932	99	Critical
Dag	5482	5425	99	Critical
Jhalrapatan	8016	8110	101	Critical
Khanpur	6736	4757	71	Semi Critical
Manoharthana	6328	5917	94	Critical
Pirawa	7231	7980	110	Critical
Total	39770	38121	96	

Source: Report of the Group on the Estimation of Groundwater Resources of Rajasthan as on 2001.

1.3 Human Development Profile of the District

The Human Development Update of Rajasthan puts Jhalawar at the middle of the 32 districts when arranged in descending order of the composite index of Human development (Table 1.8). The district observes a value of 0.56 of the human development Index as against the highest value of 0.76 in Ganganagar and the lowest value of 0.36 in Dungarpur (Figure 1.2). Thus, it ranks 16th among 32 districts. In terms of the individual components, the district ranks 15th, 19th and 17th for the health, income and education development indices respectively.

Table 1.8: Relative Human Development Index in Rajasthan

Districts	Education Index	Health Index	Income Index	Human Development Index
Ajmer	0.646	0.574	0.686	0.635
Alwar	0.617	0.776	0.710	0.701
Banswara	0.446	0.309	0.335	0.363
Baran	0.595	0.571	0.624	0.597
Barmer	0.590	0.581	0.355	0.509
Bharatpur	0.636	0.625	0.424	0.562
Bhilwara	0.507	0.396	0.818	0.574
Bikaner	0.569	0.863	0.756	0.729
Bundi	0.556	0.561	0.663	0.593
Chittorgarh	0.541	0.383	0.585	0.503
Churu	0.668	0.759	0.226	0.551
Dausa	0.618	0.591	0.380	0.530
Dholpur	0.601	0.504	0.230	0.445
Dungarpur	0.486	0.282	0.304	0.357
Ganganagar	0.647	0.816	0.825	0.763
Hanumangarh	0.631	0.846	0.673	0.717
Jaipur	0.699	0.688	0.814	0.734
Jaisalmer	0.510	0.641	0.663	0.605
Jalore	0.465	0.497	0.445	0.469
Jhalawar	**0.573**	**0.588**	**0.520**	**0.560**
Jhunjhunu	0.730	0.850	0.433	0.671
Jodhpur	0.567	0.725	0.609	0.634
Karauli	0.634	0.568	0.364	0.522
Kota	0.735	0.682	0.803	0.740
Nagaur	0.573	0.699	0.396	0.556
Pali	0.544	0.356	0.593	0.498
Rajsamand	0.557	0.440	0.571	0.523
Sawai Madhopur	0.567	0.484	0.474	0.508
Sikar	0.705	0.830	0.428	0.654
Sirohi	0.539	0.487	0.753	0.593
Tonk	0.520	0.443	0.582	0.515
Udaipur	0.586	0.413	0.611	0.537

Source: Human Development Report Update 2008, Rajasthan.

1.4 Specific Objectives

This study 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 Jhalawar, 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.

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

1.5 Methodology

This study 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 study is first to analyze 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 Khanpur and Manoharthana 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. Hospital staff, medical officers and staff in the selected sub-centres of Anganwari contacted. Using qualitative research approach, personnel at different levels in the health delivery system were interviewed.*

1.6 Layout of the Report

The presentation of the report is as follows:

Chapter one 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; while 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.

Figure 1.2 : Mapping of Districts by Human Development Index

LEGEND

	0.300 - 0.500
	0.501 - 0.530
	0.531 - 0.600
	0.601 - 0.700
	Above 0.700
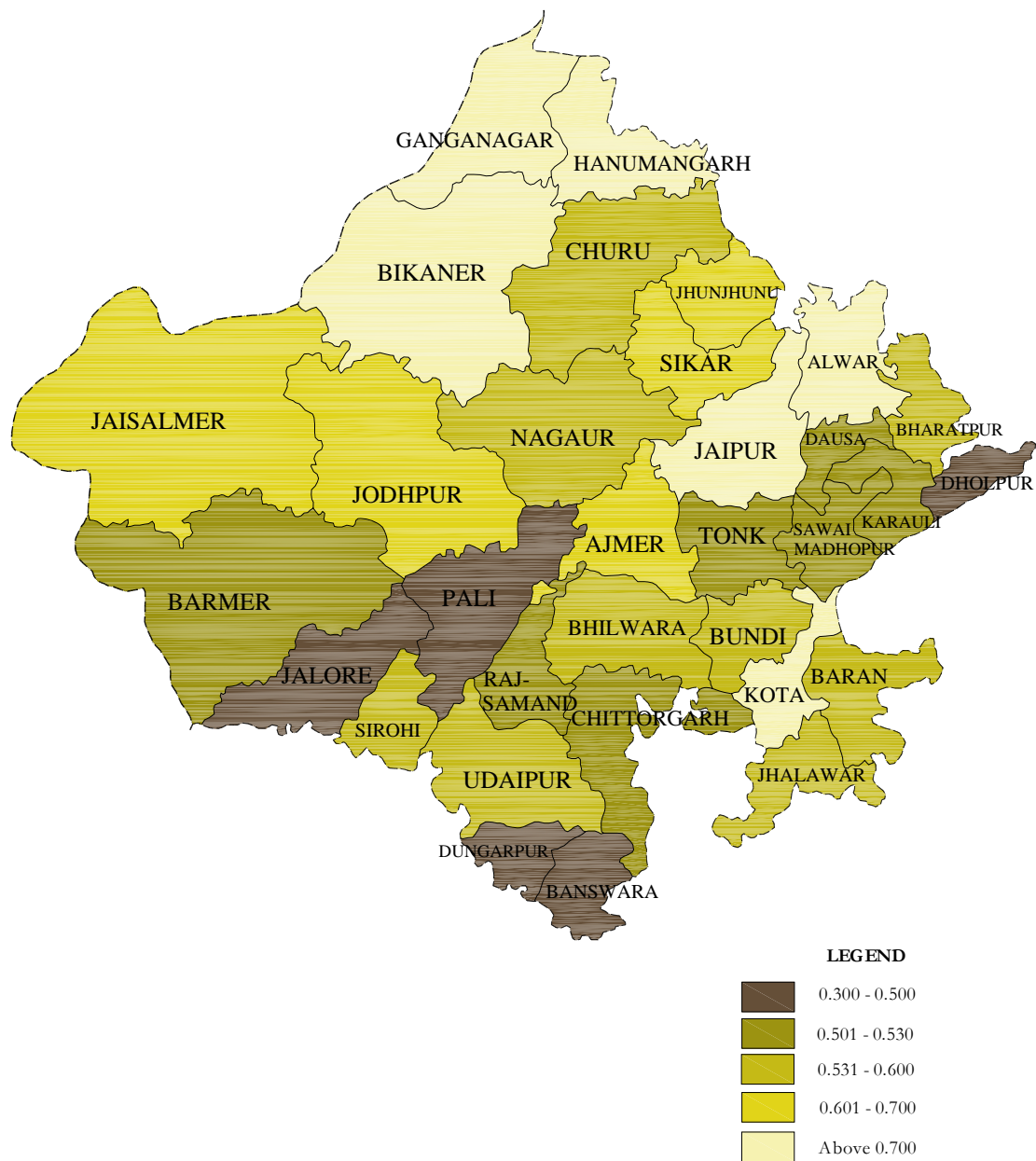
Source: Income : Directorate of Econimics & Statistics, GOR
Literacy : Census of India, 2001
IMR   : Census of India, 2001

Chapter 2

Livelihoods in Jhalawar

2.0   The District Economy

Economy of the district is largely based on agriculture. 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 (NAC) 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 on 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 prices[1] has grown at the rate of 5 per cent annually. Income from the agriculture and allied sector observes an impressive growth at the rate of 10.7 per cent annually during 1991-92 to 1999-2000. This sector collapses thereafter resulting in a sharp decline in its share in District Domestic Product (DDP).

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[1] District income at constant prices is obtained by deflating DDP at current prices by the implicit NDDP deflator at the state level.
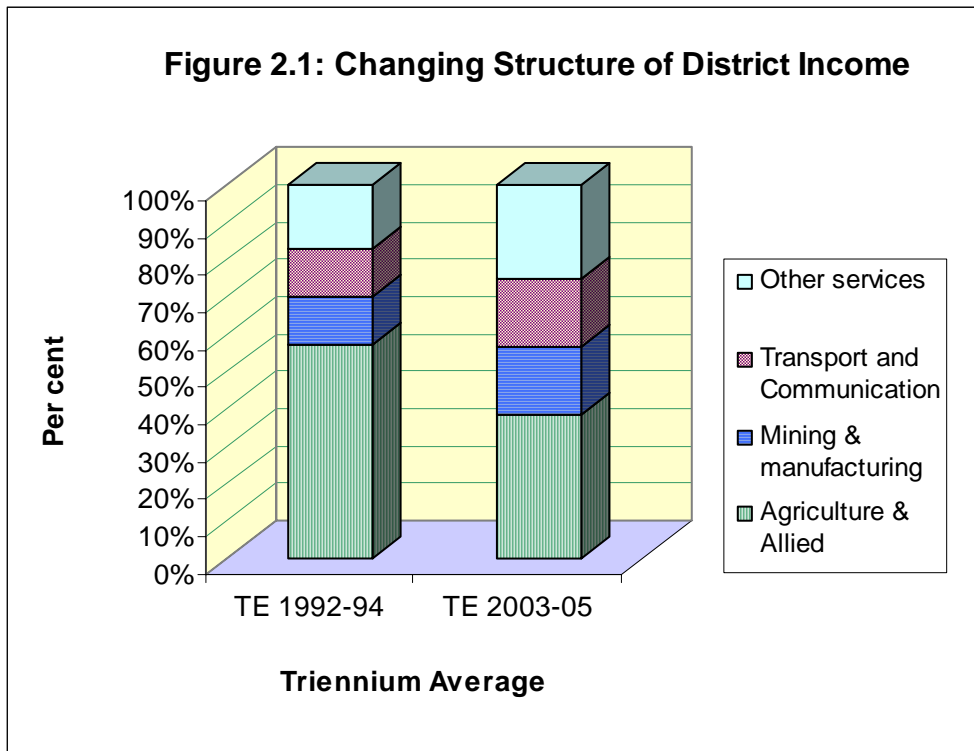
Table 2.1 shows structure of the district economy (also see Figure 2.1). The largely agriculture based economy is showing signs of change. Average share of the agriculture and allied sector has declined from 57 per cent during triennium ending 1993-94 to 43 per cent during triennium ending 2004-05. Both the transport-communication sector and other services observe an increase of five per cent points each in their respective shares during the later period. Mining and Manufacturing sector absorbs the remaining declining in the agriculture sector. Within the broad sectors of the economy, mining (1.7% points), construction (2.5% points); road transport (1.7% points), trade and hotels etc. (3.4% points), real estate etc. (2.8% points and other services (3.0% points) observe impressive gains in their share in DDP.

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

Sector	Average 1992-94	% Share	Average 2003-05	% Share
A: Agriculture & Allied	**29440**	**57.1**	**77696**	**43.3**
Agriculture	21054	40.9	48473	27.0
Livestock	6172	12.0	21059	11.7
Forestry	2191	4.3	8077	4.5
B: Mining & Manufacturing	**6586**	**12.8**	**29664**	**16.5**
Mining	93	0.2	**3379**	1.9
Manufacturing Regd.	1395	2.7	5232	2.9
Manufacturing Un Regd.	1900	3.7	5596	3.1
Construction	2544	4.9	13211	7.4
Electricity, Gas and Water Supply	654	1.3	2246	1.3
C: Transport & Communication	**6683**	**13**	**32417**	**18.1**
Railways	216	0.4	509	0.3
Other Transport	505	1.0	4845	2.7
Storage	5	0.0	33	0.0
Communication	384	0.7	1564	0.9
Trade, Hotel & Restaurants	5573	10.8	25467	14.2
D: Other Services	**8816**	**17.1**	**39671**	**22.1**
Banking & Insurance	2102	4.1	4986	2.8
Real Estate & Ownership of Dwelling	2050	4.0	12182	6.8
Public Administration	1927	3.7	7554	4.2
Other Services	2737	5.3	14949	8.3
Net District Domestic Product	**51525**	**100**	**179448**	**100**

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

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, particularly in querying and stone mines. However, growth in the non-farm sector comprising of construction, transport and communication trade hotels and restaurant and other miscellaneous services has a healthy shift in the share of income.

Figure 2.1: Changing Structure of District Income

Per cent (y-axis): 0%, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%

Triennium Average (x-axis): TE 1992-94, TE 2003-05

Legend:
- Other services
- Transport and Communication
- Mining & manufacturing
- Agriculture & Allied

People's Own Road

Changeri village of Kolana Panchayat Samiti is located on a height with unapproachable access. The old people, patients and women and challenged people found it difficult to climb the doongar. In spite of the access problem these Bhils were not ready to shift out from their paternal village. Under the NREGA Scheme the construction of pucca approach road was approved and a sum of Rs. 10.25 lakh was sanctioned. The villagers were extremely happy and women of this village worked with great zeal to construct the road. Every day, on an average, 70-80 persons were provided works leading to one person per family. The stones for the construction of the road were taken from the hill of this village. The work was completed not only in time even the quality of the construction is good. Even nitty-gritty was taken into consideration. For example in order to avoid collection of rain water on the road, a 2 ½ feet wide drainage is provided on the sides. With the increase in accessibility the villagers are happy and feel proud that they have made changer village accessible.

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 dawn from the district sample of NSS consumption expenditure surveys. But 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 shown 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. This is supported by secondary information as generated by small/large household surveys conducted within the district.

Table 2.2 shows distribution of land holdings for the year 2001-02 for all the tehsils of the district. Nearly two thirds of the land holdings at the district level are below 2 hectares. Twenty two per cent of holdings are 2-4 hectares and another 16 per cent are above 4 hectares. Similar is the situation with various tehsils. Khanpur typically has a better distribution of holdings with less than half of the holdings below 2 hectares and a quarter of holdings above 4 hectares. The distribution of holdings is much less skewed in Khanpur than other tehsils. Manoharthana is the other extreme with half the holdings below 1 hectare and 73 per cent of the holdings below 2 hectares.

Table 2.2: Distribution of Land Holdings by Tehsil (per cent)

Tehsil	< 1 ha	1-2 ha	2-4 ha	> 4 ha	Total
Aklera	47	26	20	7	100
Gangdhar	39	24	20	16	100
Jhalrapatan	40	23	21	16	100
Khanpur	26	23	26	25	100
Manoharthana	48	25	19	8	100
Pachpahar	33	25	22	20	100
Pirawa	31	24	24	21	100
District	**38**	**24**	**22**	**16**	**100**

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

2.3   Employment and Work Force Structure

Employment Structure of 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. This happens to be the case in Jhalawar where female WPR increases significantly in the year 2001. Such increase varies between -0.7 per cent points in Jhalrapatan, where the overall WPR declines; to 13.3 per cent points in Khanpur (Table 2.3). However, bulk of such increase is contributed by the increase in marginal workers. Pirawa and Gangdhar show 100 per cent increase in marginal workers. In other tehsils such increase varies between 43 in Khanpur to 81 per cent in Jhalrapatan.

Table 2.3: Work Participation Rate: Jhalawar

Tehsil	1991			2001			% points change in Female
	Person	Male	Female	Person	Male	Female	WPR
Khanpur	39.5	49.3	28.5	46.6	51.0	41.8	13.3
Jhalrapatan	44.5	53.3	34.9	43.3	51.7	34.2	-0.7
Aklera	49.1	54.6	43.0	50.3	52.7	47.7	4.7
Pachpahar	37.6	54.0	19.5	43.9	55.8	31.0	11.5
Pirawa	46.9	56.1	37.0	52.1	57.2	46.7	9.7
Gangdhar	39.6	57.9	20.2	45.8	57.5	33.3	13.1
District	**43.7**	**54.1**	**32.3**	**47.0**	**53.9**	**39.6**	**7.3**

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 labour, households industry and other workers. Agricultural labor declines across all the tehsils in the district. Khanpur and Pachpahar are the two tehsils which observe significant increase in number of cultivators, probably due to a better irrigation ratio and a favorable distribution of holdings. Diversification of workforce is assessed in terms of a shift in workforce away from agriculture or a decline in workforce dependent on agriculture. This is so because labour productivity and resulting income from agriculture is observed to be very low for most of the workers dependent on agriculture (see distribution of agriculture holding in the earlier section). At the state level, labour productivity in non-agricultural occupation to agriculture has increased from 3 to 5 during the last decade (GOR, Human Development Update 2008, Rajasthan). Table 2.4 shows sectoral distribution of workers in 2001. Of the total workers 72 per cent were main workers: This is significantly lower than the

1991 figure of 88 per cent of the main worker being employed in agriculture. The decline in the share of main worker may be attributed to lack of adequate work primarily in agriculture as is reflect in the decline both in the share and absolute number of agricultural labour.

Table 2.4: Distribution of Workers in Jhalawar District 2001

Category of	Distribution of Workers (%)			Distribution of Change over 1991(%)		
	Total	Male	Female	Total	Male	Female
Main Workers	72.0	88.6	47.6	24.4	41.8	10.7
Cultivators	64.6	62.0	71.8	20.0	15.6	23.5
Ag. Labors	12.4	9.9	19.1	-15.2	-11.6	-18.0
HH Industry	1.9	2.1	1.6	1.9	3.3	0.8
Other Workers	21.1	26.1	7.5	17.7	34.5	4.5
Marginal Workers	28.0	11.4	52.4	75.6	58.2	89.3

Source: Population Census, 2001.

It is for this reason that the increase in marginal workers accounts for 76 percent of the total increase in workers (Table 2.4). Across tehsils Khanpur and Pachpahar, which observe highest increase in WPR, such increase occurs on the strength of the growth in main workers. Pirawa and Gangdhar on the other hand observe almost the entire growth in worker contributed by marginal worker. However such growth of main workers in Pirawa and Gangdhar occurs in the agricultural sector indicating the strength and sustenance of this sector (Table 2.5 and 2.6 and also see Figures 2.2, 2.3 and 2.4).

Table 2.5: Distribution of Workers by Blocks (2001)

	Khanpur	Jhalrapatan	Aklera	Pancpahar	Pirawa	Gangdhar	District
Main Worker	78.9	75.8	68.6	79.0	64.8	67.1	72.0
Cultivator	63.8	55.7	78.8	54.8	65.9	66.3	64.6
Ag. Labour	17.2	9.6	7.5	13.4	17.2	14.0	12.4
HH Industry	2.0	2.1	1.7	2.0	1.9	1.9	1.9
Other Worker	17.0	32.6	12.0	29.8	15.1	17.8	21.1
Marginal worker	21.1	24.2	31.4	21.0	35.2	32.9	28.0

Source: Census of India 2001.

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

	Khanpur	Jhalrapatan	Aklera	Pancpahar	Pirawa	Gangdhar	District
Main Worker	57.5	18.5	26.2	45.4	-0.3	0.8	24.4
Cultivator	47.9	3.5	23.5	30.7	9.4	5.7	20.0
Ag. Labour	-8.6	-22.3	-8.7	-10.6	-20.7	-22.1	-15.2
HH Industry	2.5	3.2	0.8	2.5	1.0	1.9	1.9
Other worker	15.6	34.1	10.6	22.8	10.0	15.3	17.7
Marginal worker	42.5	81.5	73.8	54.6	100.3	99.2	75.6

Source: Calculated from Population Census of India, 2001.

Figure 2.2: Work Participation Rate
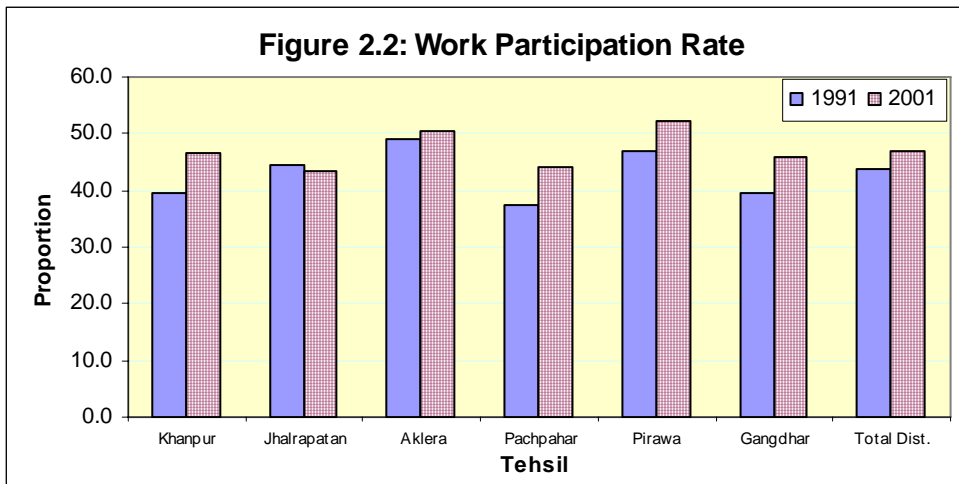
What appears to be lacking is the diversification of the workforce. The district needs far more opportunities in the non-farm sector to provide sustainable livelihoods to its people. There is a large potential for such diversification.

Figure 2.3: Distribution of Main Workers

Figure 2.4: Change in Total Workers (1991-01) by Occupation Group
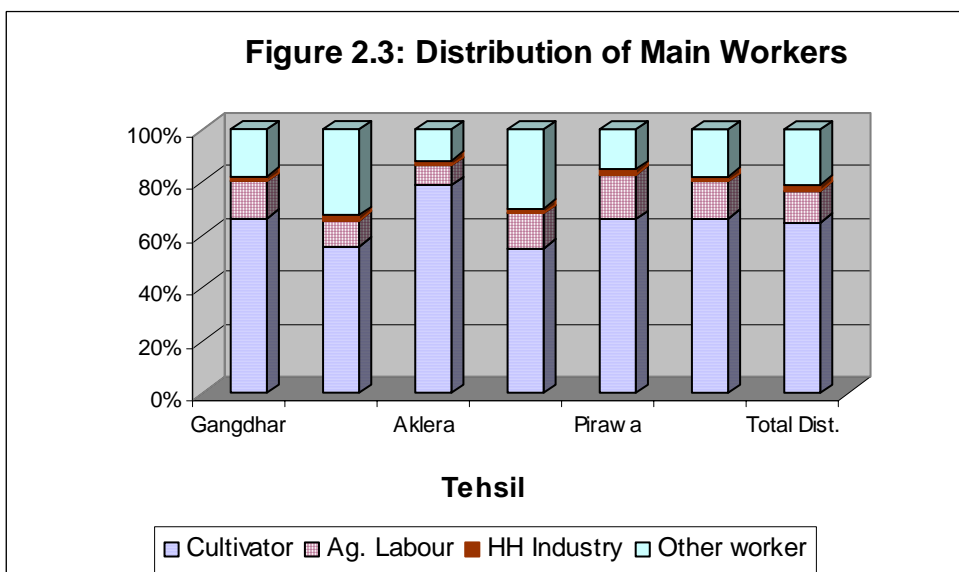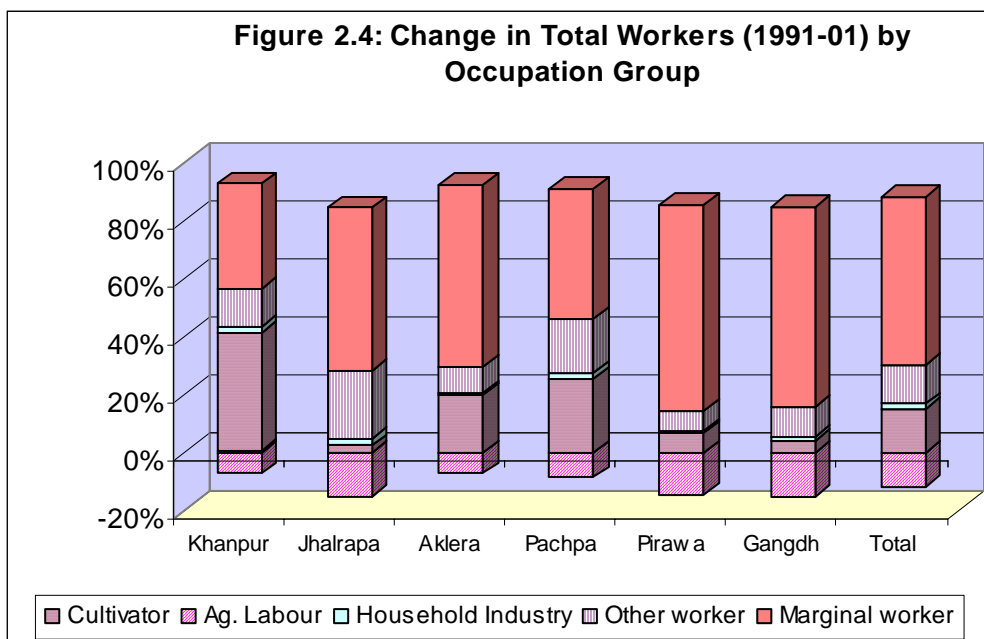
Strengthening of livelihoods and sustained growth of incomes of the household dependent on cultivation may be achieved either by a sustained growth in the farm sector over and above the growth in workers or diversification of workforce to the other sector of the economy. A sustained growth in the income of the farm sector requires both the growth in productivity and diversification of farm activities (significant diversification of crop husbandry has taken place in Jhalawar 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

As discussed earlier, farm sector, although still with the largest share in the district income is loosing its share. What is more important is that this sector sustains nearly 75 per cent of the population in 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 Growth in Agricultural Production

Until the beginning of 1990's food grain was the most important crop group and accounted for over half of the gross cropped area. Information on agricultural production at the district level is available by crops only. No indicator of the gross agricultural production such as Index of

agricultural production available at the state or all India level is computed at the district level. The lowest level of aggregation possible at the district level is the crop groups. We have therefore analyzed growth in terms of the major crop groups- food grains, oilseeds, spices and other crops. Food grain crops account for 28.1 per cent gross cropped area (GCA) during TE 2006-07. Major food grain in the district includes jowar and maize during kharif and wheat during rabi. Soybean and mustard are the main oilseed crops while coriander is the most important spices crop grown in the district with a share of 12 per cent in gross cropped area (Table 2.7 and Figure 2.5). The importance of kharif cereals has gone down between TE 1993-94 and TE 2006-07. Pulses also observed decline in its share in GCA. Food grain significantly lost ground in GCA's share. The trend rate of decline in area under food grain is estimated at 6.0 per cent during this period. These sharp declines in share of food grain crops in GCA have been on account of increased share of soybean (16 to 40%) and mustard (3 to 14%). Oilseeds together gained in share in GCA from 22 to 56 percent during TE 1993-94 and TE 2006-07. Thus major diversification in cropping pattern is observed in Jhalawar.

Table 2.7: Cropping Pattern in Jhalawar: Share (%)

Crops	TE1993-94	TE2006-07
Kharif Cereals	27.9	11.8
Wheat	10.2	10.7
Pulses	18.7	5.6
Food grain	56.8	28.1
Soyabean	15.9	40.1
Mustard	2.8	14.4
Oilseed	21.9	55.8
Coriander	12.4	11.6
Total Spices	13.9	12.9
Other Commercial Crops	7.5	0.2
GCA (000 ha.)	459.4	497.2

Source: Agricultural Statistics, Rajasthan.

The changes in cropped area are reflected in production. Food grain production in the district observes deceleration at the rate of 0.29 per cent per annum during 1991-92 to 2006-07 (Table 2.8 and Figure 2.6). This is in spite of a significant growth in productivity of food grain at 5.47 per cent per annum (Table 2.9). All the three cereals observe statistically significant growth in productivity (kharif cereals- 6% and wheat- 0.84%). Deceleration in food grain production implies a 5 per cent annual decline in per capita production of food grain and has serious implication for food security in the district in 'restrictive sense'.

Figure 2.5: Cropping Pattern
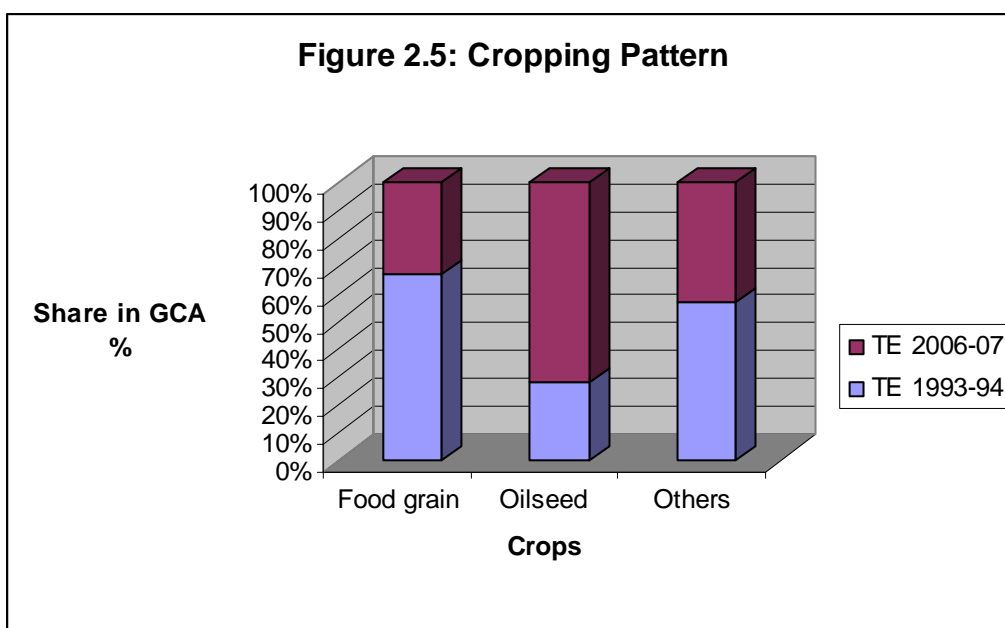
Table 2.8: Agricultural Production (000 Tonnes)

Year	Food grain	Oilseeds	Spices
1991-92	201	43	25
1992-93	289	109	29
1993-94	310	139	36
1994-95	262	160	36
1995-96	250	145	28
1996-97	297	153	40
1997-98	261	202	79
1998-99	230	261	61
1999-00	364	264	57
2000-01	164	132	48
2001-02	211	238	64
2002-03	143	81	33
2003-04	351	202	91
2004-05	273	354	79
2005-06	210	347	44
2006-07	331	331	83
Growth Rate	**-0.29**	**8.42**	**6.43**

Source: Agricultural Statistics, Rajasthan.

The oilseeds production grew during the same period by significantly by 8.42 per cent while spices production grew by 6.43 per cent. The decline in per capita food grain production however gets more than compensated by crop diversification in the district (Figure 2.7).

What is significant is that kharif cereals (mostly un-irrigated), observed high growth (around 6% per annum) in crop productivity while productivity of the irrigated wheat crop stagnated particularly during 1997-2004. The food grain productivity during 1991-92 to 2006-07 is 5.47 per

cent (Table 2.9). Oilseeds observed marginal growth in productivity (1.71%) while productivity of spices grew statistically significantly at 6.91 per cent.

Figure 2.6: Production in thousand Tonnes

Source: Agricultural Statistics, Rajasthan.

Figire 2.5 Per Capita Foodgrain Production in Jhalawar
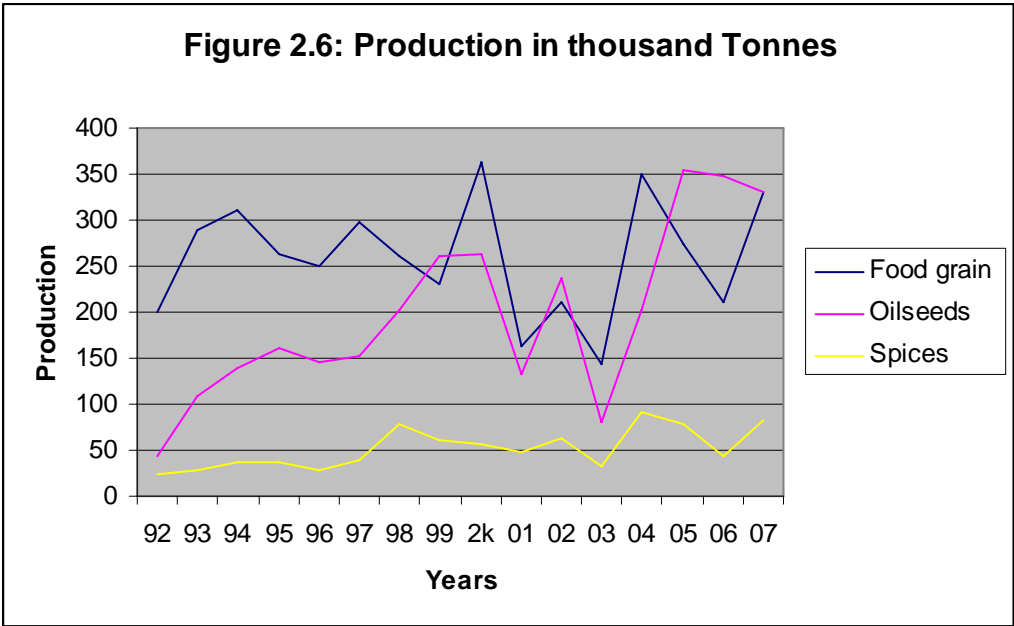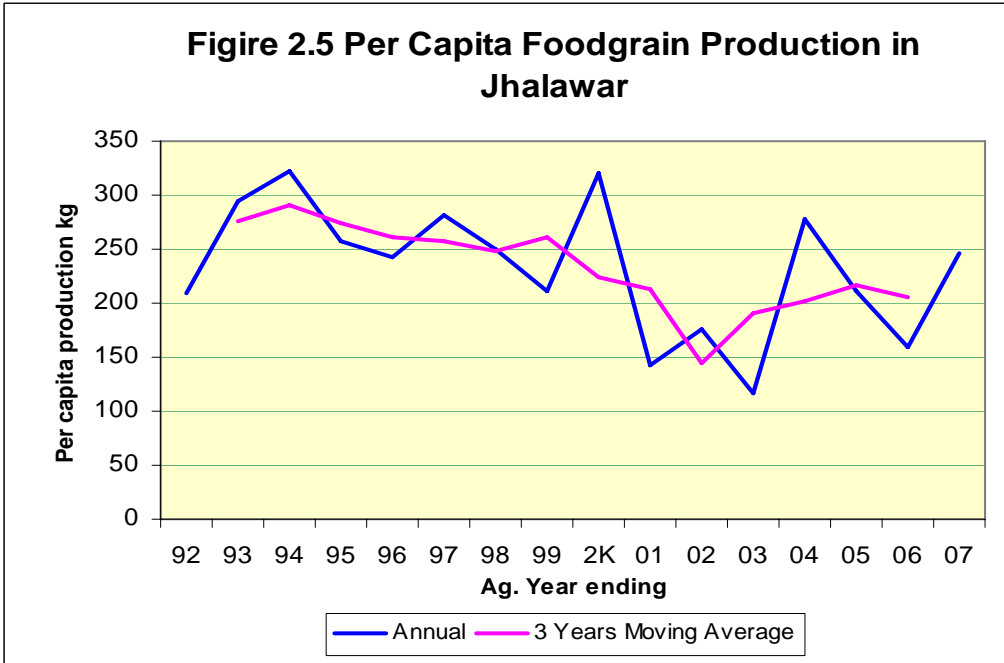
Neem and Jhalawar

Modern application of Neem includes its use as a bio-pesticide, nitrification in inhibitor for bio-fertilizer (neem coated urea) and also as a variety of health care products like soap, toothpaste, lotion and creams as well as application in medicinal use. It is estimated that more than 50 per cent of neem seeds produced are not collected for commercial exploitation. There is also lack information/guidance on correct post-harvest management. A need was

felt to provide support services for organized seed collection, post harvest processing, extraction of neem oil etc. A centre on neem and neem products development has been established at Jhalawar with the aims to conduct awareness/ training programme on collection of neem and its utilization; to develop nursery of improved varieties; collecting and processing of neem seeds; to develop linkage between neem seed collection agency/ processor and consuming indents and to develop neem based products for popularizing use of neem oil/ isolate in cosmetics, pharmaceuticals, pesticides and fertilizer products.

On the facilities side an office and a laboratory equipped with Chemical and Instrumental analysis of Neem and Neem products have been set-up and it provides support services; a primary neem processing unit comprising of Decorticator, Neem Seed Cleaner, Pulverizer, Drier and Cold Press Expeller has been installed and; green-house comprising of Poly House and Net House for propagation of neem and other aromatic plants under protected environment cultivation has been set-up. Awareness programmes on neem seed collection and use of neem products are also being organized (Ministry of Medium and Small Industries, Government of India).

Table: 2.9 Productivity of Major Crops (Kg/ha)

Year	Food grain	Oilseeds	Spices
1991-92	723	556	495
1992-93	1011	987	413
1993-94	1106	1218	490
1994-95	1036	1072	581
1995-96	1175	846	412
1996-97	1247	859	564
1997-98	1151	1112	766
1998-99	1064	1220	752
1999-00	1706	1147	824
2000-01	1278	563	940
2001-02	1486	1060	798
2002-03	1121	509	975
2003-04	1854	1232	989
2004-05	1758	1344	1060
2005-06	1852	1206	933
2006-07	2198	1177	1183
Growth Rate	**5.47**	**1.71**	**6.91**

Source: computed from Agricultural Statistics, Rajasthan.

Climate Change and Jhalawar District

Jhalawar district in Rajasthan is located in a semi-arid area that receives an average of 943 mm of rainfall annually. In addition to high degrees of climate sensitivity, it also ranks among the districts with the lowest adaptive capacity. Over the past 10 years, many farmers in Jhalawar have shifted from traditional crops, such as sorghum and pearl millet, to soybean, which receives higher market prices and yields quick returns owing to a shorter life cycle. Farmers in Jhalawar are also found to be highly vulnerable to climatic variability. When Jhalawar experienced its fourth consecutive year of drought, and crop yields were substantially reduced, particularly for the majority of farmers who lack access to irrigation. Rain-fed agriculture is practiced in village Lakhakheri Umat, where 94 per cent of the farmers have small or marginal landholdings. A review of coping mechanisms reveals that a very small group of semi/medium farmers is able to cope with adverse climatic conditions merely through the sale of available stocks. On the other end of the spectrum, landless laborers can only resort to seasonal migration due to lack of any productive assets or availability of alternative employment options in the village. Small/marginal farmers use a variety of adaptation options such as sale of cattle, shifts to other crops, labor, as well as seasonal migration. This range of options, however, constitutes only temporary coping measures. Options that enhance longer-term adaptive capacity (such as institutional credit, crop insurance, and use of drought-resistant varieties) are not used by farmers due to procedural complexities and stringent eligibility criteria, compounded by lack of awareness.

2.4.2 Animal Husbandry

A supporting farm activity with lower annual fluctuations is animal husbandry. Cattle is the predominant livestock in the district and accounts for 48 per cent of the livestock population in 1992 but looses its importance (41% in 2003) in the following years due to a declining bullock population caused by mechanization of the agriculture (Table 2.10). Number of cattle in the district has declined for 4.58 lakh in 1992 to 4.26 lakh in 2003. This implies a decline of 69 cattle per 100 households. Buffalo population (mostly female) has almost kept pace with the growth in the human population and has increased from 130 to 131 per 100 households during the same period. Goat population has increased from 2.52 lakh to 3.0 lakh resulting in an increase of 6 goats per 100 households (Table 2.11). Number of sheep during the reference period declined from 19 thousand to 1 thousand resulting in a decrease of 5 sheep per 100 households. Over all, number of animals per household decline by 68 per 100 households. Converting all animal units to cattle units the estimated decline is 66 cattle units (Table 2.12).

Decline in livestock population in term of cattle units varies between 57 and 73 units per 100 households across various blocks. 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. Between 1992 and 2003, bullock population (above 3 years) declined by 20 per cent while the number of cow (above 3 years) increased by 5 per cent. Number of buffalo (above 3 year) increased by 28 percent. Overall milch animals, above 3 years, observe an increase of 18 percent during the reference period. This implies an increase in large milch animals. However, large milch animals per hundred households have marginally declined from 280 in 1992 to 211 in 2003.

Table 2.10: Growths in Livestock Population in Jhalawar

Livestock	Numbers (000)			Per 00 Households		
Type	1992	2003	Change	1992	2003	Change
Cow	458	426	-32	280	211	-69
Buffalo	212	264	52	130	131	1
Goat	252	322	70	154	160	6
Sheep	19	14	-5	12	7	-5
Other	15	14	-1	9	7	-2
Total	**956**	**1040**	**84**	**584**	**516**	-68

Note: Figure in parenthesis indicates Change in terms of cattle units.
Source: Statistical Abstract, Rajasthan, 2005.

Table 2.11: Changing Structure of Livestock in Jhalawar

Livestock Type	Percent Share of different Livestock		
	1992	2003	Change
Cow	48	41	-7
Buffalo	22	25	3
Goat	26	31	5
Sheep	2	1	-1
Other	2	1	0
Total	100	100	0

Source: Calculated from Table 2.10.

Table 2.12: Declining Livestock by Blocks

Tehsil	Cattle Units (per 00 HH)		
	1992	2003	Change
Khanpur	660	603	-57
Jhalrapatan	522	454	-68
Aklera	696	636	-60
Pachpahar	551	490	-61
Pirawa	649	575	-73
Gangdhar	718	648	-70
District	626	560	-66

Source: Calculated from Table 2.10.

2.5 Non-farm Activities

Jhalawar is an industrially backward district of the state. The share of unregistered manufacturing sector has declined from 3.7 per cent during triennium ending 1993-94 to 3.1 per cent during triennium ending 2004-05. The share of both the registered and unregistered manufacturing has marginally declined from 6.4 to 6 per cent during the reference period. District Statistical Outline reports limited information of industrial activity. The state has only 48 registered units 25 of which are saw mills. Mining is an important activity of the district but the activity is largely restricted to non-metal minerals mainly the masonary stones including 'Kota Stone'.

2.6 Poverty and Food Security in Jhalawar

The main source of poverty estimates in India is the consumption expenditure surveys of the National Sample Survey organization. However, these surveys provide robust estimates of the poverty population only at the state level and some what weak estimates for the sub-region of the state. No estimates are available at the district level. Jhalawar falls in the south eastern region of the NSS. This region observes sharp fall in rural poverty from 59 per cent in 1972-73 to 10 per cent in 1999-2000. Jhalawar happen to have lower resource endowment in this NSS region and hence is likely to have higher poverty than the entire south east region in 1999-2000 (State Human Development Update 2008, Rajasthan). However, an alternative estimate of rural poverty is provided by the BPL Census. This census is conducted every five years. The latest estimates are available for the year 2002. Between 1997 and 2002 numbers of BPL households have declined from 55190 to 34428 implying a 38 per cent decline in the number of poor households. Incidence of poverty is the highest among scheduled tribe households. During 2002 such

incidence is estimated at 31 per cent for ST, 13 per cent for SC and 9 per cent for non SC/ST population. Overall the incidence of poverty is 16 per cent by the 2002 BPL Census. Across blocks incidence of poverty is the highest in Manoharthana at 21 per cent followed by Bakani and Dag at 19 per cent. On the other hand 71 percent of he ST households in Pirawa are poor (Table 2.14).

Table 2.14: Distributions of BPL Households by Social Group 2002

Block/Tehsil	SC		ST		Others		Total BPL Families			
							2002		1997	
Khanpur	639	(13)	1170	(30)	1454	(9)	3263	(13)	8962	(37)
Jhalrapatan	1047	(15)	1445	(19)	2085	(10)	4577	(13)	8605	(28)
Manohar Thana	471	(23)	795	(19)	2623	(21)	3889	(21)	13177	(47)
Pirawa	418	(7)	1482	(71)	1855	(9)	3755	(13)	7625	(28)
Bakani & Dag	1915	(13)	3231	(37)	6839	(17)	11985	(19)	16821	(30)
District	4490	(13)	8123	(31)	14856	(13)	27469	(16)	55190	(33)

Note: Figures in Parentheses indicate the percentage of BPL families in the respective category.
Source: BPL Survey, GoR.

Efforts for Poverty Alleviation in Jhalawar

Under DPIP 3926 CIGs formed with 42743 members in rural Jhalawar. Of these 1340 were women groups with 18 thousand women members. About 4000 sub-projects were approved in the district with total investment of Rs.97.40 crore. Members contributed Rs.14.46 crore. Besides, 140 projects of housing were approved for Bhil and Kanjar communities for 1491 families. About 889 schemes were approved of which 374 were anganwari centres, 122 community bhawans, 41 sub-centres, 95 additional classrooms, 22 bridges, 10 community wells and 21 minor construction works. 5970 families linked to 631 sub-dairy projects. With investment of Rs.1.15 crore, 667 hectares of grazing lands were developed. 1434 self help groups with 13640 members were provided working capital of Rs.1.85 crore through bank linkage. 31327 BPL families benefited through 2651 sub-projects.

Jan Mitra

Jan Mitra, or a "friend of the public" is part of Government of India- UNDP project on "Improving Citizens' Access to Information" which commenced activities in 2001. This project was formulated in recognition of the need for a more open regime with freer access to information with a view to empowering citizens, making administration more participatory, ensuring greater transparency, and deterring the arbitrary exercise of official power. Against the backdrop of the Right to Information Acts, this has been a phase of learning for all the stakeholders on the issue of Access to Information. This project and allied initiatives have been timely interventions aiming to add value to the learning process on the issue of access to information through a multi-pronged strategy: (i) through the sensitization, re-orientation and capacity building of government officials to the issue of freedom of information that would enable a change from a culture of secrecy to one of openness; (ii) by supporting re-engineering of prevailing systems, which now have to respond more swiftly to the demand for information, which in turn might benefit from computerization and improvements in the records management system; (iii) by creating and increasing the awareness of citizens, and building their capacity to make reasonable demands for information. Efforts for these could be greatly strengthened by forging partnerships, facilitating discussion and inclusion of diverse points of view from a range of stakeholders such as the media, NGOs, consumer rights/ research institutions and the academia and; (iv) providing support to an enabling legal and institutional environment, within the framework of which all the above efforts would be attempted. Jan Mitra in the rural district of Jhalawar, Rajasthan, characterized by low literacy, is one of the six disparate locations chosen for piloting ICT-based Access to Information initiatives under this project.

Results
Bhawani Mandi: It is past 9:30 p.m. in this small border town in the Jhalawar district of the picturesque state of Rajasthan, best known for its orange, opium and coriander fields. The town is asleep and the shops are long

closed, save the lone information kiosk that closes only after 10 pm. The kiosk is run by a local youth who received the franchise to set up the Jan Mitra information kiosk under the Government of India-UNDP initiative that has piloted the use of information technology for improving citizens' access to information pertaining to government services in some of the most remote parts of the country. After a hard day's grind, Raju Mali, in his mid-thirties is slightly built and looks weary, steps into the kiosk. He has stopped by the kiosk, having seen the sign-board that announces in detail the whole gamut of government services that are available at the info-kiosk. One such service that catches Mali's eye and is immediately relevant to him concerns a land title certificate issued to the villagers.

"My father died a year ago and I have not managed so far to have the property transferred in accordance with his will," Mr. Mali tells the kiosk owner. "You know how it is at the district office. We go all the way and find ourselves at the mercy of the clerk who seldom helps, and almost never without a consideration," Mr. Mali says. "I am a lowly electrician in a textile mill and am hired on a daily wage arrangement. I cannot afford to waste a full day being sent back and forth between sundry government offices, without much hope that my job will be done. But can you help in any way?" Mr. Mali asks with a look of hopelessness and incredulity. The kiosk-owner is a consummate information retailer who shows Mr. Mali the on-line application form and promises that the transfer certificate will be issued to him in seven days and it costs only Rs.0 only. Mr. Mali's first look is one of disbelief but after further explanation, Mr. Mali is convinced and ready to use the facility. For the owner, it has not been a bad day; his turnover for the day- a decent Rs.150. Most of this income comes from helping regular people access government-related information.

Another kiosk owner in Bhawani Mandi, says most people's complaints deal with such Government services as power supply, pensions and land dispute resolution. Most are attended to with alacrity. In one incident, the manager of the local cooperative bank made an on-line complaint against the electricity board to clear the loose high-tension wiring over his house that was exposing his entire family to imminent risk. He had personally petitioned the officials on a number of occasions, without success. But once he registered the on-line complaint, the wires were fixed within three days. The speedy grievance redressal has been a big ticket success story under the Jan Mitra initiative. Within a relatively short span of time, the Jan Mitra initiative has been able to create demand for government services among a section of the population and even managed to deliver a fraction of these services at their doorstep. In remote and chronically under-served parts of Jhalawar, the border district of Rajasthan in the foothills of the Aravalis, notorious for its isolation from the mainstream - the nearest railhead is still a good 45 kilometres away- the seemingly non-descript Jan Mitra village information 'shops' are reviving people's faith in the system by, what most villagers reckon, for the first time facilitating their access to the government. In a region with high levels of income and human poverty, an abysmal state of village roads, chronic scarcity of drinking water supply and erratic, insufficient and poor quality of electricity, it is remarkable how, in village after village, Jan Mitra is heralding the arrival of an incipient knowledge economy. From registration of births, deaths and land records, to grievance redressal, to the submission of on-line applications for a clutch of government schemes and services, to even getting examination results, each e-service comes with its price-tag. Jan Mitra is being implemented by the Jan Mitra Society headed by the District Collector. The Society consists of the Governing, Advisory and Technical Committees, to manage various aspects of the project. Kiosk operators are mandated to provide certain services of public interest, such as information on BPL families, development schemes and that pertaining to hygiene and health, free of charge. The nominal price for other services is determined by the Society, and typically includes the cost of providing it (electricity, internet connectivity, print outs) plus a small mark up for the kiosk operator.

The villagers are not only not paying up happily, but actually counting their savings in terms of time and effort. It is clear as daylight that what they are enjoying the most, however, is the freedom from an unhappy past associated with the excesses of the Babu (a term loosely used to define every form of the local official) and the red tapism that the Babudom has came to represent for that man on the street.

A combination of administrative reforms and information-technology is marching hand-in-hand in several pockets of India including some of the least developed regions such as Jhalawar in Rajasthan. With the State Government's energetic efforts to bring governance closer to the people through initiatives like sub-district development fairs and grievance redressal fora to deal with people's government-related problems on-the-spot, the Access to Information project using the IT-enabled information kiosk approach marks a huge leap forward in bridging the chasm between local administration and the end-users of service delivery.

Lessons
The project illustrates that Access to Information is a cross-cutting issue with tremendous potential as it holds the key to a range of other rights and opportunities, and can therefore be applied to address a host of development issues. The success, however, has not lulled the implementers into a false sense of complacency. There is realization that for the long-term viability and sustainability of the project constant updating of information would be necessary. An innovative, grounds-up approach to the use of ICT for development, the initiative offers lessons in public-private partnerships for micro-entrepreneurship development at the grass-roots level.

The profile of users of the ICT-kiosks shows that women have hardly been using the services. This is a cause for concern, as this facility is provided cost-free information on socially relevant issues such as health and hygiene, and on subjects such as reproductive health and family planning. Considering the socio-economic society in which the initiative is based, this is not surprising. Women run kiosk should be encouraged, which would encourage women to access the services.

Development Impacts
One can unhesitating say that the project has led to a paradigm shift in terms of the way in which people are accessing information. It has no doubt heralded the advent of an information economy in a seemingly unlikely place. It has created a livelihood opportunity for the unemployed youth, and will also inspire and encourage people to undertake training in the usage of computers.

Dag, Jhalawar: *Dug is a sleepy backward-caste village deep inside Jhalawar, some 120 kilometres from the district headquarters and over 500 miles south-east off Jaipur, the state capital of Rajasthan. M.A.Gori, a 25-year-old local lad, together with his two younger brothers, runs the Jan Mitra kiosk and a range of other IT-enabled services under the banner of the Divine Computer Institute. Training village high-school children in basic computer skills is big on his agenda and by far the biggest money spinner for the brothers. They keep a hawk's eye on software training schemes for poor that the State and Central governments either sponsor or subsidize, bidding for the schemes and lining up an ever-expanding customer base. Gori, a computer techie, proudly claims to be the first applicant under the Jan Mitra scheme. After being selected by the 'tough' interview committee to run the information kiosk, Gori, along with the score-odd other young entrepreneurs who were selected, received an intensive seven-day training that equipped him with a full knowledge of the customized Jan Mitra software as well as the functioning of various government departments. The boys, exuding a sense of genuine achievement, declare the info-kiosk a runaway success for them. Services such as certificates for land records are a big hit among the villagers as is the on-line grievance redressal system and the on-line application forms that allow people to pitch for dozens and dozens of poverty-alleviation schemes that the villagers earlier did not even know existed. Jan Mitra is a win-win situation for all. The self-employed are able to expand the menu of services they can provide to their customers, while improving their own prospects and gaining tremendous self-confidence. The average citizen gains on several counts: he saves time, effort and also money, because he is spared repeated visits to a distant office which would have meant incurring transport costs, and loss of wages. The Government is able to "virtually" reach out and come closer to the citizens without physically having to do so, which would have meant financial overheads. And apart from the obvious short-term gains to all concerned, it marks the first step forward in the evolution of democratic governance-making it more participatory, responsive and transparent. Clearly, there is evidence of Government officials realizing and embracing their new role, and recognizing the emergence of citizens as equal partners in the development process. This would surely have been a long and uncomfortable journey for the officials - from being in a superior position of unquestionable authority - to one of client-orientation, transparency and answerability. Also evident is the fact that citizens are shedding their former servile attitude and seeking information with confidence (and wonder!) and are able to access government services and schemes, and the opportunities these could open up. The ICT kiosk, by bringing public services closer to the citizens, restores their faith in the government machinery, and by allowing them access to information, opens several windows of opportunity, thereby laying a sound foundation for the process of their empowerment. The effects of the advent of the information economy give room for hope that the stage has been set for citizens to evolve not only in their personal capacity, but also as development actors who would be able to contribute to building a better tomorrow.*

2.7   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. Jhalawar district has a variety of women's groups. There are large number women and child department groups. Since inception, there are 9762 SHGs in the district with saving of Rs.532.84 lakh and loans worth Rs.1748.49 lakh. 657 SHGs were reported to be engaged in income generating activities. However, 827 SHGs are defunct also. As these are mainly women's groups, there is lot of potential for women gaining from groups.

2.7.1   Women in Economic Activities

Some indication of women in economic activities is available in economic census of 2005. In Jhalawar as per the 2005 economic census, there were 69552 workers engaged in non-agricultural establishments. Of these 8213 were women (11.81% of total workers). Further, there were 19599 persons usually working in rural non-agricultural establishments. Of these 3144 were females. There were 17682 hired workers of which 3033 were females. This means that hired female workers constituted 96.47 percent of all female workers. In urban non-agricultural establishments, there were 21567 workers. Of these 2029 were females. There were 17916 hired workers of which 1926 were females. This means that hired female workers constituted 94.92 percent of all female workers. In case of combined non-agricultural establishments, there were 41161 persons usually working. Of these 5173 were females. There were 35598 hired workers of which 4959 were females. This means that hired female workers constituted 95.86 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 2.15 and 2.16. In case of own account enterprises (with no hired workers) in Jhalawar there were 24348 enterprises that employed 31519 workers (table 2.15). Of these 11.69 percent were females. There were 16456 rural own account enterprises (OAE) that had 21853 workers of which 13.26 percent were females. Among the rural OAEs, 14434 were non-agricultural enterprises that employed 18815 workers. Of these 11.54 percent were female workers. There were 2022 agricultural OAEs that had 3038 workers of which 23.92 percent were female workers. In urban OAEs, 9666 workers were employed in 7889 enterprises. Of these 8.14 percent were female workers. There were 7822 urban non-agricultural enterprises with 9571 workers. Of these 8.03 percent were females.

Table 2.15: Female Employment in OAEs- 2005

Districts	Enterprises	Workers Total	Female Workers	% Female workers to Total
Agricultural- Rural				
Jhalawar	2022	3038	727	23.93
Non-Agricultural- Rural				
Jhalawar	14434	18815	2171	11.54
All- Rural				
Jhalawar	16456	21853	2898	13.26
Agricultural- Urban				
Jhalawar	67	95	18	18.95
Non-Agricultural- Urban				
Jhalawar	7822	9571	769	8.03
All- Urban				
Jhalawar	7889	9666	787	8.14
Agricultural- Combined				
Jhalawar	2089	3133	745	23.78
Non-Agricultural- Combined				
Jhalawar	22256	28386	2940	10.36
Combined- All				
Jhalawar	24345	31519	3685	11.69

Source: Economic Census 2005, GoR, July 2008.

In case of establishments, Jhalawar had 12723 enterprises with 41975 workers and 12.81 percent female workers. The 12311 non-agricultural establishments had 41166 workers with 12.53 percent being female workers. In 412 agricultural establishments, there were 809 workers that had 26.95 percent female workers. Now in 7879 rural establishments, 20332 workers are employed; 16.45 percent are females while in case of non-agricultural rural establishments (7491), 19599 workers are engaged of which 15.98 percent are females. There are 388 rural agricultural establishments that had 733 workers with 213 female workers. In urban establishments (4844), 21643 workers were engaged. Of these 9.40 percent are females. In case of urban non-agricultural establishments (4820), there were 21567 workers with 9.41 percent female workers. There are 24 urban agricultural establishments that employed 76 workers and 5 females.

Table 2.16: Employment in Establishments- 2005

Districts	Enterprises	Total Workers	Female workers	% Female workers of total
Agricultural- Rural				
Jhalawar	388	733	213	29.06
Non- Agricultural- Rural				
Jhalawar	7491	19599	3131	15.98
All- Rural				
Jhalawar	7879	20332	3344	16.45
Agricultural- Urban				
Jhalawar	24	76	5	6.58
Non-Agricultural- Urban				
Jhalawar	4820	21567	2029	9.41
All- Urban				
Jhalawar	4844	21643	2034	9.40
Agricultural: Combined				
Jhalawar	412	809	218	26.95
Non-Agricultural- Combined				
Jhalawar	12311	41166	5160	12.53
All- Combined				
Jhalawar	12723	41975	5378	12.81

Source: Economic Census 2005, GoR, July 2008.

The above information shows that in Jhalawar 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 more than in urban areas.

2.8   Main Development Problems or Issues

Jhalawar is industrially a backward district of the state. Even though the district occupies prime position in production of soyabean, orange and coriander, agro processing industry in the district has failed to pick up. The district lacks basic facilities for the development of industries.

1. The district headquarter is not linked by rail road. There is a proposal to link Jhalawar to Bhopal via Ramganj Mandi. This should help important blocks of the district viz. Bakani and Manoharthana and it will provide pace to development of the district.

2. There is no dairy cooperative in the district. However, eighty-nine dairy committees are operational in the district which collect and send milk to Kota for pasteurization and packing.

3. Cold storage facility needs to be strengthened in the district.

4. Jhalawar is the highest rainfall district of the state but most of the water flows out of the district in the absence of watershed development. It also leads to soil erosion. Development of watershed, farm bunds and small/medium irrigation plans are needed to use this water for the district. This is all the more important as five out of six administrative blocks of the district have been declared critical with the state of groundwater development varying between 94 and 110. Only Khanpur block is classified as semi-critical with the stage of groundwater development as 71.

5. The Kota stone processing units in the district are causing significant environmental problems due to the slurry which is thrown around. There is a need to utilize this slurry more usefully for the sake of the environment.

Appendix A2.1: Declining Share of Agriculture in NDDP

| Year ending | Agriculture & Allied | Sectoral Distribution of NDDP | | |
		Mining & Manufacturing	Transport and Communication	Other Services
1992	56	14	13	17
1993	59	13	13	16
1994	56	12	13	19
1995	48	17	15	20
1996	51	14	18	18
1997	53	12	17	18
1998	53	14	17	16
1999	52	14	17	17
2000	57	13	15	16
2001	48	15	17	20
2002	39	19	18	25
2003	41	17	18	25
2004	32	20	18	29
2005	43	17	19	21

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

Appendix A2.2: Distribution of Irrigated Area by Crop Groups 2006 (Per cent)

Tehsil	GIA (ha)	Rabi Cereals	Rabi Pulses	Spices	Fruits & Vegetables	All Crops	Oilseed Crops
Khanpur	57804	13.7	0.2	20.8	0.5	35.7	63.9
Jhalrapatan	40572	26.5	4.0	46.7	4.3	81.8	17.2
Aklera	23924	26.6	2.3	47.6	0.6	77.1	21.7
Pachpahar	22110	24.9	6.0	37.8	5.9	74.6	24.1
Pirawa	34939	18.8	13.5	34.3	10.0	76.7	21.9
Gangdhar	18020	33.9	22.0	25.5	0.5	81.9	16.1
District	177740	35.8	2.0	38.3	0.8	77.0	22.0

Source: District Statistical Outline, Jhalawar.

Appendix A2.3: Area and Production of Orange

Years	Area (ha)	Production (tonnes)
1992	1779	1423.3
1993	1661	913.6
1994	1982	3973.9
1995	2164	3096.1
1996	2098	3674.5
1997	3322	6976.2
1998	2977	7293.6
1999	3289	656.1
2000	3729	21362.4
2001	3966	32612.1
2002	4944	31632.3
2003	5693	47846.0
2004	5847	44948.4
2005	6562	84518.7
2006	6778	83537.6
2007	7508	97125.6

Source: Directorate of Horticulture, Rajasthan, Jaipur
        and Revenue Department, Jhalawar.

Chapter 3

Status of Education

3.0   Introduction

The spread of modern education stayed at a low key for most of the post-independence period in most of Rajasthan and Jhalawar was no exception. However, from the perspective of relative position of the district, Jhalawar enjoyed a better educational profile. Jhalawar stood seventh in literacy in the year 1904-05 among the 20 states and chief-ships of Rajputana with 3.3 per cent of the inhabitants (6.4% male and 0.2% female) able to read and write. Efforts were further made and according to the census returns of the year 1931, Jhalawar State had secured the highest percentage in literacy among the States/Principalities of Rajputana. In that year 6.6 per cent of the population was literate. The situation did not change in the subsequent period and the 1951 census reports 7.5 per cent of the population (12.7% male and only 2.2% female) as literate. The scene improved in the independent India, (Figure 3.1) although slowly until the New Educational Policy of 1986 suggested innovative programmes for elementary education.

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 33 per cent in 1991.

The second push to the improvement of educational status was provided with the launching of *Lok Jumbish* in 1992. The program was later merged with DPEP. Although evaluation studies on *Lok Jumbish* have largely lauded the programme, the real success of *Lok Jumbish* 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.

Figure 3.1 Literacy Rate (1981-2001)
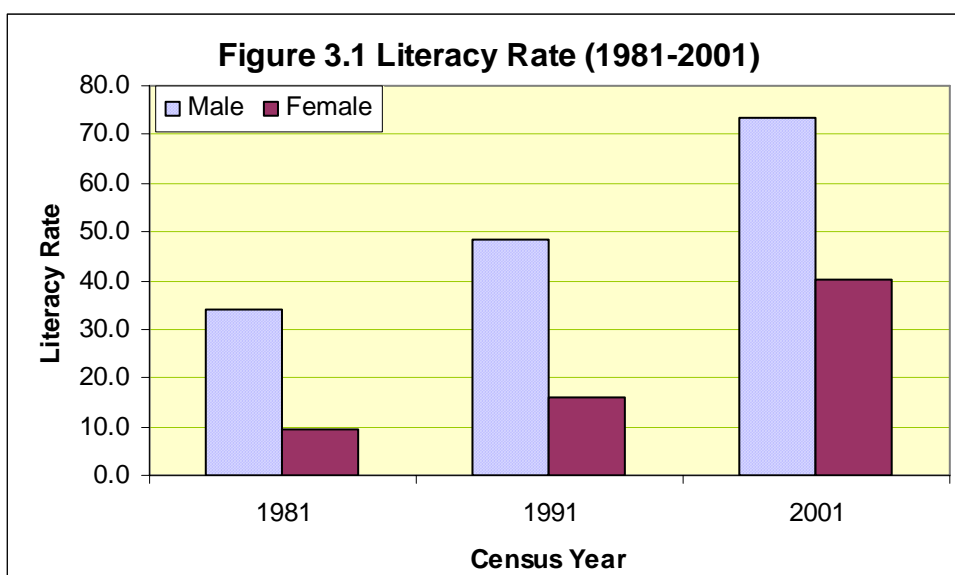
The success of educational programmes as reflected in the current educational profile of the district is discussed here. In the process, issues related to strengthening educational programmes and identifying supply side gaps– both quantitative and qualitative– for sustaining development in education sector have been put forth.

3.1 Status of Literacy and Enrolment

3.1.1 Literacy

With the overall literacy of 57 per cent in 2001, up from 22 per cent in 1981 and 33 per cent in 1991, Jhalawar shows impressive gains in literacy per cent. The gains are impressive both for male and female literacy rates, at 73 and 40 per cent, respectively (Table 3.1). A significant feature of growth in the number of literates is that the backward classes out perform others during the nineties. Literacy rate for the scheduled caste population more than doubles from below 24 per cent to 53 per cent during the nineties. Similarly scheduled tribe population increases its literacy rate from below 30 per cent to 51 per cent while the remaining social groups observe an increase from 36.2 to 60.4 per cent. (Table 3.2)

Table 3.1: Literacy Rate of the District from 1951 to 2001

Census Year	Overall	Male	Female
1951	7.5	12.7	2.2
1961	13.6	21.9	4.7
1971	17.6	27.1	7.2
1981	22.1	34.0	9.3
1991	32.9	48.2	16.2
2001	57.3	73.3	40.0

Source: Population Census of India, various years.

Table 3.2: Literacy Rates of ST/SC & Others from 1991 to 2001

Years	ST	SC	Others
1991	29.8	23.8	36.2
2001	50.5	48.0	60.4

Source: Population Census of India, 2001.

However, bulk of the illiterates in Jhalawar, 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 above 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.

Hole-in-the-Wall Effort

In the district of Jhalawar in Rajasthan, children of select upper primary schools will soon experience a new way to learn. The Rajasthan State Government has signed a Memorandum of Understanding (MOU) with Hole-in-the-Wall Education Ltd. (HiWEL) in New Delhi on 21st September 2005 for a project to set up and operate Learning Stations in Jhalawar. The three-year project, which improves outcomes of elementary education, is part of the Sarva Shiksha Abhiyan (SSA) (hole-in-the-wall).

An 'incremental literates' to 'incremental population ratio' (ILIP ratio) at 152 per cent is impressive. However, such gains in literacy are not equitably distributed across social groups, gender and regions within districts. Table 3.3 shows incremental literacy rates by the social groups. Clearly the SCs and STs have outperformed others- SCs are way above others, at 240 per cent and STs at 167 per cent- while the general category populations show a relatively poor performance, 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 Jhalawar (Figure 3.2).

Table 3.3: Ratio of Increase in Literacy to Increase in Population, 1991-2001

Social Group	Incremental Literate / Incremental Population ratio (%)		
	Total	Male	Female
Scheduled Caste	240	293	188
Scheduled Tribe	167	204	130
Others	139	156	122
All population	152	174	129

Source: Population Census of India, 2001.
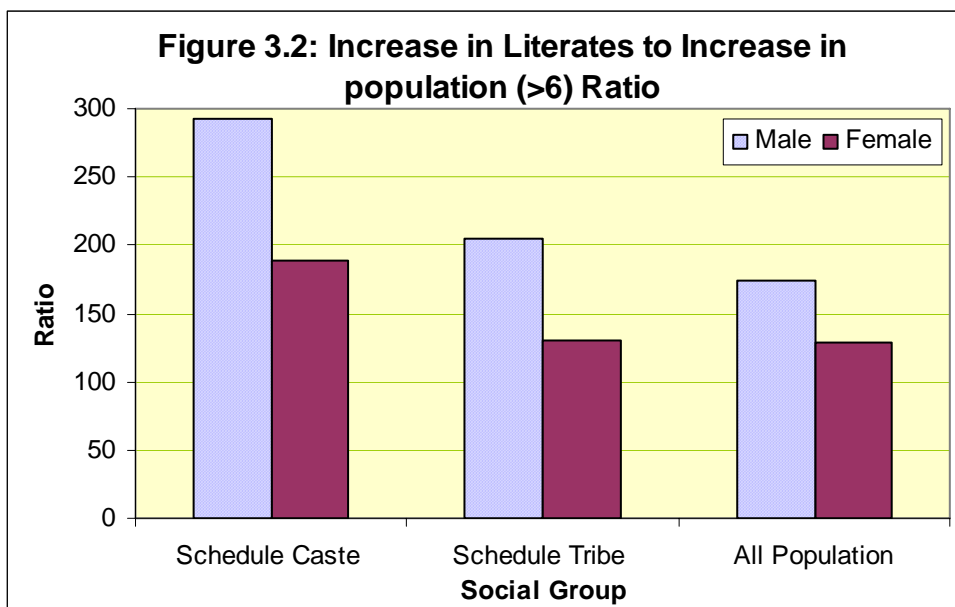
Figure 3.2: Increase in Literates to Increase in population (>6) Ratio

Yet another feature of the gains in literacy in Jhalawar appears to be the gender disparity in Incremental Literate/Incremental Population ratio (ILIPR). 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 population groups but is larger for the SC/ST population at 156 implying a greater gender bias among the scheduled population groups in Jhalawar.

Effort in Education

Jhalawar has made tremendous efforts in improving the education status of the district. For the universalization of education 381 Rajiv Gandhi Pathshalas have been upgraded to primary schools, 349 primary schools to upper primary, 31 upper primary to middle and 30 middle schools to upper primary schools. 40 new primary schools were opened. Under the Pannadhai Jivan Amrit Yojana 946 students were given scholarships. 11145 students were given computer education. All students up till class 8 are provided cooked mid-day meals.

In order to promote higher education in the district new subjects have been introduced in the arts and science faculty. Science faculty has been introduced in the Government Girls College, Jhalawar. In the arts faculty in the same college new subjects like Hindi, History, Political Science, and Home Science have been introduced. New Law College has also been opened. . Similarly technical, medical and engineering educations are also promoted and new colleges in these areas have been opened in the district. Certainly, all these efforts will help in improving the human resource of the district.

3.1.2 Regional Variations

Gains in literacy are not uniform across different blocks/tehsils. The ILIPR varies between 132 in Jhalrapatan despite a large urban population to 202 in Pirawa tehsil, a predominantly rural area. What is significant in Pirawa (see the status of facilities in Pirawa) is that the girls have performed

as well as the boys (Table 3.4 and Figure 3.3). Similar is the case with the next best performer viz., Khanpur both in terms of ILIPR (168) and a very low gender bias in literacy gains. Aklera and Gangdhar, on the other hand, observe average performance primarily due to the gender bias in literacy achievements.

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

	Incremental Literate to Incremental Population (>6) Ratio (1991-2001)			Ratio to Male to Female ILIPR
Tehsil	**Total**	**Male**	**Female**	
Khanpur	168	171	165	104
Jhalrapatan	132	148	115	128
Aklera	142	181	103	176
Pachpahar	135	156	114	137
Pirawa	202	207	197	105
Gangdhar	159	205	113	182
District	152	174	129	134

Source: Population Census, 1991, 2001.

Figure 3.3 Incremental Literates to incremental Population (>6) Ratio (1991-2001)
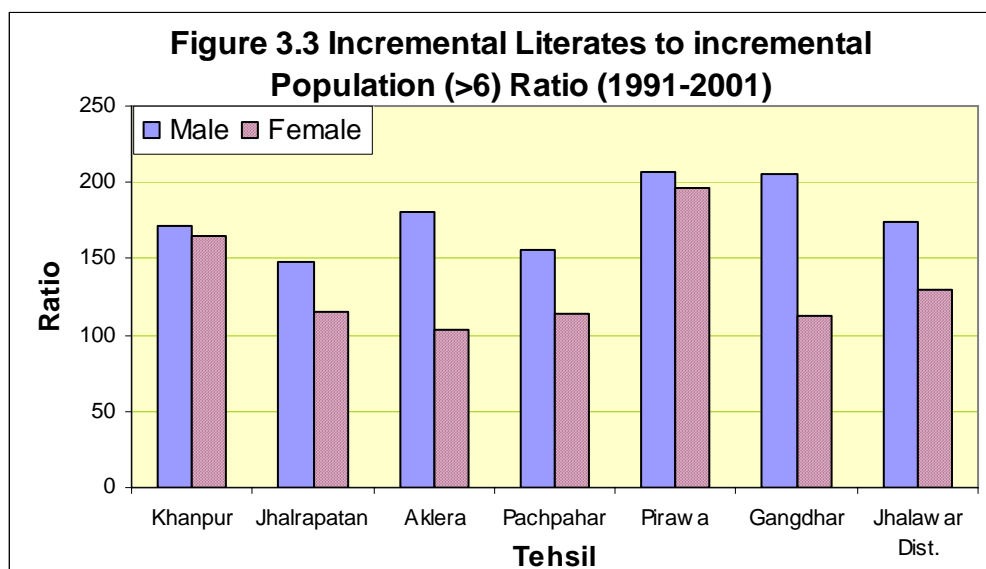
3.2   Enrolment and Retention

Literacy rate or the incremental literacy rate as defined above, reflect 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 students 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.

Jhalawar observes a healthier trend in enrollment rates, when compared to the state average. The gross enrolment ratio for class 1-5 is estimated at 107 for the entire district. However, there is small variation in GER across different Blocks. Figures 3.6 to 3.8 provide a graphics based on data provided by the Government of Rajasthan (DISE) for an assessment of the GER.

Assuming that identical number of students enters class 1 every year, the data shows low decline in enrollment from class 1 and class 5. Enrollment of students declines from 46 thousand for the class 1 to 42 thousand in class 2 and to 35 thousand in class 5. Thereafter, number of students declines rapidly to 17 thousand in class 8. The different in the 1-5 and 5-8 rates of retention may be explained in terms of the gender partly during lower primary schooling and gender disparity during the later years, of girls to boys moves around 0.9 during lower primary. However, it declines sharply to 0.51 during the upper primary class. (Figure 3.4 and for details see Appendix A3.2).

Congress Kanwar: An Example of Girl Child Right

Jhalawar is way ahead in women and girl child empowerment. Through the state and NGO's the district has made a mark in this respect. The best example is Congress Kanwar of Patlani Village. A fourteen-year-old girl studying in 6th standard decided to take a major step of stopping her own child marriage. The youngest among the seven siblings was determined to complete her studies before marriage. All the other sisters and brothers were married at a very young age. She convinced her parents with much difficulty that she would not get married at this tender age and wanted to first complete her studies. She was successful in convincing her parents with help of the WDP workers. This young determined girl on completion of her studies wants to become a police officer and has also taken an oath that she would work against child marriages in her area. She has been awarded for brave step by the state and national government.

Figure 3.5 shows declining enrollment by blocks. The performance of enrollment judged is judged in this figure by the rapidly declining slope of the curves after the class 5. Manoharthana and Bakani, for example, observe a steep decline in enrollment for class 5 to class 6. It tapers to lower values thereafter Jhalrapatan and Bakani on the other hand, observe slower decline in enrollment through out.

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 944 girls per 1000 boys, one may expect lower enrollment of girls than the boys. The ratio of girls to boys' enrollment therefore starts at 0.88 and improves thereafter to 0.9 in the class 3 but declines to the original value with class 5. The decline thereafter is fast to 0.51 in the class 8. Similar situation is observed at the block level. In Khanpur block this ratio increases from 0.88 in class 1 to 1.03 in class 3 and 1.00 in class 5 but declines to 0.63 in class 6 (Figure 3.7). The sharpest

decline during the upper primary is in Bakani (from 0.89 to 0.43) and Manoharthana (from 0.9 to 0.42) blocks (Table 3.6).

Figure 3.4: Total Enrollment by Sex
Jhalawar: 2006-07
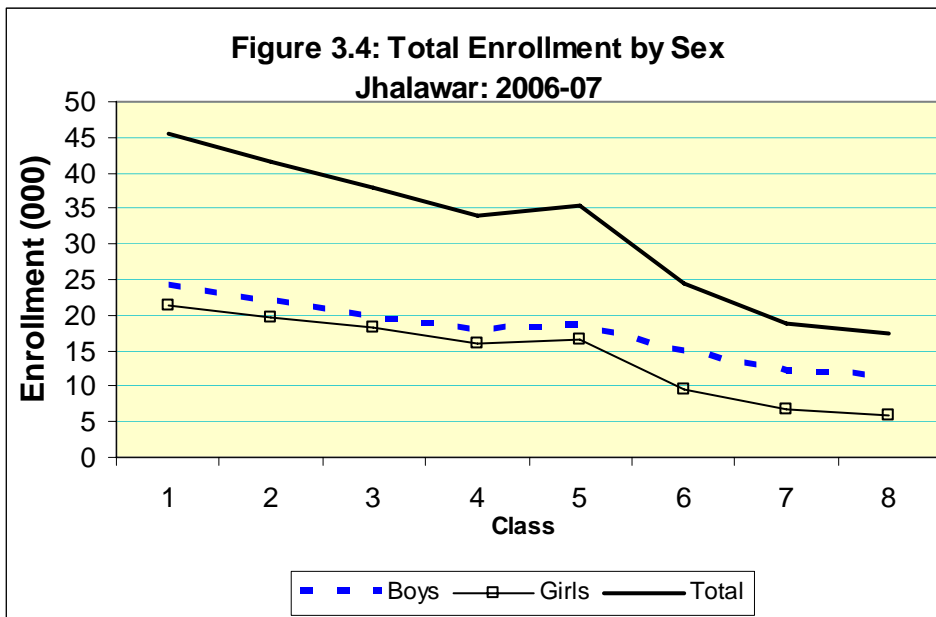
It was observed earlier that both SC/ST populations are growing faster than the non SC/ST population during the nineties. One of the reflections of such gains may be observed in the ratio of SC/ST enrollment to the non SC/ST population. Ratio of SC/ST population to non SC/ST population in the 0-6 age group was 0.45 in 1991. However the ratio of SC/ST students to non SC/ST students in class 1 is observed at over 0.5 during most of the lower primary classes (Figure 3.2). This means that more SC/ST students are enrolled in lower primary classes than their share in the relevant age group (see Figure 3.8).

Figure 3.5: Total Enrollment by block
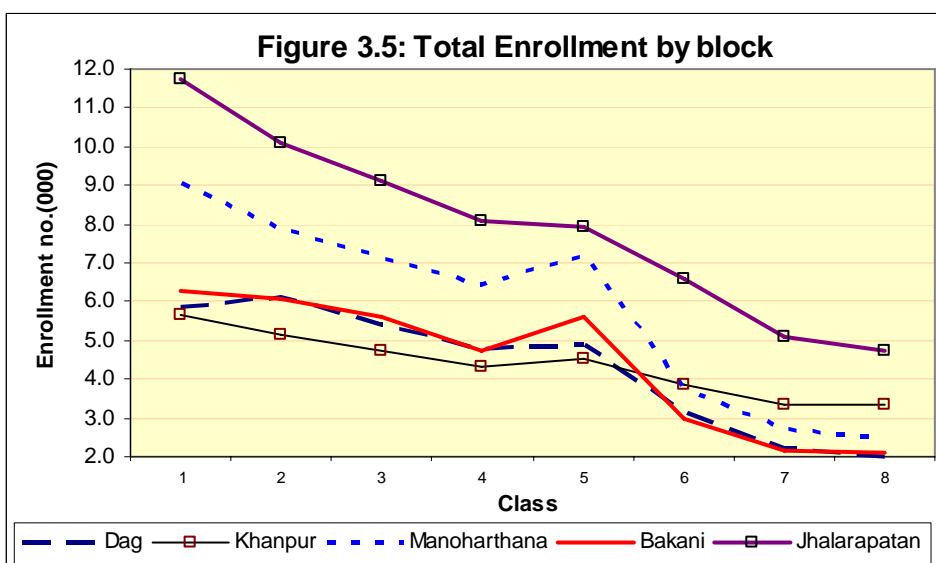
Table 3.6: Enrollment Ratios: Girls to Boys

Class	Jhalawar	Bakani	Dag	Jhalra patan	Khan Pur	Manohar thana	Comparative Enrolment Ratio
1	0.88	0.84	0.90	0.86	0.88	0.90	0.88
2	0.90	0.91	0.90	0.90	0.96	0.88	0.90
3	0.93	0.91	0.93	0.93	1.03	0.90	0.93
4	0.90	0.86	0.85	0.89	0.96	0.87	0.90
5	0.89	0.89	0.77	0.83	1.00	0.90	0.89
6	0.63	0.60	0.46	0.66	0.81	0.53	0.63
7	0.57	0.48	0.39	0.61	0.72	0.48	0.57
8	0.51	0.43	0.39	0.56	0.63	0.42	0.51

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: DISE, 2006.

Such phenomenon is observed across all the blocks. Ratio of SC/ST students to non SC/ST students increases from 0.70 in class 1 to 0.73 in class 5 but declines to 0.65 in class 8 in Manoharthana. Bakani observed a gradual increase in this ratio from 0.25 in the class 1 to 0.36 in class 8 (Figure 3.4 and Table 3.7).

One of the reasons for the spirited performance of scheduled caste and scheduled tribe 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. This came to the focus during the field visit of Khanpur and Manoharthana blocks.

Figure 3.6: Comparative Enrollment Ratios in Jhalawar: 2006-07

Figure 3.7: Enrollment Ratio: Girls to Boys in Jhalawar District
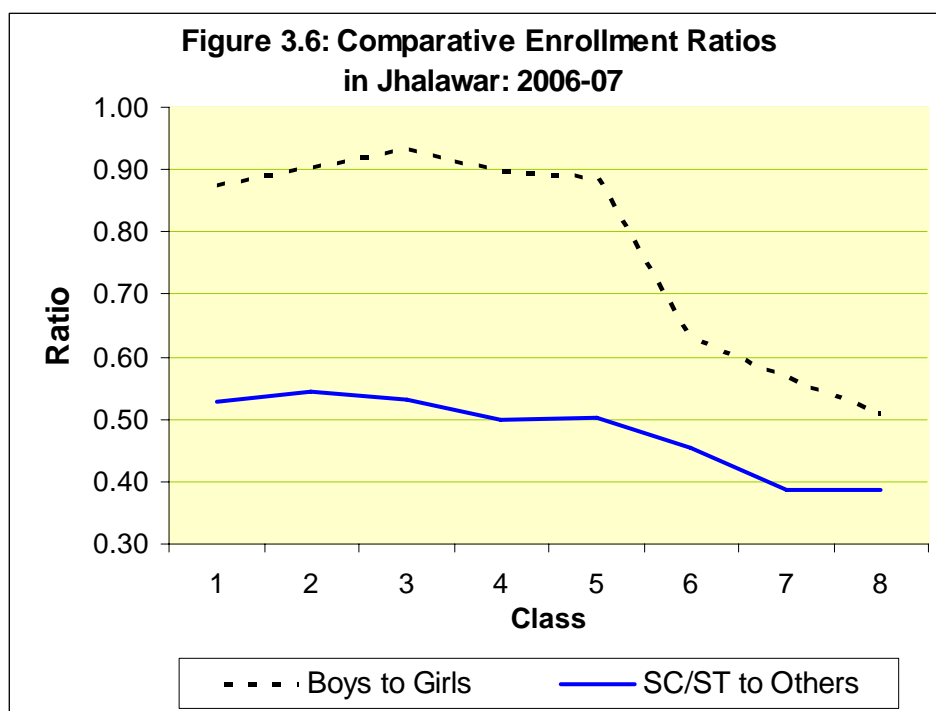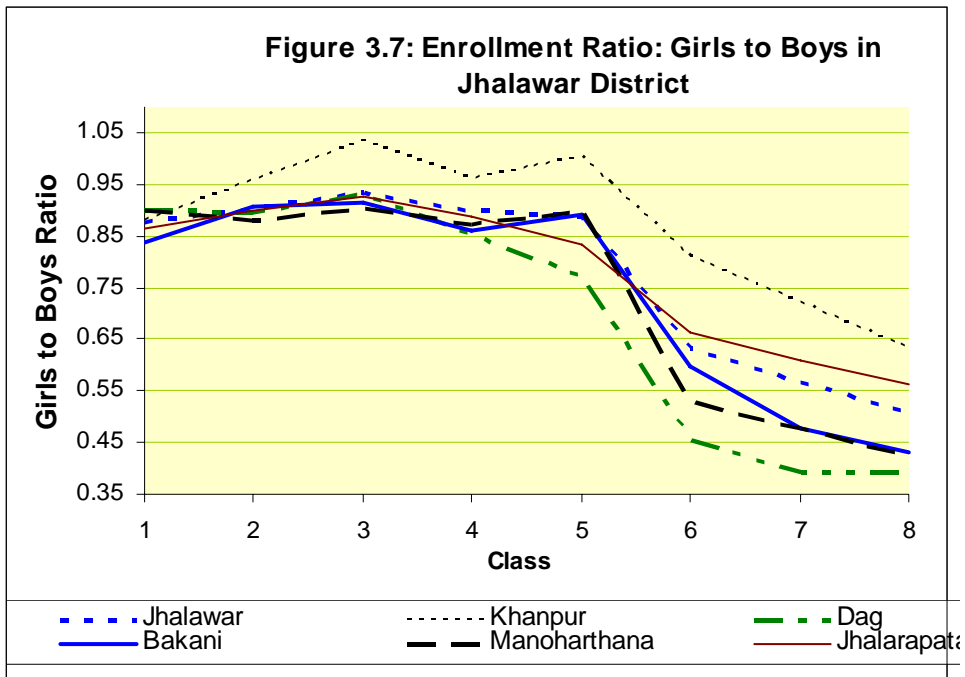
Table 3.7: Enrollment Ratios: SC/ST to Others

Class	Jhalawar	Bakani	Dag	Jhalrapatan	Khanpur	Manoharthana
1	0.53	0.25	0.37	0.58	0.63	0.70
2	0.54	0.28	0.37	0.61	0.70	0.73
3	0.53	0.27	0.37	0.57	0.66	0.73
4	0.50	0.26	0.38	0.55	0.62	0.67
5	0.50	0.28	0.35	0.56	0.62	0.73
6	0.45	0.30	0.27	0.48	0.55	0.68
7	0.39	0.29	0.27	0.39	0.46	0.63
8	0.39	0.36	0.26	0.39	0.44	0.65

Source: DISE, 2006.

Figure 3.8: Enrollment Ratio: ST/SC to Others
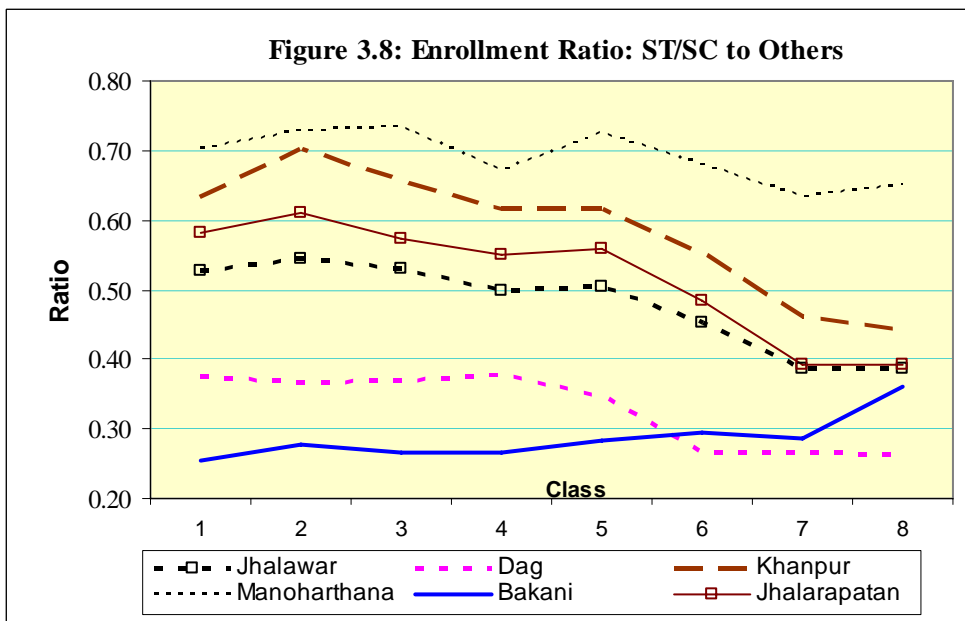
381 Rajiv Gandhi Schools converted into primary schools with 40 new primary schools started in the district. Another 349 primary schools have been converted into upper primary schools. The district had 1158 new teachers of grade III while 61 widows and 17 women were appointed grade III teachers. Mid-day meal programme is functional in 2527 schools and befitting 2 lakh students. 31 schools were concerted from middle to secondary schools.

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. Poor households in Jhalawar migrate or agricultural and non agricultural work affected their education. On the other hand demand for education is expected to increase if children are compensated in part, e.g. mid-day meals or fully through scholarships as is the case with SC/ST students. The positive impact of mid-day meals scheme has been widely discussed in literature. The impact of scholarship also gets reflected in the performance of the students belonging to socially backward classes. The incremental literates to incremental population ratio for SC/ST population during 1990's for exceed non- SC/ST population (Table 3.3). Similarly, the enrolment ratio for the SC/ST population exceeds 0.5 even though its population ratio is significantly below 0.5.

With agriculture increasingly losing the most important employer status due to stagnant/declining 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 return 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 ASER 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 shows Jhalawar in a rather poor light. Accordingly, 70 per cent of the class 3 to 5 students can not read class 2 text. Forty four per cent of such students could not solve subtraction problem.

3.4   Supply Side

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 primary level. Of the total 1719 schools in Jhalawar district, 20 per cent of the schools were private schools in 2006. However share of teachers in private schools was 45 per cent while the share of students in private schools was 30 per cent. At the lower primary level only 6 percent of the enrollment was in primary schools. This increases to 31 per cent for the upper primary schools (Table 3.8).

Table 3.8: Share of Private Schools, Teachers and Students

Block/Tehsil	Total Schools	Schools	Total Private School Teachers	School Students
Khanpur	210	66 (31)	438 (47)	11630 (43)
Jhalrapatan	340	146 (43)	1318 (81)	25487 (49)
Bakani	338	50 (15)	306 (40)	9132 (23)
Manoharthana	291	35 (12)	209 (26)	6804 (23)
Dag	290	18 (6)	141 (20)	5495 (17)
Pirawa	250	25 (10)	162 (18)	6307 (19)
District	1719	340 (20)	2574 (45)	64855 (30)

Source: DISE Report, 2006-07.

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[2] ASER, Annual Status of Education Report, http://www.pratham.org.

Number of primary government schools in Jhalawar was 1215 in 2006. Most of the villages in the district have lower primary schools. Only 70 villages were without any school. Highest number of villages without any school was observed in Manoharthana. In three blocks, viz., Bakani, Dag and Pirawa no village was without a school (Table 3.9).

Table 3.9: Accessibility of Rural Schools 2006

Block/tehsil	Total Villages/ Habitations	Villages Without Schools	Percentage Without Schools
Khanpur	200	13	6.5
Jhalrapatan	305	6	2.0
Bakani	383	0	0.0
Manoharthana	299	51	17.0
Dag	276	0	0.0
Pirawa	216	0	0.0
District	1679	70	4.2

Source: District Education Office, 2008.

3.4.2 Teachers- Provisioning

Adequacy of qualified and motivated teachers is the most important component of any educational program. This is discussed with respect to three factors. First, the status of teachers provided by the public education system, second, pupil to teacher ratio as per provisioning by the state's education department to meet certain normative standards and third, actual availability of teachers observed in the schools. Table 3.10 shows total number of teachers by level of primary education. Of the total sanctioned posts of teachers half the teachers are lower primary (grade-III) teachers. Forty one per cent of the grade-III teachers are engaged in the upper primary classes and remaining 9 per cent teachers are senior grade-II teachers teaching upper primary classes. Distribution of the teachers is uneven across blocks, more so of the upper primary teachers. Jhalrapatan, for example has 826 or 28.4 per cent of the upper primary teachers. Table 3.11 shows gender composition of the teachers. This is particularly important for the upper primary classes as social values in some communities may have reservations in for the girls above 11 years to be taught by male teachers. At the primary level 28 per cent of the teachers are female teachers but the number drops marginally to 25 per cent for the upper primary teachers.

Table 3.10: Sanctioned Posts of Teachers by Level of Primary Education

Block	Primary III Grade	UPS III Grade	UPS II Grade	Total
JhalraPatan	584	687	139	1410
Bakani	497	237	58	792
Khanpur	368	377	82	827
Sunel	403	460	101	964
Manoharthana	539	336	82	957
Dag	507	274	77	858
District	2898	2371	539	5808

Source: DISE Report 2006-07.

Table 3.11: Gender Composition of Teachers

	Male	Female	Total
PS	2573	1008	3581
UPS	1421	478	1899
Part Time PS/UPS	409	60	469
Total	4403	1546	5949

Source: DISE Report 2006-07.

In view of the differing size of student population across blocks a more appropriate way to look at the adequacy of infrastructure is to analyze in terms of Pupil to Teacher Ratio. Pupil to Teacher Ratio in lower primary schools needs to be maintained at 40 (Table 3.12 and Figure 3.9). It varies, however, between 33 (Khanpur) and 54 in Manoharthana. This incidentally has a direct impact on the quality of education and also an enrolment and literacy. The contrast in performance indicators between Khanpur and Manoharthana may at east partially be explained in these terms. Similarly, pupil to teacher ratio varies from 20 per cent at Jhalrapatan to 27 per cent at Bakani in upper primary schools.

Table 3.12: Pupils to Teacher Ratio in Blocks of Jhalawar District (%)

Tehsil	PS Only	UPS
Dag	51.51	25.6
Khanpur	32.73	22.14
Manoharthana	54.14	23.95
Bakani	41.05	26.98
Jhalrapatan	38.26	20.16

Source: Calculated from the data given in DISE Report.

Figure 3.9: Pupil to Teacher Ratio (PTR) in Blocks of Jhalawar District
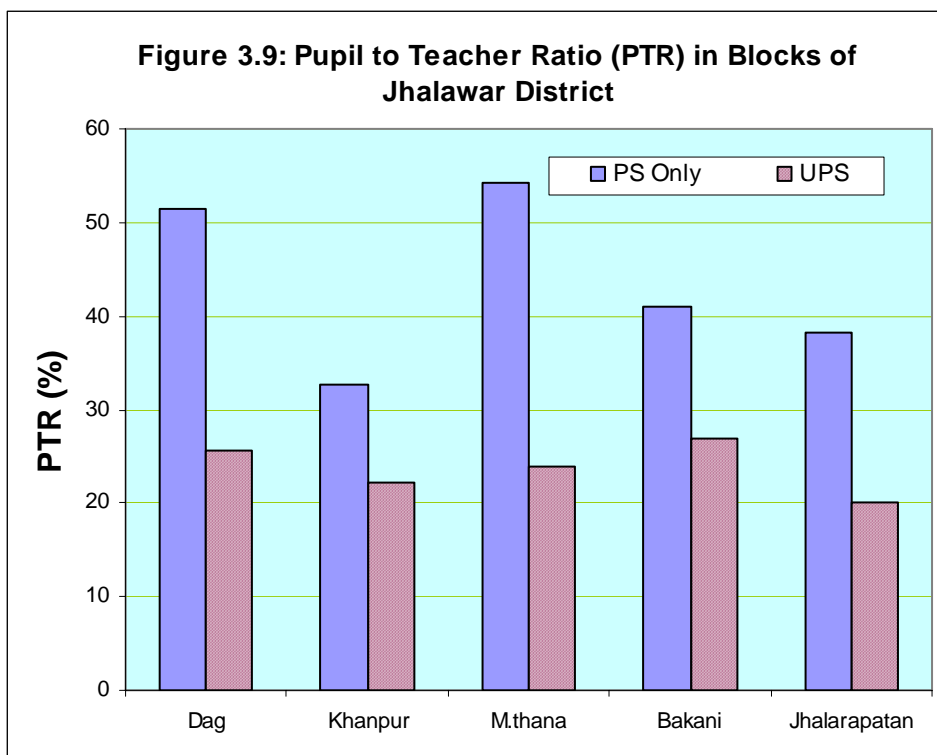
Infrastructure use as seen from Field Observations

Observations from the fields visits of Khanpur and Manoharthana blocks, provides the contrast in school infrastructure. Toilets in some schools in Manoharthana lack hygiene, sanitation and most importantly water. Taps run dry and drinking water facilities too become unreliable and hence unhealthy. Children are expected to study in an intolerable environment devoid of basic facilities in some areas. Conditions were better in the areas visited in Khanpur. In a few cases, the numbers of children in a class are too many to be contained in one room (in Sozpur and Bharatpur villages of the Manoharthana block). In fact, sometimes several classes are held in the same room! Apart from the classrooms being inadequately ventilated, the atmosphere congested as well with too may children. It was observed that students of class 1-4 are accommodated in one room while those of classes 1-7 in another in the higher primary school of Bharatpur village in Khanpur block. There is no toilet in the school, nor is there any land available for the toilet constructions. Availability of drinking water remains problem in a large number of schools. Teacher (Bharatpur and Sozpur in Manoharthana block) complained that students often go to there homes for drinking water particularly after the mid day meals, thus disrupting studies.

The PRI representative insisted on setting priorities for primary education. Literacy or SSA is not sufficient. A greater focus on vocational education particularly for girls on the pattern of such states Karnataka needs to be emphasised. Similarly, greater focus on computer education for boys was emphasised. Quality of education needs to be improving significantly. A comparison between private and Govt. school education would reflect better outcomes among private school students, ceteris paribus, even though a qualification of the Govt. school teacher is better than the private teachers. The Government has introduced computer education recently in some schools. However, with poor space availability, electricity and technical expertise, the investment might appear futile, considering that the equipment demands large maintenance and space for installation.

3.4.3   Teachers: Availability

We have discussed above provisioning of teachers from different perspectives. However at any time point all the teachers are not available. Out of the total 5808 sanctioned posts 1132 or **one**

fifth of the total sanctioned posts were lying vacant as per information provided by the office of the District Education Officer. The reasons advanced for the vacancy include creation of new posts and promotion of teachers. However, what is surprising is the uneven spread of vacant positions both across level of schooling and across blocks. Almost a third of upper primary grade II teaching positions are lying vacant as against 14 per cent of upper primary grade III positions (Table 3.13). This has implications for the upper primary teaching. There appears to be a vicious cycle of low-enrolment- vacant positions-low enrolment in the upper primary schooling. However, the high gender gap is not as prominent in grade II teachers as is in grade III teachers. Across blocks, Jhalarapatan and Khanpur with 4 and 8 per cent vacant posts of grade III lower primary teachers respectively provide a contrast to Bakani, Manoharthana and Dag with 29 and 43 per cent vacant posts. Per cent of grade II upper primary teachers is high in Manoharthana (45%) Sunel (35%) and Dag (51%) (Table 3.14). The fact that teachers have other responsibilities and duties to fulfil, like election duties, data collection during various surveys (e.g. livestock census and population census), and participation in campaigns such as pulse polio eradication, health and hygiene, reduces their availability even further. No incentives for extra work done are given: hence extra hours are seldom put in.

Table 3.13: Status of Elementary School Teachers

	Percent of Vacant Posts		
	Total	**Male**	**Female**
Primary III Grade	21.8		
UPS III Grade	13.7	11.5	19.3
UPS II Grade	32.3	32.6	30.3

Source: District Administration (DEO), Jhalawar.

Table 3.14: Block wise Status of Vacant Post of Teachers (%)

	Primary	**UPS**	
Block	**Grade III**	**Grade III**	**Grade II**
Jhalrapatan	4	7	28
Bakani	29	10	9
Khanpur	8	11	23
Sunel	16	25	35
Manoharthana	29	13	45
Dag	43	19	51
Total	22	14	32

Source: Same as Table 3.13.

3.4.4 Other Supply side Facilitating Factors

Table 3.15 shows other supply side facilitating factors 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 more than half of the schools have only one teacher. Number of single room schools, however, is low at 5 per cent. Forty one per cent of the lower primary schools have common toilets while 13 per cent schools have separate toilets for girls. Thirty per cent schools do not have the drinking water facility.

Table 3.15: Percentage of Schools Having: Facilitating Factors

School Category	PS Only		UPS		Total	
Single Classroom	62	(5)	4	(1)	66	(4)
One Teacher	650	(54)	19	(3)	669	(36)
Drinking Water facility	847	(70)	581	(87)	1428	(76)
Common Toilets	492	(41)	298	(44)	792	(42)
Separate Girl's Toilet	153	(13)	243	(36)	396	(21)
Total	1215		671		1886	
Share of Pvt. Schools in total Enrollment	6		31		22	

Note: Figures in Parenthesis indicate the percentage of schools having facilitating factors.
Source: DISE Report, 2006-07.

The situation improves considerably although still inadequate for the upper primary schools, in which case 36 per cent schools have separate toilets for girls. Only eighty seven per cent of the upper primary schools have drinking water facility. Surprisingly, even at the upper primary level 3 per cent schools are one teacher schools and one per cent school have a single classroom. The number of schools having a toilet facility varies from 21 per cent in Manoharthana and 37 per cent in Pirawa, except for in Dag which is 4 per cent (Table 3.16). Dag appears to be exceptional in this case although its status in terms of drinking water is among the best block at 46 per cent and the poorest block in this regards is Jhalrapatan with 30 per cent of its schools with drinking water followed by Manoharthana with 36 per cent of its school with drinking water facility. Pirawa block on the other hand has lowest number of schools with pucca buildings as against 61 to 69 per cent of schools with pucca buildings in Bakani, Manoharthana and Dag. It has 40 per cent school building as pucca. The distribution of facility thus, appears to be uniform across blocks.

Table 3.16: Primary Schools (Government) in Jhalawar with Amenities

Block/tehsil	Total Schools	Schools with		Percentage of Schools with		
		Drinking Water	Toilets	Pucca Buildings	Drinking Water	Toilets
Khanpur	210	95	53	44	45	25
Jhalrapatan	340	102	80	43	30	24
Bakani	338	154	121	61	46	36
Manoharthana	291	105	62	69	36	21
Dag	290	132	12	62	46	4
Pirawa	250	110	92	40	44	37
Jhalawar	1719	698	420	54	41	24

Source: DISE Report, 2006-07.

An important impediment in Dungarpur is the non-availability of schools which offer science subjects: only one block has such a facility at the secondary/higher secondary level. This is discouraging as a number of opportunities and employment avenues are linked to knowledge and degrees in sciences.

3.5   Summing up: Key Issues

One, education of the girl child should assume priority in the ST groups, to the extent that if more than the normal incentives are to be offered, they should be offered.

Two, the quality of 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.

Three, 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.

Four, aspects like teacher attendance and training must assume higher priority.

Five, quality improvement including aspects like teaching science require attention.

Appendix A3.1: Definitions

Gender Parity Index (GPI) is defined as the ratio of Girl's enrolment in Primary Grades to Boy's enrollment in Primary Grades in the year 't'.

Gross Enrollment Ratio
Net Enrolment Ratio (NER) is defined as enrolment of 6-11 years students in grades 1-5 to the population in the 6-11 years age group.

Ratio to Primary to Upper Primary Schools/Sections is defined as the total number of Primary Schools/Sections is divided by the total number of Upper Primary Schools/Sections in year 't'.

Appendix A3.2: Total Enrollments by Class (000)

Class	District	Bakani	Dag	Jhalra patan	Khan Pur	Manohar thana
1	45.5	6.3	5.9	11.7	5.7	9.1
2	41.5	6.1	6.1	10.1	5.2	7.9
3	37.9	5.6	5.4	9.1	4.7	7.2
4	34.0	4.7	4.8	8.1	4.3	6.5
5	35.3	5.6	4.9	7.9	4.5	7.2
6	24.4	3.0	3.1	6.6	3.8	3.7
7	18.8	2.2	2.2	5.1	3.3	2.7
8	17.4	2.1	2.0	4.7	3.3	2.5

Source: DISE Report, 2006-2007.

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 contribute to the health status of a population. These include, for example, hygiene and availability of potable drinking water, maternal and child health, accessibility to health caste 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.

Till the end of the 19th century, little attention was paid to health and sanitation in this area. In the rural areas, some Ayurvedic and unani dispensaries were maintained by the more important panchayats, but there is no reliable record of the number of such dispensaries and the village in which they were located. Several dispensaries were, however, found in Jhalrapatan and the Chhaoni (Cantonment).

Towards the end of the century, the political Agency had four hospitals and two allopathic dispensaries opened at the tehsil headquarters. In 1904, the hospitals had accommodation for 22 in-patients and treated a total number of 38,177 cases; 1,533 operations were performed by the Agency surgeon. Even where hospital facilities were available, the majority of the people clung to old-time remedies. While some of these remedies were based on healing herbs, a large number were rooted in the belief that illness was a sign of divine displeasure and the remedy, therefore, lay in the sphere of religion and occult.

Some of the more common practices in this regard were (and still are followed by numbers of people, particularly the lower castes and the tribal people): *Jhar- phunk* (exorcism by blowing on the face of the person), *jantra* (magic), *tantra* (charms), *dora* (tying a piece of thread round the wrist), *grihshanti* (blessing of the house) and, of course, various incantations. The application of leeches (*jonk lagana*) and the use of horn- shaped tube to bleed the patient (*seengi lagana*) were the only practical aspects of such treatment.

A visit to the temple of Rambha Mata in Pirawa tehsil was regarded as a certain cure for dog-bite, and a bath in the Chandra Bhaga River at Jhalrapatan was believed to be efficacious in the case of leprosy and other skin disease. In almost every village there was a person who claimed to be able to counteract the effects of snake bite and scorpion stings with the help of special mantras.

Seengi lagana was resorted to in cases of swellings and infected wounds. The "doctor" would use a sharp curved knife to make an incision above the affected part. He would then place the *seengi*, which was either a cow's horn or a horn-shaped brass tube, over the wound and by sucking induce the blood to flow. After some time the blood would be mopped up and powdered turmeric applied to the wound. It was believed that blood-letting was good for health. Even healthy young children were put to the *seengi* treatment, an incision being made on the chest for the purpose. This was called *kotha khulana*. This type of surgery was the work of professional class of itinerant "doctors" called *Jarrahs*.

4.1 Public Health Structure

4.1.1 Allopathic Institutions

Modern Allopathic medical services rapidly expanded after independence. Till 1961 these were 11 hospitals, 6 dispensaries and 3 mother and child welfare centers in the district. Number of allopathic medical institutions expanded further to 32 in 1973-74, 42 in 1984-85, 52 in 1990-91 and 74 in 2004-05. Table 4.1 shows growth of public health delivery structure. Since 1961, hospitals and dispensaries together increased from 17 to 33 in 1984-85 after which some of such facilities were converted to primary Health Centers (PHCs) and major expansion in health services occurs in the form of primary health centers and health sub-centres (SCs).

Table 4.2 shows public health infrastructure in Jhalawar by Blocks. Community Health Centres or hospitals with specialists are well distributed across varies blocks. One such centers is to be provided for one lakh population as per recommended of WHO accepted by the Government. Primary Health Centres need to be provided, per 20000 populations is a tribal area and per 30000 populations are non-tribal areas (Table 4.3). The ratio of PHCs per CHC varies between 5 for tribal and 3 for non tribal areas. However, in Jhalawar such rates vary between 2 to 2.5 (Table 4.2).

Table: 4.1 Growth of Public Health Structure, Jhalawar

Year	Hospital	CHC	Dispensary	Mother and Child Welfare	Primary Health Centre	Total
		Number of Medical Institutions				Total
1960-61		11	6	3	-	20
1973-74		5	20	1	6	32
1984-85		7	26	3	6	42
1990-91		7	12	3	30	52
2004-05		12	31	3	28	74
2007-08	1	14	1	4	28	74

Source: Chief Medical Health Officer, Jhalawar.

Increase in Institutionalised Delivery

In Jhalawar the **Janani Suraksha Yojana** *has been successful. In the district in 2006-07 there have been 12,000 and in 2007-08 there have been 20,000 women who have gone for institutionalised delivery. This has certainly led to decrease in the maternal and infant mortality rate in the district. Until now Rs.3.25 crore has been spent on this Yojana.*

Efforts to Control Population

Jhalawar has already achieved the gross fertility rate of 21 per 20000. The current gross fertility rate of the district is 30 per 1000. The district is way ahead of the appointed target by the state because of its determined and continuous efforts in this direction.

Similarly, as per WHO norm, for every PHC there should be 6 sub- centres 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 are block can always avail services available in another block due to proximity or better health delivery. However, from an overall perspective it is use full to assess if these is adequate supply of health delivery institution/persons.

Table 4.2: Health's Institutional Structure of the Health Care System: (2007-08)

Block/Tehsil	PHCs		Community Health Centre		Sub Centre		Total Health Institutions
Khanpur	4	(11)	2	(5)	32	(84)	38
Jhalrapatan	6	(10)	3	(5)	50	(85)	59
Bakani	4	(8)	2	(4)	46	(89)	52
Manoharthana	4	(10)	2	(5)	36	(86)	42
Dag	5	(12)	2	(5)	35	(83)	42
Pirawa	5	(10)	3	(6)	40	(83)	48
District	28	(10)	14	(5)	239	(85)	281

Note: There are no Govt. Dispensaries. Figures in parentheses indicate share of various health facilities.
Source: Same as Table 4.1.

Table 4.3: 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 Sub Centre	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

4.1.2   Infrastructure Gaps

Table 4.4 provides estimates on infrastructure gaps as per WHO norms. As per data provided by CPO (Jhalawar), every block in the district is short of PHC. On the other had it has more Sub Centres than the required number (Figures 4.1 and 4.2). Over and above these medical institutions the district has 31 upgraded primary health centers (dispensaries). If such centeres are included in the number of PHCs at the district or the block level, availability of PHCs could far exceed the WHO norms.

Table 4.4: Infrastructural Gaps in PHCs and Sub Centres

Block/tehsil	Total Population	PHCs	Sub-Centre	Required PHCs	Required Sub Centre	Gaps PHCs	Gaps Sub Centres
Khanpur	153370	4	32	5	31	-1	1
Jhalrapatan	205868	6	50	7	41	-1	9
Bakani	160267	4	46	6	34	-2	12
Manoharthana	170653	4	36	5	32	-1	4
Dag	175059	5	35	6	35	-1	0
Pirawa	171897	5	40	6	34	-1	6
District	1037114	28	239	35	207	-7	32

Note: The population data given by the Jhalawar CPO are far short of the 2001 population and even further short of 2005 population, when projected using 1991-02 population growth rate.
Source: District Statistical Outline, 2006

Figure 4.1: Infrastructural Gaps in PHCs
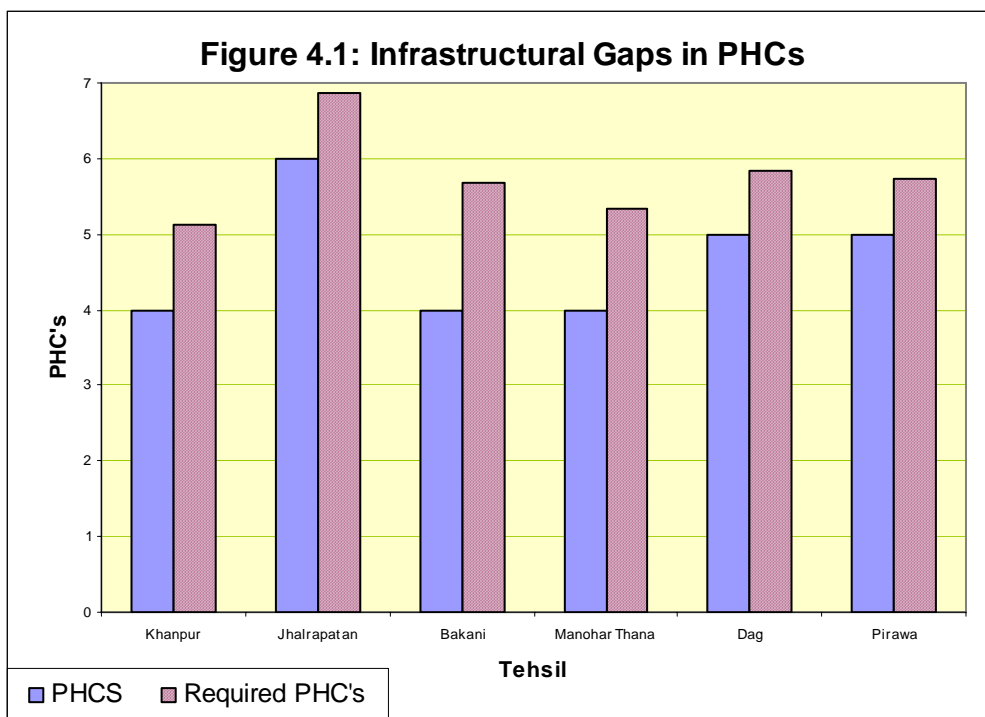
4.1.3 Health Personnel: Provisioning and Availability

Table 4.5 and Figure 4.3 shows distribution of Health personnel (sanctioned posts). Number of medical officers varies between 8 in Dag to 17 in Jhalrapatan. Sanctioned posts of government nurses (ANM) varies between 22 in Manoharthana to 42 in Jhalrapatan. However, distribution of access to such health personnel way be assessed in terms of population per sanctioned medical post. Accordingly population served by a medical officer varies between 10 thousand in Khanpur to 22 thousand in Dag. Population covered per ANM however is more uniform. It varies between 4.9 thousand in Jhalrapatan to 7.3 thousand in Manoharthana. A number of sanctioned posts in varies blocks are lying vacant. This puts additional pressure on the available staff.

Every Women gets Employment

In Jhalawar presently 85000 Self Help have been already formed of these 4805 groups have got loans of Rs.15.29 lakh through banks for employment generation. Jhalawar today is the first district, which has made efforts of getting bank loans for women for employment generation. In the year 2007-08 in the district 1995 Self Help Groups were made which was again much ahead of the 1200 target. 2573 groups were provided Rs.1.38 lakh as loan.

Figure 4.2: Infrastructural Gaps in SCs
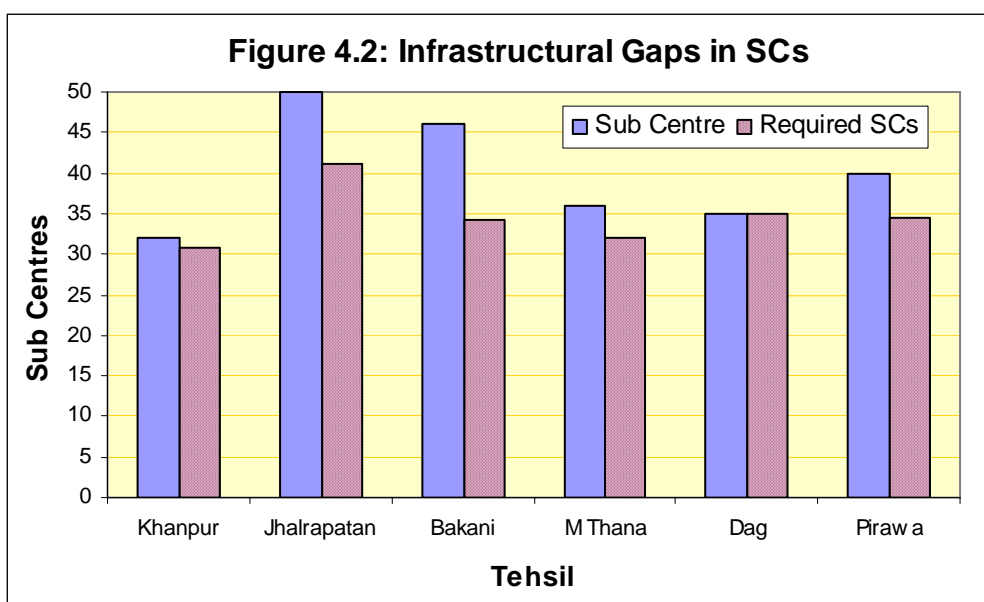
Table 4.5: Distribution of Health Personnel (Sanctioned) per 000 Populations

Block/Tehsil	Population (000)	Medical Officers	Govt Nurses	Population per 000 Medical Officers	Govt. Nurses
Khanpur	153	15	26	10.2	5.9
Jhalrapatan	206	17	42	12.1	4.9
Bakani	160	13	25	13.1	6.8
Manoharthana	171	9	22	17.8	7.3
Dag	175	8	28	21.9	6.3
Pirawa	172	12	31	14.3	5.5
District	1037	74	174	14.0	6.0

Source: Chief Medical Health Officer, Jhalawar.

The Contrast in Public Health Delivery is provided by the Two Villages visited by the Investigating Officers

Village Sozpur in Khanpur block has a health sub centre covering five villages three private medical service providers (Registered Medical Practitioners) were observed. Villagers preferred to go to RMPs for pediatric problem. The female ANM is working in the sub center for six years and has settled in the village after marrying a local youth. During her long stint in the village she is socially accepted and villagers freely seek her guidance in gynecological problems. Because of her active involvement with the public health and family planning, her center was rewarded by the government. Khanpur town has a community Health Centre with 7 sanctioned posts of doctors also has a private hospital is 8 RMPs. In the CHC Manoharthana, five posts of doctor were lying vacant. As a result occupancy rate of the bed was less than 20 percent. There are few Private practitioners in this backward block. In the village Semli Haat the post of the ANM was lying vacant for a long period and a male ANM has recently joined. People in the village were reluctant to avail facilities provided by the government under Janani Suraksha Yojna due to a number of reasons.

Medical College has been set up in Jhalawar.

Figure 4.3: Distribution of Health Personnel per 000 population
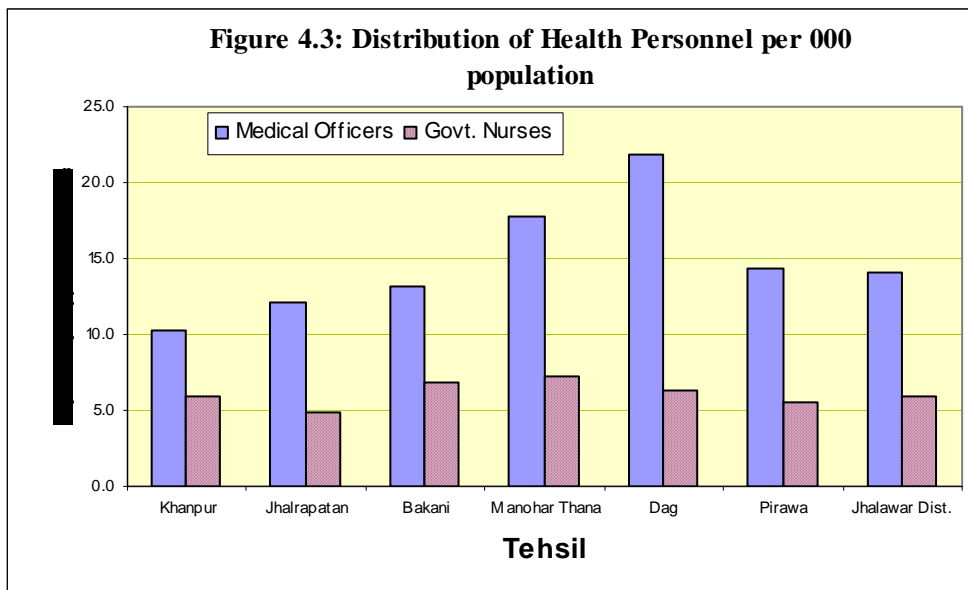
Staff adequacy on paper does not translate into functional staff availability in this area; it is not uncommon to find some staff members are away from the place of work on account of leave or another reason. Places like Manoharthana, Dag and Pirawa are not an attractive posting, and staff appointed here often look for a change 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 referral hospital system is evaluated in terms of bed utilization rates. Assessment of bed utilization is based on Bed Occupancy Rate (BOR) and Bed- Turnover Rate (BTR). Bed Turnover Rate is deferred 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.

4.1.4   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 indications 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's is not available

for Jhalawar. We therefore base our conclusions on the bases of a ratio of in-patients per bed. Number of patients per bed varies between 66 and 127 during 2001-05 (Table 4.6 and Figure 4.4). Across blocks patients per bed vary between 19 in Dag and 22 in Manoharthana to 130 in Khanpur. Except for Khanpur (Table 4.7), this is far below the expected number of patients that the system can serve in a year. Medical studies[3] 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 of 19 or 22 is far too low to justify optimal use of resources.

Table 4.6: Utilization of Health Services:
(Inpatients per Bed in Jhalawar)

Years	Total Beds	In Patients	Patients/Beds
2000-01	711	59324	83
2001-02	711	90071	127
2002-03	700	49647	71
2003-04	748	49663	66
2004-05	724	64673	89

Source: District Statistical Outline, 2005.

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 Khanpur and Manoharthana indicate a large of vacant position of medical doctors. The problems of in-patients get compounded significantly if a number of doctors' positions are vacant in a low-density block. This is typically the case of Manotharthana and dang resulting in low occupancy (Figure 4.5).

4.2 Other Systems of Medicine

Indian system of medicine includes both the Ayurvedic and Unani health systems. These systems have traditionally worked with private practitioners as discussed in the introduction of this section. After independence the state has expanded services in this domain also. Public provisioning under the indigenous system of medicine is 6 hospitals (5 Ayurvedic and one Homeopathy) and 74 dispensaries (Table 4.8). What is significant is that the number of out-patients served by the system is far higher than the allopathic system of medicine.. In 2004-05 over one million out-patients were treated by system. This is far higher than the out-patients treated under the allopathic system (Table 4.9).

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

Figure 4.4: Utilization of Health Services:
Patients per Beds in Jhalawar
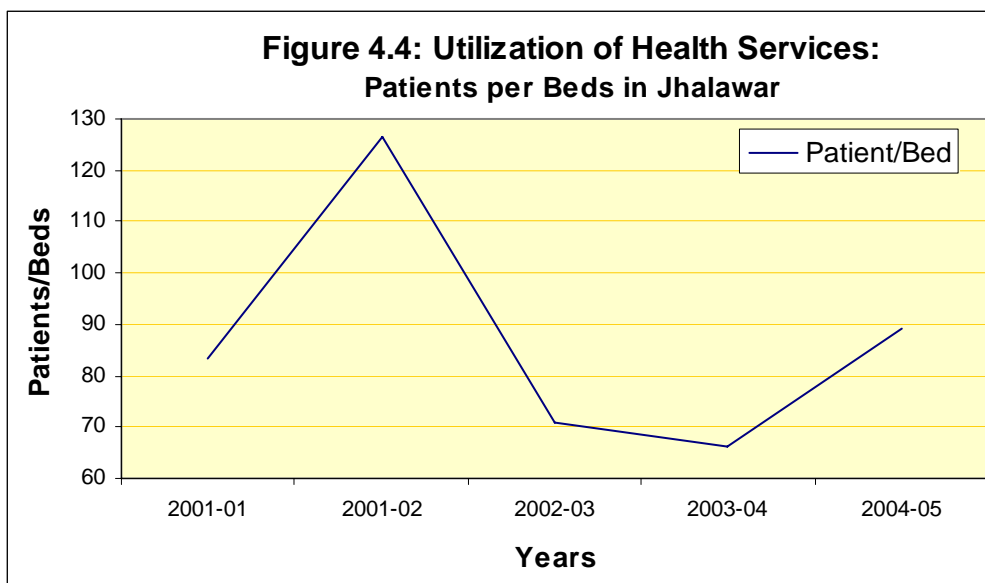
Table 4.7: Utilization of Health Services: Patients/Bed by Tehsils: 2006

Tehsil	Total beds	In Patients	Total Patients Out Patients	Patients per Bed
Khanpur	104	910	10146	130
Jhalrapatan	110	2725	19999	36
Bakani	24	2512	37799	31
Manoharthana	48	8003	99826	22
Dag	78	1176	36790	19
Pirawa	120	282	9698	82
District	484	15608	214258	89

Source: The data given by CPO differs widely from given in the
Jhalawar District Profile 2006. We have retained data
from the district profile- this being the published source.

Figure 4.5: Utilization of Health Services in
Patients/ Bed in Jhalawar
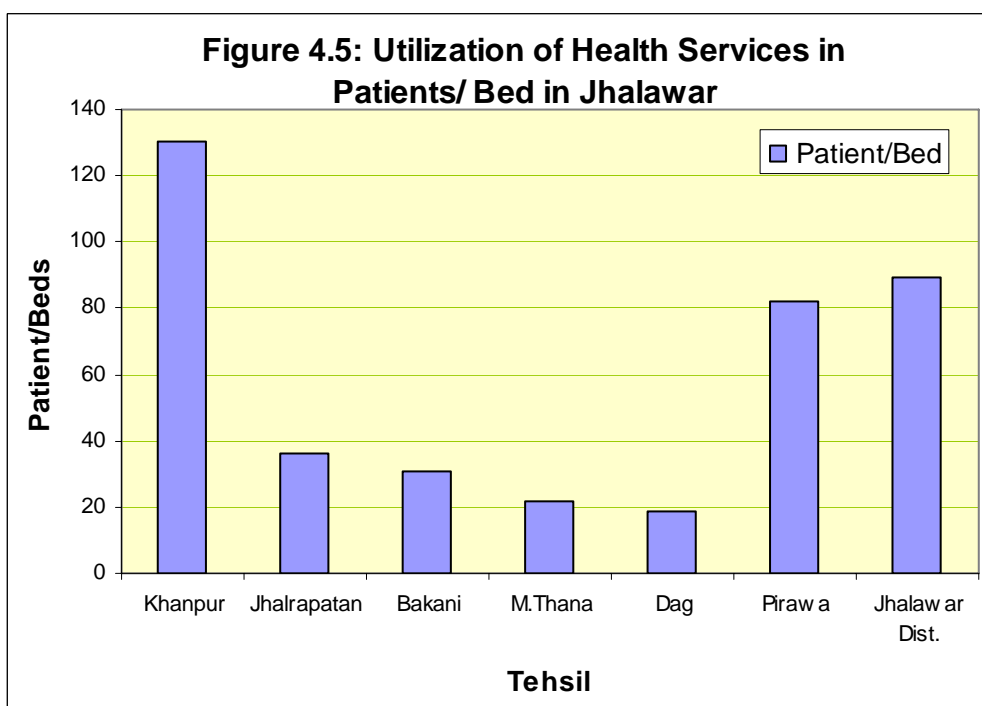
Table 4.8: Public health Infrastructure: Indigenous Systems 2007-08

Facility	Number
Hospital	3
Dispensaries	77
No. of Beds	17
No of Doctors	97
Medical assistants	225
In Patient	249
Out Patient (000)	1004

Source: District Ayurvedic, Homeopathic and Unani Officer, Jhalawar.

Table 4.9: Utilization of Alternative Systems of Medicines: Out patients

Years	Out Patient	
	Allopathy	Other Systems
2000-01	557497	922914
2001-02	650877	1062955
2002-03	634839	1086296
2003-04	624656	980450
2004-05	674235	1003852
2005-06	214258	921407

Source: District Ayurvedic Officer, Jhalawar.

4.3 Private Health Services

Besides public sector health infrastructure, a number of private hospitals have come up in urban areas. Three private hospitals are reported in Bhawani mandi and Jhalrapatan each and two hospitals are reported in Jhalawar and Aklera. During the field visit, however, a number of private doctors/ dispensaries were observed even in villages (see Box 4.1). However, information on these doctor or dispensaries is not available. A major advantage of these private health centers is that the provide medicines also which is in perpetual shortage at the health sub-centres.

4.4   Prevailing Health Problems

4.4.1 Maternal and Child Health

Infant mortality Rate in Jhalawar is estimated by the DLHS (2002-04) at 55. This lies in the middle of the range of IMR for different districts of the state. The main causes of infant mortality in Jhalawar 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 15.9 years is among the lowest in 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 is low (Table 4.10). The field situation, however, depicts a somewhat different picture, particularly in Manoharthana which the research team visited. There were several hamlets (and households) in remote and inaccessible *Dang* areas, in which children- of mainly low income households with uneducated mothers- were not inoculated.[4] Common sense suggests as well, that the vital statistics would be better than if all children had effectively been reached.

Table 4.10: Reported Immunization Coverage (2006-07)

Block	Total Population	0-6 Population	Reported Immunization Coverage (Numbers)			
			BCG	OPV3	DPT3	MSLS
Khanpur	153370	26359	4597	3520	3518	3201
Jhalrapatan	205868	36960	12700	11099	11171	10171
Bakani	160267	30182	4867	4215	4228	3567
Manoharthana	170653	35095	6744	5830	5838	5406
Dag	175059	29398	5650	5606	5617	4915
Pirawa	171897	29352	4713	4597	4618	3766
District	**1037114**	**187346**	**39271**	**34867**	**34990**	**31026**

Source: Department of Health, Jhalawar.

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. Next, the survival rates of the children up to five years age is quite 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).

4.4.2 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.

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[4] Mother's literacy was found to be central to achieving higher inoculation here (as elsewhere).

Jhalawar seems to have achieved drinking water targets. Of the total 1679 habitations more than 75 per cent are fully covered with the drinking water supply in the district (Table 4.11). The share of fully covered blocks, however, varies between 51 per cent in Pirawa to 91 per cent in Khanpur. Only 14 per cent of the habitations in the district are not covered by the drinking water supply.

Table 4.11: Status of Drinking Water Supply 2007-08

Block	Total Habitations	*Habitation Covered by Drinking Water Supply*		
		Fully Covered	Partly Covered	Not Covered
Khanpur	200	188 (91)	1 (6)	11 (3)
Jhalrapatan	305	212 (71)	33 (20)	60 (9)
Bakani	383	340 (74)	5 (4)	38 (22)
Manoharthana	299	198 (87)	21 (3)	80 (10)
Dag	276	188 (73)	42 (14)	46 (14)
Pirawa	216	135 (51)	55 (23)	26 (26)
District	1679	1261 (75)	157 (11)	261 (14)

Note: Figures in parenthesis indicate the percentage of fully, partly and not covered habitations.
Source: PHED, Jhalawar.

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 18 per cent of the households in Jhalawar have sanitary latrines constructed in the house (Table 4.12). The number varies from zero in Bakani to 36 per cent in the backward blocks of Manoharthana and Pirawa.

Table 4.12: Status of Sanitary Latrine in the District

Block	Total No. of HHs	Percentage of Target
Khanpur	25215	14.48
Jhalrapatan	34824	8.12
Bakani	30265	11.16
Manoharthana	27626	12.64
Dag	29818	6.30
Pirawa	28933	11.72
District	**176681**	**10.54**

Note: The data of No. o HH having Latrine launching of TSC is not available.
Source: Same as Table 4.11.

4.4.3 Other Diseases

Beyond water and sanitation-related problems, local populations- adults and children alike-also suffer disproportionately from tuberculosis, genetic disorders, anaemia and nutritional deficiency diseases. Women suffer from gynaecological and anaemia-related problems. Table 4.13 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. A substantial increase in the number of TB patients treated by the system is more an indication of aware ness and greater access than an increase ion the incidence of TB. Similar is the situation with the patients suffering by other ailments. Number of patients treated under the ENT ailments increased from 1735 to 11635 while patients treated for the ophthalmic ailments increased from 8.2 thousand to over 21 thousand during the last decade. Strangely, patients treated under the category 'others' was the largest at 171 thousand and has since increased to 648 thousand in 2004-05. There is a general increase in the incidence of reported cases in almost all the diseases. This might indicate worsening of the health status in the district but medical professionals emphasise greater awareness and access to public health facilities for such an increase in the number of out-patients. If so, one needs to rely on the anthropometric measures indicating the status of health among the children and adults. Unfortunately such information is not available at the district level. This aspect needs investigation.

Table 4.13: Number of Patients by Type of Diseases in Jhalawar

Ailment	1994-95	1999-00	2005-06
T.B	70	987	1853
ENT	1735	8653	11632
Eyes	8207	13662	21304
Mental	22	2789	2401
Communicable Diseases	84	36267	53346
Others	171039	582409	648372
Total	181157	644767	738908

Source: Department of Health, Jhalawar.

4.5 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 *anganwari*s, nutrition supplements and the *anganwari* worker.

Table 4.14 presents data on a *panchayat*-specific distribution of *anganwari*s as on March 2008. This table suggests that there are 1175 *anganwari*s and all are operational. Further, the number of CDPO/ACDPO sanctioned in the district is 8 as on March 2008 and only 2 were in position. As regards the number of supervisors, the sanctioned number stood at 53 while 39 were in position. Thus staffs are not in position to deliver these services.

Table 4.15 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 32.87 percent in the district and varies between 26.41 percent in Jhalawar city and 37.33 percent in Jhalarapatan. Grade 2 malnutrition percentage ranges between a low of 15.89 percent in Jhalawar city and a high of 30.05 percent in Pidawa. There are children in Grade III & IV level in all blocks. Overall, all tehsils with exception of Jhalawar city have less than 50 percent of children are in normal nutrition status situation.

Table 4.14: Anganwaris and Staff

District/Block	No. of Anganwaris				No. of CDPO/ACDPO		No. of Supervisors	
	Sanctioned	Operational	% operational	Reporting	Sanctioned	In Position	Sanctioned	In Position
Bakani	151	151	100	151	1	0	8	7
Dag	194	194	100	194	1	1	8	7
Jhalarapatan	226	226	100	226	2	0	9	6
Jhalawar City	110	110	100	110	1	0	4	4
Khanpur	154	154	100	154	1	1	7	6
Manohar Thana	184	184	100	184	1	0	9	6
Pidawa	156	156	100	156	1	0	8	3
District Total	**1175**	**1175**	**100**	**1175**	**8**	**2**	**53**	**39**

Table 4.15: Classification of Nutritional Status for 0-5 year Children

	Normal	%	Grade-I	%	Grade_II	%	Grade-III& IV	%	Total No of Children Weighted
Bakani	6544	44.50	4910	33.39	3137	21.33	115	0.78	14706
Dag	9691	43.27	7018	31.33	5606	25.03	83	0.37	22398
Jhalarapatan	6073	37.77	6002	37.33	3549	22.08	453	2.82	16077
Jhalawar City	4910	53.79	2411	26.41	1450	15.89	357	3.91	9128
Khanpur	5698	42.96	4721	35.59	2739	20.65	107	0.81	13265
Manohar Thana	10634	45.03	7728	32.73	4869	20.62	383	1.62	23614
Pidawa	3645	38.18	2955	30.95	2869	30.05	78	0.82	9547
District Total	**47195**	43.40	**35745**	32.87	**24219**	22.27	**1576**	1.45	**108735**

4.6 Summing up: Key Issues

An all round up-scaling of health, sanitation and water supply is the need of the hour. Some specific areas of intervention are:

One, a 'need-assessment' of the health needs of the local communities must be made;

Two, strengthening supply- appropriate location of health facilities, better buildings, equipment, medicines and personnel- is a priority.

Three, water and sanitation should receive more funding.

Four, there should be higher decentralisation, more innovation and better M&E in nutrition programmes like the ICDS.

Appendix 4.1: Progress of Women and Child Development Project: 2007-08

Block/tehsil	Sector	*Anganwari Centre*		Nutrition Distribution Centre	Benefited by Supplement Nutrition	Benefited before School
		Sanctioned	Working			
Dag	8	194	194	194	19148	7067
Jhalrapatan	9	226	226	226	21747	5985
Manohar Thana	9	184	184	184	17561	5560
Khanpur	7	154	154	154	12324	3947
Bakani	8	151	151	151	13074	4424
Pirawa	78	156	156	156	14357	5400
Total	**53**	**1179**	**1175**	**1175**	**107020**	**34787**

Source: Department of Women & Child Development, Jhalawar.

Chapter 5

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. Suggestions below require sheer larger fund; 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. Basic data pertaining to each village (as well as the *tehsil*s/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. 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.

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, see Point 4 below. 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. Drought proofing is an important policy initiative: save at least one crop, plus ensure sufficient drinking water. Wild fluctuations in crop production during the last decade in a place with abundant rain water indicate the need for an appropriate water management strategy. In this regard, the irrigation potential both through groundwater recharge and surface reservoirs needs stabilization. Jhalawar is the highest rainfall district of the state

but most of the water flows out of the district in the absence of water shed development and also leads to soil erosion. Development of water shed, farm bunds and small/medium irrigation plans are needed to use this water for the district. This is all the more important as five out of six administrative blocks of the district have been declared critical with the state of groundwater development varying between 94 and 110. Only Khanpur block is classified as semi-critical with the stage of groundwater development as 71. Several initiatives, from practices, for instance from *Pani Panchayat* (in Western Maharashtra), could be examined for possible emulation. Next, watershed development requires a different and up-scaled definition in which there is larger stakeholders' participation and more dimensions like cropping pattern, farm and agro-forestry brought in.

5.   Both agricultural extension and marketing local produce need strengthening.

6.   The extant activities outside crop agriculture are currently restricted to animal husbandry, forest, mining and some rural industries. Each of these require up-scaling. Of specific mention is raise milk production and productivity, for which there is large scope. For this, improvement of breed, better feed and veterinary services are essential. There is no dairy cooperative in the district. Eighty-nine dairy committees are operational in the district which collect and send milk to Kota for pasteurization and packing. Similarly, Cold storage facilities need to be strengthened in the district.

7.   The Kota stone processing units in the district are causing significant environmental problems due to the slurry which is thrown around. There is a need to utilize this slurry more usefully for the sake of the environment.

8.   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.

9.   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. If there is shortage of teachers they could be recruited from the southern states as a one-off measure.

10.   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.

11.   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.

12.   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.

13.   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.

14.   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.

15.   Women have to educated and trained in rural areas to have better livelihood.

16.   Efforts are, however, afoot to implement various schemes and programmes that improve education, health and thereby HDI.