Availability of Health Services and drin
areas in the States of Gujarat, Jharkha
Rajasthan

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CONTENTS

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Lipi Mukhopadhyay
Project Director

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Chapter -1

Introduction

The tribal population of the country is 8.43 crore, constituting 8.2 percent of the total population. The lifestyle of the tribal people is conditioned by the ecosystem and is in tune with nature and natural resources. In general, they live in remote areas close to forest. Due to rapid deforestation and industrialization they face problems in terms of adequate food and nutrition, which cause health problems making them vulnerable to diseases. With increased GDP and industrialization the condition of life among tribal people has not much improved. The loss of forests and natural resources on the one side and modern technological growth on the other created a gap between realistic and idealistic lifestyle of tribals. The condition under which they are living is far beyond the accessibility of safe drinking water, minimum standard of health and sanitation facilities. The present study intends to evaluate the availability of health and drinking water facilities in four states – Chhatisgarh, Gujarat, Jharkhand and Rajasthan with special reference to tribal areas.

Health

The achievement of positive health among people is a vital component of community development. With rapid advances in the basic and applied biological

sciences, a variety of tenable solutions to major health problems have been elucidated. However, even today, the benefits of modern medicine are available to a selected community. Health care accessibility and affordability is subject to extreme imbalances, especially between urban and rural areas. There is a need to reorient medical education and service away from a top-heavy, clinic-intensive approach to one involving greater and continued application of epidemiology and public health principles for the masses. This necessitates a fresh outlook towards quality health services, preventive health programmes, and public health research. Such initiatives should focus on poor, excluded, and vulnerable groups, to strengthen their access to low cost health care.

Community based health programmes

Major gains have been recorded over the past five decades in people's health status, with visible improvements across various parameters. Despite a large resource of physical infrastructure in the form of Primary Health Centres and Sub-Centres, health status of the poor remains dismally poor with high infant / maternal mortality rates, communicable diseases like malaria and tuberculosis.

An integrated approach to public health problems, locating health concerns within the overall ambit of development and poverty is required. It encourages incorporating observation and research in field interventions; focus on rational health care and linking service delivery with impacting policy and practice.

Drinking-water quality is an issue of concern for human health in developing and developed countries worldwide. The risks arise from infectious agents, toxic chemicals

and radiological hazards. Experience highlights the value of preventive management approaches spanning from water resource to consumer.

WHO produces international norms on water quality and human health in the form of guidelines that are used as the basis for regulation and standard setting in developing and developed countries world-wide.

Water Purification

The water purification is one of the important areas identified for development of appropriate technology systems as in many parts of the country, the main source of drinking water is polluted by non permissible doses of salts, iron, arsenic and fluoride contaminants. Similarly river water, which is another source of drinking water, is contaminated with iron ore and coal dusts in mineral rich states like Jharkhand, Chattisgarh and Rajasthan. Various technological solutions such as filtration by polymer and ceramic membranes/ filters, flocculation, Reverse Osmosis (RO) process for desalination for hard/ brackish water, and other treatment methods are in vogue in some parts in India. However, technological viable systems have to be developed to provide safe drinking water. Recognising that sound technological and economically viable solutions are very much needed, the Department of Drinking Water supports projects not only for development of technology systems in filtration, flocculation, (RO) but also for the treatment of environmentally safe solutions for sludge treatment.

Sanitation and Water Pollution

Sanitation is directly related to water quality and water pollution. Water quality usually describes the level of certain compounds that could present a health risk. The

quality of water is usually defined by guidelines, values of what is suitable for human consumption and for all usual domestic purposes, including personal hygiene.

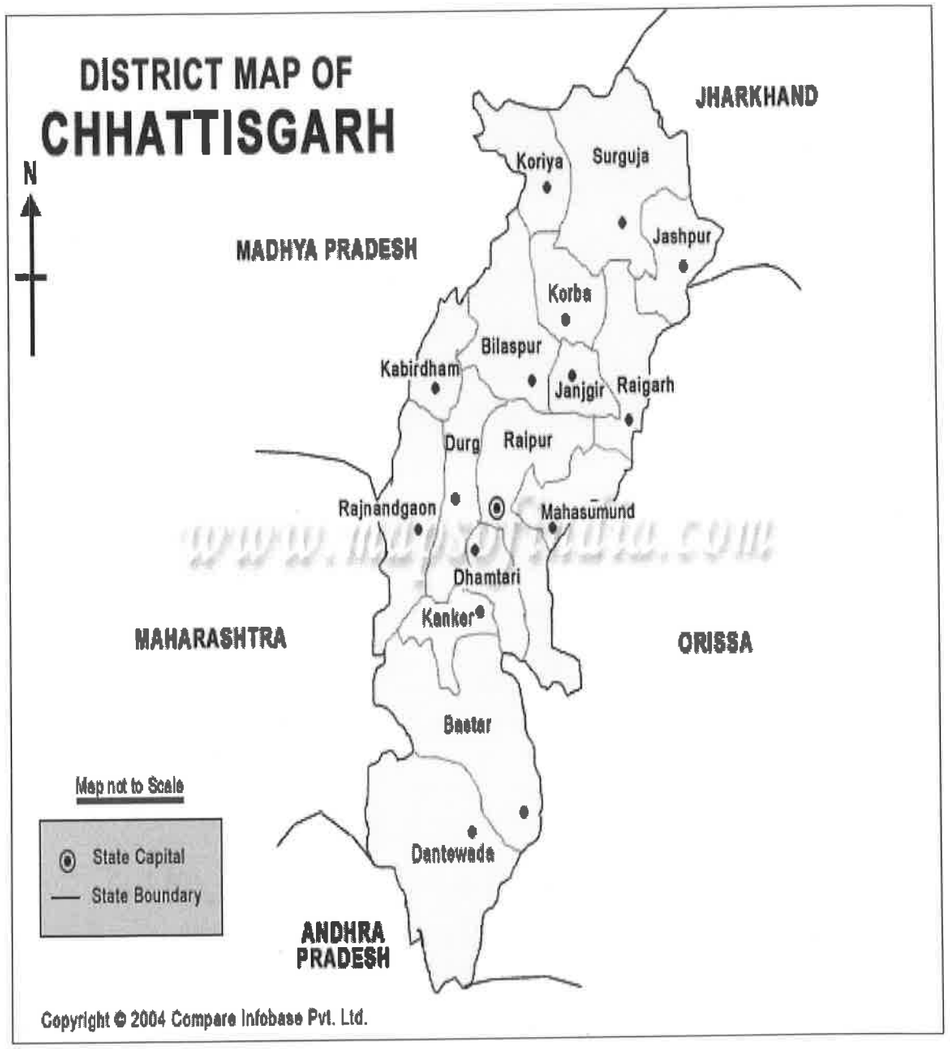
With regard to sanitation, water pollution, one must examine both **point** and **non-point** source of pollution, as these are the two routes of entry of the pollution into the water supply. Point-source pollutants enter the water ways at well-defined locations, such as a pipe or a sewer outflow. The discharges are usually even and continuous. Industrial factories, sewage treatment plants and storm sewer outflows are common point sources of pollution. Non point sources enter the water system from broad areas of land. It is estimated that 98 percent of the bacterial contamination is due to non-point sources.

Profile of the States and Districts

Chhatisgarh

Resources:

Chhattisgarh is truly a land of opportunities. With all major minerals including diamonds in abundance, it is the richest State in mineral resources. There are mega industries in Steel, Aluminium and Cement. The newly formed state is richly endowed with natural resources. Its forest revenue, which alone accounts for forty four percent of the total state's forest revenue has been the main source of income of Madhya Pradesh. It has rich deposits of limestone, iron-ore, copper-ore, rock phosphate, manganese ore, bauxite, coal, asbestos and mica that contribute around forty eight percent of Madhya Pradesh's revenue from minerals. Chhattisgarh contributes 35.66 percent of total power generated in Madhya Pradesh.


DISTRICT MAP OF
CHHATTISGARH
N
JHARKHAND
MADHYA PRADESH
MAHARASHTRA
ORISSA
ANDHRA PRADESH
Koriya
Surguja
Jashpur
Korba
Bilaspur
Kabirdham
Janjgir
Raigarh
Durg
Raipur
Rajnandgaon
Mahasumund
Dhamtari
Kanker
Bastar
Dantewada
Map not to Scale
State Capital
State Boundary
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Population culture and Status of Women:

Rural women here are though poor but are more independent, hardy, better organized and socially more vociferous and command more power in general compared to their counterparts in other parts of India. So much so that they can choose and even terminate a marriage at their will. Most of the old temples related to women power (eg Shabari, Mahamaya, Danteshwari) are of tourists attraction. Female literacy has been doubled in the last decade, and male literacy is higher than India's average. Gender ratio is next only to Kerala.

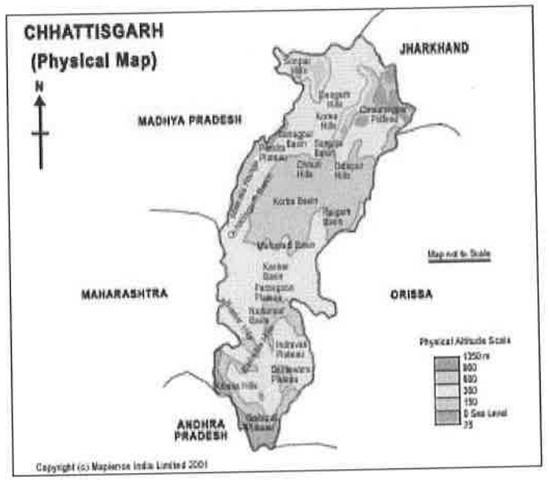
One third of the State's population is tribal, with 6616596 mostly live in the thickly forest areas in the North and South. The central plains of Chhattisgarh are known as the "Rice Bowl" of Central India.

Bastar is known the world over for its unique and distinctive tribal heritage. The Bastar Dassera is the traditional celebration of the gaiety of our tribals. Chhattisgarh has many virgin, unexplored tourism destinations.

Geography and Climate:

The new state is carved out of India's largest state of Madhya Pradesh with an area of 443,000 square kilometers. Though Chhattisgarh with an area of 135,194 square kilometers accounts for only 30 per cent of the total area of Chhattisgarh, it is still a considerable size, which is equivalent to almost sixteen times the size of Kerala.

Chhatisgarh



Area: 1,35,100 Square kilometers

Population: 176.15 l Lakhs.

Capital: Raipur

Main Languages: Chattisgarh, tribal dialects and Hindi.

Chattisgarh state is situated in Tropic of Cancer. Hence the overall climate is warm in the state. The monsoons are heavy between July and September in this region. The northern part of the state lies on the edge of the great Indo-Gangetic plain: The Rihand River, a tributary of the Ganges, drains this area. The eastern end of the Satpura Range and the western edge of the Chota Nagpur Plateau form an east-west belt of hills that divide the Mahanadi River basin from the Indo-Gangetic plain. The central part of the state lies in the fertile plain of the Mahanadi and its tributaries, with extensive rice cultivation. The southern part of the state lies on the Deccan plateau, in the watershed of

the Godavari River and its tributary the Indravati. Forests cover roughly forty-four percent of the state.

Mahanadi (one of largest rivers in India) originates from Chhattisgarh. Other main rivers are Hasdo (a tributary of Mahanadi), Rihand, Indravati, Jonk and Arpa. The north and south part of the state is hilly. The middle part is plain. The weather and climate is typical to that of central India.

Human Resource Development

Chhattisgarh contributes substantially to the Human Resources of India. Several hundred students from the State qualify for admissions in prestigious academic institutions every year. Bhilai, the knowledge capital of the State, alone sends over 50 students to the elite Indian Institutes of Technology every year. The region of Chhattisgarh supplies food grain to 600 rice mills known as `Rice Bowl' of India. Agriculture is the main activity for the population of 1,76,00,000 people of this state enveloped by Maharashtra, Andhra Pradesh, Orissa, Bihar and Uttar Pradesh and of course Madhya Pradesh. Eighty percent of the population is engaged in agriculture with one crop a year.

However, in spite of its abundant natural resources and manpower Chhattisgarh remains a poverty stricken and socially backward region. A cursory look at some parameters will reveal this fact. The literacy rate in the State is as high as 81.3 per cent but people above 19 years the district of Bastar is illiterate. The rest of the state is

slightly better in this respect. **Forty nine percent** of the households do not have drinking water. **Sixty eight percent** of the households do not have an electricity connection though it produces more power than it consumes. Infant mortality is high: 84 deaths per thousand live births against the national average of 71 percent. **Forty one percent** of the women work as labourers in the grueling activities (the national average is just 22.3). About half of its female population gets married between the ages of 15 and 19.

Since the formation of the state, there has been constant conflict by non state actors to ensure the indigenous people's right to land, forest, water and livelihood in the southern part of the state. This has led to a lot of counter violence by state agencies and is presently a major challenge to democratic life.

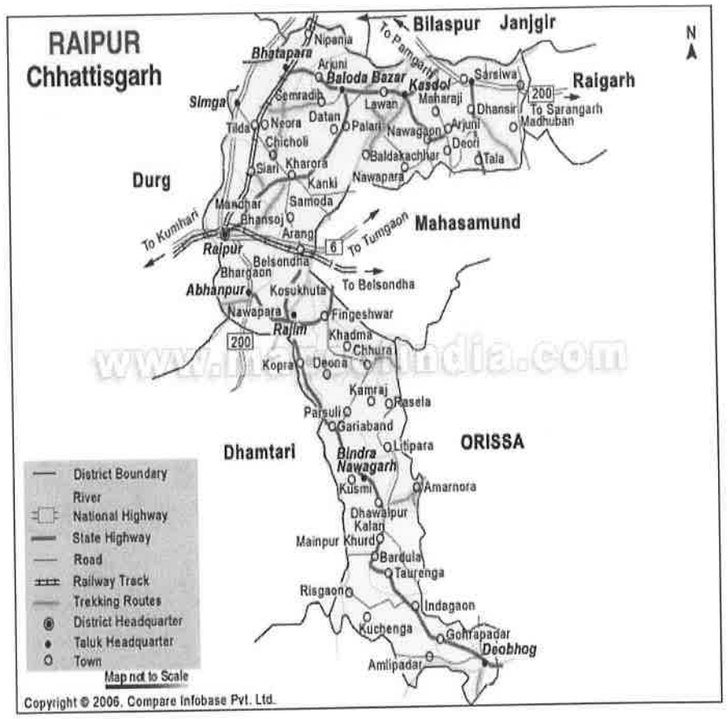
Raipur:

Raipur the capital of Chhatisgarh is rich in mineral resources. There are many wild life sanctuaries and sight seeing places worth visiting. It occupies the south eastern part of the upper Mahanadi River valley and the bordering hills in the south and the east. Thus, the district is divided into two major physical divisions: the Chhattisgarh plains and the hilly areas. To the north is Bilaspur District. To the south is Bastar District and part of Orissa state. To the east is Raigarh District and part of Orissa state. To the west is Durg District. The Mahanadi River is the principal river of this district.

Raipur district has 13 Tehsils and 15 revenue blocks. It comprises of two Lok Sabha Constituencies Raipur and Mahasamund and 13 Vidhan Sabha constituencies. The

chief crop of this region is paddy. There are more than 50 large and middle scale industries in this district which have offered employment to over 10,000 people.

Raipur district

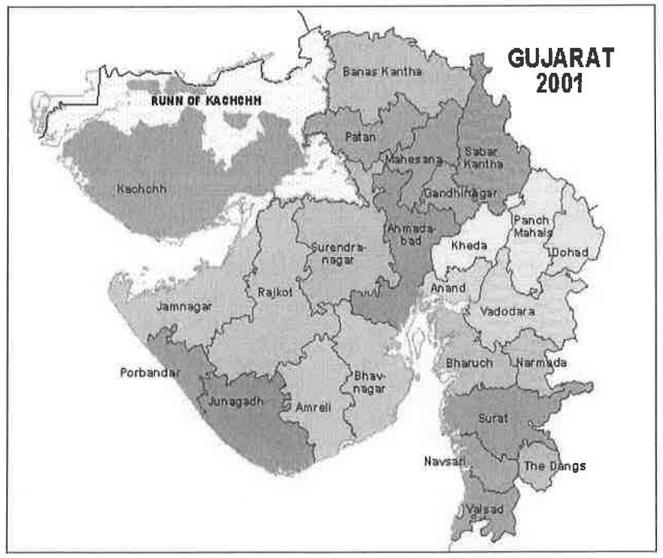


Gujarat

Gujarat is one of the most prosperous and industrialized states, in western India. covering an area of 196,024 sq km (75,685 sq mi). It has a fertile plain land in the south cut by several rivers, low hills in the west, and broad mudflats in the north that adjoin the Thar Desert.

History

Signs of civilization in the region that is now known as Gujarat date back to the period from 3000 to 1500 BC the region was part of the Mauryan Empire in the 3rd century BC under King Asoka. In 1818 the British East India Company took control of Gujarat administering the state through local princely rulers. With the independence of India in 1947, Gujarat became part of the state of Bombay. In 1960 Bombay state was split up, and Gujarat was formed from the northern and western portions, which were predominantly Gujarati-speaking areas. The remainder of Bombay state became Maharashtra state.



Demography

According to the provisional results of Population Census 2001, the population of Gujarat as on 1st March 2001, stood at 5.06 crore, including the estimated population of earthquake affected areas. The decadal growth rate during the decade of 1991-2001 has increased in comparison to 1981-1991 from 21.19 percent to 22.48 percent. Scheduled tribe population accounts for 14.76 per cent of the total population in the State as against 8.08 per cent scheduled tribes population in the country.

The density of Gujarat was 258 persons per sq. km. in 2001. The literacy rate in the State (excluding children in the age group 0-6 years) has increased from 61.29 per cent in 1991 to 69.97 per cent in 2001. About 37.67 per cent population of Gujarat resides in urban areas (excluding earthquake affected areas). Out of the total population of 483.87 lakh in the state 203.7 lakh (42.10 per cent) are workers and 280.2 lakh (57.90 per cent) are non-workers. According to the provisional results of population census 2001, the total number of households are 96.44 lakh.

Climate & Natural Resources

The relief is low in the most parts of the state and involves diverse climate conditions. Though mostly dry, it is desertic in the north-west, and wet in the southern districts due to heavy monsoon season. With the construction of **Sardar Sarovar** on **Narmada River**, a largest Dam in India irrigation facilities have improved immensely. Water being provided to the most dry areas of **Kutch** and **Saurashtra** through a 550 km

long canal, is an engineering marvel. With the Gulf of Kutch and the Gulf of Cambay, Gujarat has about 1600 km of coastline, which is the longest coastline of all Indian states.

Economy

The economy of Gujarat shows that it is one of the most prosperous states of the country, having a per-capita GDP, 2.47 times India's average. According to the data published by Center for Monitoring Indian Economy (CMIE) Gujarat ranked third among all the states of India in 2004, approximately same as Punjab and Maharashtra, Major Agricultural produce of the state include cotton, peanuts, dates, sugarcane, milk and milk products. Industrial products include cement, and petrol. Gujarat is the largest producer of milk in India. Amul, located at Anand is one of the largest milk product producer co-operatives in the world.

Surat is a hub of the global diamond trade. It is home to a thriving diamond trade and diamond cutting industry. Alang Ship Recycling Yard, located 50 km southeast of Bhavnagar, on the Gulf of Khambhat, is the world's largest ship breaking yard. Reliance Petroleum Limited, one of the group companies of Reliance Industries Limited founded by Dhirubhai Ambani operates the oil refinery at Jamnagar which is the world's largest grassroots' refinery.

People: Gurjaras who came in Gujarat around the 5th century AD. The name Gujarat comes from these Gurjaras. A large number of Gurjaras settled in north, but a majority moved towards the western coast where they settled for a Gurjara Rashtra. This was also the entry point for the Zoroastrians into India, who fled Persia to escape victimisation

from Muslims who had by then, virtually overrun the middle east. Parsis were welcomed into the Indian community by the local Rajas, in turn, they adopted Gujarati as their language. More than 70 percent of the population is Hindu; there are also significant minorities of Muslims and Jains in Gujarat In 1991 more than 60 percent of the population was literate. The tribal population in Gujarat consists of 14.76 per cent of the total population in the State.

Education: Gujarat has two official languages: Gujarati, which is derived from Sanskrit, and Hindi. Several universities are located in Gujarat. To name a few the IIM Ahmedabad, Gujarat University in Ahmedabad, Bhavnagar, Sardar Patel Sardar Patel University in Kheda, and Saurashtra University in Rajkot.

Agriculture: The leading crops are rice, maize (corn), peanuts, cotton, and tobacco. Among livestock raised are buffalo and other cattle, sheep, and goats. Salt, manganese, limestone, and bauxite are mined. Petroleum production began in 1960, and an oil refinery is located at Vadodra.

Industries: One of India's most industrialized states, Gujarat maintains a variety of industries, the principal ones being general and electrical engineering and the manufacture of textiles, vegetable oils, chemicals, soda ash, and cement. New industries include the production of fertilizers and petrochemicals.

The State has an international boundary and has a common border with the Pakistan at the north-western fringe. The two deserts, one north of Kachh and the other between Kachh and the mainland Gujarat are saline wastes. The State has a long coast-

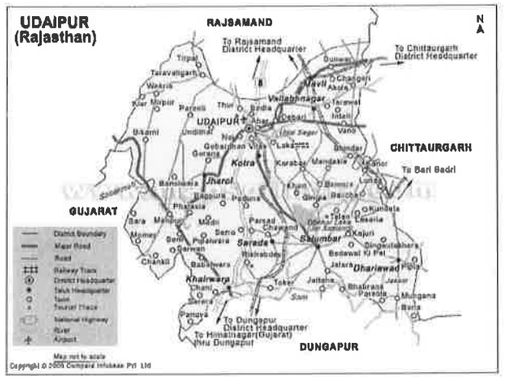
line of about 1600 kms, is the longest among all States of the country. For the purpose of administration, Gujarat State at present comprises of 25 districts, sub-divided into 226 talukas, having 18618 villages and 242 towns.

Political: The state capital is Gandhinagar. The state has a single-chamber legislative assembly with 182 members. The state sends 37 members to the Indian national parliament: 11 to the Rajya Sabha (Upper House) and 26 to the Lok Sabha (Lower House).

Udaipur

Popularly Known as the Jewel of Mewar, the city was founded by Maharajah Jai Singh in 16th century. The district is generally filling. The city of Udaipur is surrounded by three major lake and Pichhola, Fatehsagar and Udaisagar. The three lakes add to the magic of the city. On Pichhola lake stands the Jag mandir, a famous palace of royal era.

Udaipur District:



Major features of Udaipur	
Area	: 37 sq km.
Best Seasons	: September - March.
Languages	: Mewari, Hindi, English.
Excursion	: Eklingi, Nathwada, Deogarh.
Major Attraction	: Lake Pichhola, City Palace, Shilpgram, Jagdish Temple.

Udaipur consists of Five districts. The Divisional Headquarter is situated in Udaipur. Following are the districts comprising the Udaipur Division:

- Udaipur
- Rajsamand
- Chittorgarh
- Banswara
- Dungarpur

Office of Divisional Commissioner is situated in the campus of Commissioner Office, Udaipur. Udaipur is the largest district of the Division and administrative control and monitoring of this division is carried out mainly from here only. District Magistrate and Collector is the head of District Administration. Two Additional District Magistrates-assists him. For administration and development, the district is divided into seven sub-divisions viz Girwa, Dhariyawad, Mavli, Vallabhnagar, kotda, Jhadol and Salumber.

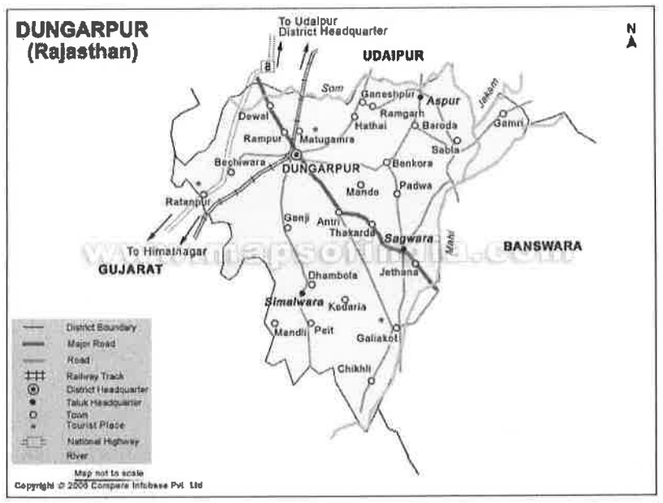
Art & Culture

The Ghoomar dance from Udaipur and Kaibeliya dance of Jaisalmer have international recognition. Folk music is a vital part of Rajasthan culture. Songs are used to tell the legendary battles of Rajputs. Folk songs are commonly ballads which relate heroic deeds, love stories, and religious or devotional songs such as bhajans and banis and often accompanied by musical instruments like dholak, sitar, sarangi etc.

Dungarpur

Dungarpur District is a district of the State of Rajasthan in western India. The town of Dungarpur is the district headquarter. The district has an area of 3,770 km², and the population of the district is 1,107,037 (2001 census). The district is roughly triangular in shape. The Mahi River runs along the western edge of the district, forming the boundary with Banswara District. The Som River, a tributary of the Mahi, runs along the northern edge of the district, largely forming the boundary with Udaipur District. The district is bounded on the east by the state of Gujarat.

The Vagad region of Rajasthan includes Dungarpur and Banswara districts. Vagad's population is predominantly Bhils, a tribe of central India.



Jharkhand

1. It is located on ChhotaNagpur Plateau. It is surrounded by Bihar to the north, Orissa to the south, West Bengal to the east, and Uttar Pradesh and Chhattisgarh to the west. Jharkhand has a population of 26.90 million, consisting of 13.86 million males and 13.04 million females. The sex ratio is 941 females to 1000 males. The population consists of 28 percent tribals, 12 percent Scheduled Castes and 60 percent others. There are 274 persons for each square kilometer of land. However, the population density varies considerably from as low as 148 per square kilometer in Gumla district to as high as 1167 per square kilometer in Dhanbad district.

Area:	79,714sq km
Population:	26.9 million
Capital:	Ranchi
Main Languages:	Hindi, Angika, Sadri, Oriya and Bengali and other tribal dialects

The state comprises of eighteen districts - Ranchi, Gumha, Lohardanga, East Singbhum, West Singbhum, Hazaribagh, Giridih, Kodarma, Chatra, Dhanbad, Bokaro, Palamau, Garhwa, Dumka, Deoghar, Godda, Pakure and Sahebgunj. With an area of 74,677 sq km.

Jharkhand has remained a home to a number of tribal communities since time immemorial. Infact, in some of the districts of Jharkhand, the tribal population predominates, the non tribal one. Jharkhand has 32 primitive tribal groups. These are the Asur, Baiga, Banjara, Bathudi, Bedia, Binjhia, Birhor, Birjia, Chero, Chick-Baraik, Gond, Gorait, Ho, Karmali, Kharwar, Khond, Kisan, Kora, Korwa, Lohra, Mahli, Mal-Paharia, Munda, Oraon, Pahariya, Santal, Sauria-Paharia, Savar, Bhumij, Kol and Kanwar.

Jharkhand is one the most industrialised regions of the country today. The region accounts for 35.5 percent of the country's known coal reserves, 90 percent of its cooking coal deposits, 40 percent of its copper, 22 percent of its iron ore, 90 percent of its mica and huge deposits of bauxite, quartz and ceramics. It is home to the largest steel plant in Bokaro, apart from Jamshedpur being practically the city of TISCO and TELCO. The State's total revenue per annum is Rs. 3.775 crores. In fact about 63 percent of Bihar total revenue comes from this region. With the creation of Jharkhand, the truncated Bihar will suffer a revenue loss of Rs. 1,500 crores annually, as the major contributor to the State's Exchequer, mines and minerals, and a large chunk of the commercial taxes will go to the newly formed State.

With everything in its favour, Jharkhand can well look forward to a bright future. It is poised to become the Industrial powerhouse of the country, that is, if its leaders set the wheel of development rolling.

Rajasthan

Early History

The state was formed in 1948 from several former principalities of Rajputana. Other small areas were added in 1949, 1950 and 1956. Rajasthan is the north-western region of India and has remained independent from the great empires. Buddhism failed to make substantial impact here; the Mauryan empire (321- 184 BC), whose most renowned emperor, Ashoka, Converted to Buddhism in 261 BC, had minimal impact in Rajasthan. However, there are Buddhist caves and stupas (Buddhist Shrines) at Jhalawar, in Southern Rajasthan. Ancient Hindu scriptural epics make reference to sites in present day Rajasthan. The Holy Pilgrimage site of Pushkar is mentioned in both the Mahabharata and Ramayana.

It has been accepted that the Rajputs were divided into thirty-six races and twenty-one kingdoms. The Rajput clans gave rise to dynasties like Sisodias of Mewar (Udaipur), the Kachwahas of Amber (Jaipur), the Rathors of Marwar (Jodhpur & Bikaner), the Hadas of Jhalwawar, Kota & Bundi, the Bhattis of Jaisalmer, the Shekhawats of Shekhawati and the Chauhans of Ajmer.

Rajasthan is one of the most educationally background states in India. According to 2001 census Rajasthan State has 56.4 million scheduled tribe population.

Geography

The main geographic feature of Rajasthan is the Aravalli Range, which ru... the state from southwest to northeast, almost from one end to another end. Mount Abu is at the southwestern end of the range, although a series of broken ridges continue into Haryana in the direction of Delhi. About three-fifths of Rajasthan lies northwest of the Aravallis, leaving two-fifths on the east and south.

The northwestern portion of Rajasthan is generally sandy and dry, and most of the region is covered by the Thar Desert, which extends into adjoining portions of Pakistan. The Aravalli Ranges intercept the moisture-giving southwest monsoon winds off the Arabian Sea, leaving the northwestern region in a rain shadow. The Thar Desert is thinly populated, and the town of Bikaner is the largest city in the desert. The Northwestern thorn scrub forests lie in a band around the Thar Desert, between the desert and the Aravallis. This region receives less than 750 mm of rain in an average year, and summer temperatures can exceed 45° C in the summer months, and drop below freezing in the winter.

The Aravalli Range and the lands to the east and southeast of the range are generally more fertile and better watered. This region is home to the Kathiarbar-Gir dry deciduous forests eco-region, with tropical dry broadleaf forests that include teak, *Acacia*, and other trees. The hilly Vagad region lies in southernmost Rajasthan, on the border with Gujarat. With the exception of Mount Abu, Vagad is the wettest region in Rajasthan, and the most

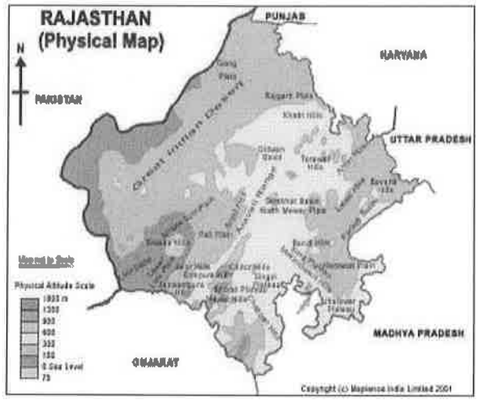
heavily forested. North of Vagad lies the Mewar region, home to the cities of Udaipur and Chittaurgarh. Eastern and southeastern Rajasthan is drained by the Banas and Chambal rivers, tributaries of the Ganges.

Economy:

Rajasthan's gross state domestic product for is estimated at $33 billion in current prices. Rajasthan' economy is primarily agricultural and pastoral. Wheat and barley are cultivated in large areas, as are ***pulses***, ***sugarcane***, and ***oilseeds***. ***Cotton*** and ***tobacco*** are cash crops. Rajasthan is among the largest producers of ***edible oils*** in India and the second largest producer of oilseeds. Rajasthan is also the biggest ***wool***-producing state in India. There are mainly two crop seasons. The main source of irrigation is wells and tanks. The ***Indira Gandhi Canal*** irrigates northwestern Rajasthan.

Rajasthan has 32 districts: Ajmer, Alwar, Banswara, Baran, Barmer, Bhilwara, Bikaner, Bharatpur, Bundi, Chittorgarh, Churu, Dausa, Dholpur, Dungarpur, Ganganagar, Hanumangarh, Jaipur, Jaisalmer, Jalore, Jhalawar, Jhunjhunu, Jodhpur, Karauli, Kota, Nagaur, Pali, Rajsamand, Sawai Madhopur, Sikar, Sirohi, Tonk, and Udaipur.

Rajasthan



Area: 342,269 sq kms

Population: 56.4 million

Capital: **Jaipur**

Main Languages: Hindi, Mewari and tribal dialects.

Rajasthan is known for its traditional and colorful art. The block prints, tie and die prints, Bagaru prints, Sanganer prints, zari embroidery are major export products from Rajasthan. Handicraft items like wooden furniture and handicrafts, carpets, blue potteries are found here.

Architecture

Rajasthan is famous for the majestic forts, intricately carved temples and decorated havelis. Jantar Mantar, Dilwara Temples, Chittorgarh Fort, Lake Palace Hotel, City Palaces, Jaisalmer Havelis are true architectural heritage.

Terms of Reference

The terms of reference mentioned by the Ministry of Tribal Affairs are given below:

1. The grantee will discuss the methodology and objective of the study with the Ministry before initiating the study.

2. The grantee will conduct the study as per the research project submitted to the Ministry of Tribal Affairs and direction issued thereon by the Ministry.

3. Final report of the project will carry prominently an acknowledgement of the financial assistance provided by the Ministry.

Chapter -2

Methodology

Aim:

The major aim of the study was to promote safe drinking water and minimum standard of health facilities to tribal communities under reference. It was also aimed to generate awareness among communities toward schemes on health and sanitation being implemented in the respective states.

Objectives:

The objectives of study were :

- to evaluate availability of drinking water and health facilities among tribal communities.

-assess provision and availability of minimum health and drinking water facility.

-promote drinking water, health and sanitation in tribal villages.

-analyse gap between actual sanction and release of fund by the implementing agencies

-encourage active community participation.

-evolve flexible and people centered approach in implementing agencies.

Test:

A questionnaire was formulated based on pilot survey conducted in Gandhinagar (Gujarat). The study is three-fold – assessing availability of health, drinking water and sanitation facilities in four states, namely, Chhatisgarh, Gujarat, Jharkhand and Rajasthan.

In order to evaluate the variables relating to the subject mentioned above it was essential to conduct pilot survey to gain knowledge about different schemes operated in the states under reference. With the understanding of various schemes relating to drinking water, health and sanitation under operation a questionnaire was formulated and administered on a few administrative personnel and village communities of Gandhinagar and Sabarkantha respectively. Based on the pilot survey conducted in the month of May , 2006 a final questionnaire was prepared in perspective of the aim and objectives mentioned above.

A two-fold questionnaire was used. One section of it was for administrative personnel comprising of questions pertaining to geography i.e. name of the state, district, block and village level data relating to water, health and sanitation schemes. The second part of questionnaire was meant for communities/ beneficiaries of the villages on the research variables such as demography, drinking water, health and sanitation. Therefore, the questionnaire consists of three sections – drinking water, health and sanitation facilities. Under each section about 15-20 questions were selected for interviewing the administrative personnel and the village communities.

Sample:

We selected one and two districts of each state under study. In Chattisgarh **Raipur** district was selected. **Banaskantha** district of Gujarat and **Palanpur** block was taken. **Udaipur** and **Dungarpur** Districts of Rajasthan were selected as they, primarily, consist of tribal population. In Jharkhand **Ranchi** as well as **Seraikela** districts were selected. Sample design is given in tabular form below. The total number of sample from

administrative personnel was 110 and 422- households got selected (see sampl
Table - 2.1 and distribution of sample in Table -2.2). A Quota sampling meth
in selection of sample.

Table – 2.1

Sample Design

STATES	NO. OF RESPONDENTS
RAJASTHAN	172
GUJARAT	48
JHARKHAND	156
CHATTISGARH	46
TOTAL	422

Table – 2.2

Sample distribution

COMPARISION BETWEEN DIFFERENT STATES

SOCIAL STATUS

STATES	SC(%)	ST(%)	OBC(%)	OTHERS(%)
RAJASTHAN	0.58	98.26		1.16
GUJARAT		97.08		2.92
JHARKHAND		100		
CHHATISGARH	4.7	68.08	21.27	6.38

Data Collection and Field experience:

Field data collection is an important task for survey research from primary sources. The study was undertaken to assess availability of drinking water, health and sanitation facilities in four states- Chhatisgarh, Gujarat, Jharkhand and Rajasthan. Primary information regarding above mentioned subjects was to collect from administrative personnel dealing with these subjects in each State, district, block, panchayat level including the village communities as well. Due to disperse and scattered geography, lack of resources and time constraints the primary information relating to above issues was first collected from the concerned officials of the State and other subsequent levels of administration.

Based on the background information collected from official sources villages were selected for primary data collection. Village communities were selected for interview and the questionnaire was administered on them through door to door survey. Those could be contacted formed the sample as respondents. The questionnaire was administered individually as well as in group through the help of village scho

village level committee workers, etc. In most of the States villagers could not even understand Hindi language. Interpreter was engaged from the given village for communication and briefing.

As nature of data required was specific and systematically listed on the questionnaire no elaborate discussion was necessary. The most difficult task was getting the respondents in the months of June, July and August due to monsoon session. This was a major constraint. Villagers during the day time go out for work and get back in the evening. Due to lack of electricity and proper transportation movement of research team was restricted during evening. This was a common feature in all places. As a matter of fact data collection from the respondents took longer than the estimated time. Data collection with right perspective in a conducive atmosphere should have been done with lots of time at hand so that respondents would have felt relaxed and interested in responding. The rush and short time during monsoon season made field work very difficult. Despite these difficulties team members worked very hard and made a good effort to deal with the subject in great detail.

Officers at the state and district levels mostly, were busy with preoccupations, meetings and other important engagements. In Chhatisgarh they were not available at all for our meeting. Block and panchayat level officers were also not available readily but with persuasion and several meetings, they were helpful in guiding us for the selection of good and bad areas where drinking water availability and health schemes were operative.

Based on discussion and secondary data source villages were selected. The distance from the district head quarter was also one of the conditions for selection of village for primary data collection.

It is important to note that in Gandhinagar and Ranchi where the project Director visited and met the officials at the State head office they were very responsive and helpful. They provided all guidance and help in carrying out the field survey.

Plan of Analysis:

The analysis of data contains secondary based information as well as primary data collected through survey. Informations relating to major findings based on variables selected for the study are shown in percentages through graphs and tabular form

Chapter – 3

Analysis of Data

Part – I

This section refers to official data collected through various documents and reports made available to researchers. State- wise analyses relating to the schemes on availability of water, health and sanitation are given below.

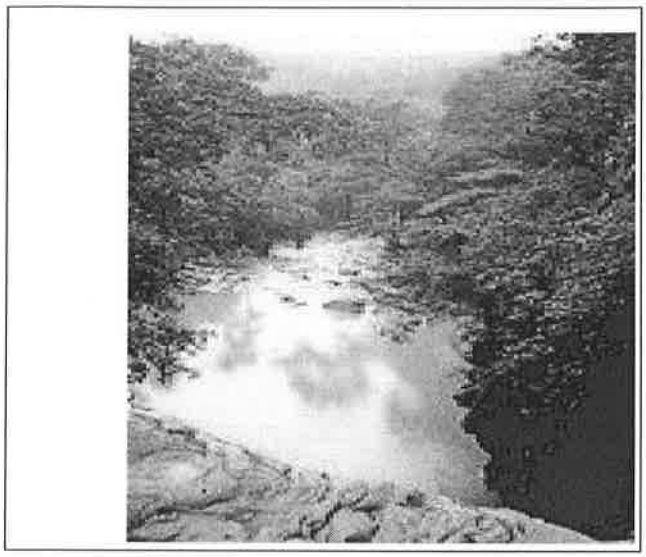
Chhatisgarh

Availability of Drinking Water

Nature is very kind to Chhattisgarh in terms of rainfall as compared to several other states of the Union. Average rainfall in the state is around 1400 mm. and about 90% of the total rainfall is confined in the Monsoon season i.e. 15th June to September. The rainfall has erratic temporal and spatial distribution in the state. Due to this variation in the rainfall, the agriculture production of the state, which is mainly Paddy, is affected. To overcome condition of recurrent draughts due to varying rainfall, the state government has taken-up many new irrigation projects on priority with an ultimate aim of achieving irrigation for 75% cultivable area. A comprehensive master plan for the state, for optimum use of water resources is also being prepared according to an official record.

The main sources of water in the state are Rivers, Tanks and Ground water. The state has important rivers providing a lifeline to the socio-economic development of the

state, such as **Mahanadi, Sheonath, Indravati, Arpa, Hasdeo, Kelo, Son, Rehar, Kanhar** etc.. The geographical area of the state can be divided into five river basins.



1. Mahanadi Basin 75,546 Sq. Km.
2. Godavari Basin 39, 577 Sq. Km.
3. Ganga Basin 18,808 Sq.Km.
4. Narmada Basin 2, 113 Sq.Km.
5. Brahmani Basin 1, 316 Sq.Km..

Total 137, 360 Sq. Km.

The state has a history of tanks built in villages since Kalchuri Kings and nearly every village has a small tank for daily needs. There are 4 Major, 33 Medium and 2199 Minor completed irrigation projects in the state as mentioned.

Table – 3.1.1Drinking Water Availability (As reported by official sources) in Raigarh

Total	**'000 habitations**	**72775**
Fully covered	**'000 habitations**	**54721**
Partially covered	**'000 habitations**	**9438**
Not covered	**'000 habitations**	**8616**

Table – 3.1.2 Water statistics

1.	Total Villages	1439
2.	Covered Villages	726
3.	Partially Covered Villages	713
4.	Total Hand Pump Installed	6883
5.	Spot Water Supply Schemes	76
6.	Piped Water Supply Schemes	28

Table – 3.1.3 Sources of Drinking Water

Tap	2.63
Hand Pump	52.99
Tube Well	0.56
Well	32.82
Tank, Pond Lake	0.64
River Canal	3.73
Spring	3.83
Any Other	2.79
HH	100.00

Source: Census of India, 2001

Health:

The Infant Mortality Rate for all of rural Madhya Pradesh moved from 120 to 125 to 109. The Infant Mortality Rates for rural Chhattisgarh are significantly lower than for entire rural Chhattisgarh and for entire rural Madhya Pradesh. The Death Rates in rural Chhattisgarh are lower than Death rates for Rural Madhya Pradesh in the same years.

During 1990, 1991 and 1992 the Infant Mortality Rate for rural Chhattisgarh fluctuated from 82.7 to 111.8 and then to 76.5.

Table 3.1.4 Health Infrastructure in Chattisgarh

Medical Colleges	**2**
Dental Colleges	**3**
District Hospitals	**16**
Civil Hospitals	**16**
Community Health Centers	**116**
Primary Health Centers	**517**
Sub Health Centers	**4692**
Civil Dispensaries (Urban)	**30**
Health & Family Welfare Training Center	**1**
District Training Centers	**14**
General Nursing Schools	**4**
ANM Training Centers	**7**

Sanitation:

With the objectives of the Public Health Engineering Department, Raigarh to provide safe drinking water in the rural areas and construction of latrine under low cost sanitation programme in the district was launched.

The department provides safe drinking water in rural areas by drilling of tube-wells and installation of hand pumps and through spot water supply schemes. The villages, having population more than 2000 are supplied safe drinking water by **pipe** water. Low cost latrines are constructed under rural sanitation programme for the families living below poverty line.

Table – 3.1.5 Rural Sanitation Programme

1.	No. of Beneficiaries living below poverty line	2346
2.	Benefited Population	11730
3.	No. of Latrines Constructed	2346

Table 3.1.6 Sanitation Facility in Chhatisgarh

Pit Latrine	5.93
Water Closet	7.09
Other Latrine	2.30
No Latrine	84.68
Total HH	100.00

Source: Census of India, 2001

Gujarat

Safe Drinking Water:

Not just power but water too is set to become a regulated commodity in Gujarat. With this move, the government hopes to minimize the mismanagement of its water resources as well as rationalize costs. Gujarat is set to become the second state in India, after neighbouring Maharashtra, to have a regularly body for its water sector. The state government has ratified a draft Bill on a water regulatory commission to ensure planned growth in the sector, promote water conservation and rationalize water supply tariffs and

transport subsidy policies. Increased privatization of water resources in the state is also a likely outcome of the Bill.

Soil and water conservation:

Government of Gujarat lays special emphasis on the development of remote areas and specially for the backward people of the State. A number of activities and schemes have been taken up and introduced for their development. Tribal area development is one of them. The tribal population of the State is mostly concentrated in the east and south-eastern part of the State. The concentration of the tribal population is found in eleven districts i.e. (1) Banaskantha (2) Panchmahal (3) Sabarkantha (4) Vadodara (5) Surat (6) Valsad (7) Bharuch (8) Dangs (9) Narmada (10) Navsari (11) Dahod.

All the soil and water conservation programmes are now undertaken on watershed principle, under various states and centrally sponsored schemes. Works on most of this watershed which started during eighth plan required to be completed during the Ninth Five Year Plan period.

Soil conservation in Tribal Area (SLC-3).

Under this scheme Soil and Water Conservation measures like contour bunding, nala plugging, terracing, land leveling etc. were undertaken on watershed basis in tribal areas of the State. The works carried out on the basis of 75 percent subsidy to the private cultivators on the total cost of the works. The remaining 25 percent amount recovered with 4 percent interest in eight equal annual instalments from the cultivators after two

years moratorium period. Under this scheme physical targets and financial outlay of State plan for the year 2004-05 was as under:

Sr. No.	Programme	Physical Target (ha.)	Financial Outlay (Rs. In lakhs)
1.	State Flow	1105	165.75

The Project- Sujalam Suphalam Yojana

To compensate deficit water balance of this region, the State has adopted a multi-pronged strategy i.e. both macro and micro management of water. On the one hand, water is being made available through Sardar Sarovar dam and other reservoirs, and on the other every drop of water is being collected, stored and recharged to take the maximum benefit. The State community-driven rainwater harvesting in the form of **check dam** construction in the State has yielded high dividend. The State Government has identified worst water scarce districts. These districts are **Ahmedabad, Patan, Banaskantha, Gandhinagar, Mehsana, Sabarkantha, Dahod, Panchmahals, Surendranagar and Kachchh**. This Scheme includes two major components i.e. irrigation and watershed management and drinking water supply.

Out of 10 worst water scarce identified districts, six districts namely, **Ahmedabad, Banaskantha, Gandhinagar, Mehsana, Patan, Sabarkantha** are in North Gujarat region. The following works are believed to be taken up in these districts. Construction of Sujalam Suphalam Spreading Canal from Mahi to Banas river which includes diversion of surplus flood water to these water deficit areas. Construction of

distribution network for effective distribution of water between the areas of Sujalam Suphalam Spreading Canal and Sardar Sarovar Narmada Main Canal. Lift Irrigation schemes for Narmada Main canal to the existing water reservoirs of these areas to divert allocated surplus water of Gujarat, extension of existing command areas is also to be taken up in view of the availability of surplus water from other river basins by transportation through the proposed Sujalam Suphalam Spreading Canal and Narmada Main Canal. To create additional storage on enrooted ponds, construction of Check dams, construction of Khet-Talav adis (field ponds) are also under consideration.

The provision of safe drinking water and sanitation facilities to the rural and urban areas of the State is one of the primary concerns. On the basis of National survey carried out by Rajiv Gandhi National Drinking Water Mission, Government of India in consultation with Government of Gujarat is as given below:

Category	**Remaining as on 11-4-99**	**Covered during 2002-03**	**Covered during 1999-2003**
NC	81	11	78
NC	2010	271	1421
Total	2091	282	1499

It was planned to cover 250 NC/PC village/habitation during 2003-04. However, as per the instructions of Government of India, all remaining NC/PC habitations were to be covered by March, 2004. All 592 habitations have been covered with water supply facility by the end of March 2004 as claimed by the administration. The villages which are once covered with water supply facility are reemerged as problem villages into the category of `Not covered' or `Partially covered' due to source failure or lack of quantity.

The villages, which are once covered with water supply facility need up-gradation of water supply level constitute about 250 villages/ habitations during 2004-2005.

Hand pump programme

Programme for drilling hand pumps considering 1 hand pump per 50 persons is proposed. About 5959 Hand Pumps are installed against the target of 2000 during 2003-04. It was planned to install 2000 Hand Pumps during 2004-05 also. According to an estimate about 200 mini pipe water supply schemes during 2003-04 and 2004-2005 were planned to cover.

Table – 3.2.1 Sources of Drinking Water

Tap	16.30
Hand Pump	50.09
Tube Well	2.11
Well	27.25
Tank, Pond Lake	0.31
River Canal	1.92
Spring	1.13
Any Other	0.90
HH	100.00

Source: Census of India, 2001

Health Camp:

In Banaskantha District, Lokvikas Sanstha, Sihori, Banaskantha, organized a meeting in collaboration with local PHC at Shihori village. In this 48 women participated. Topics discussed were **care during pregnancy** and **childbirth, services provided by the PHC, unsafe abortions etc.** The Government of Gujarat in collaboration with SEWA organized workshop on Role of *Dai* in RCH-II on 10th and 11th April 2003. NGO representatives and *Dais* from Gujarat, Rajasthan, Maharashtra and Madhya Pradesh participated.

An immunization camp was organized in collaboration with the Civil hospital, Ahmedabad. **Fourteen pregnant** women were given TT injections and iron tablets and 12 children below the age group of 1 year were given OPV, DPT and measles vaccine.

Safe Motherhood:

Forty- five adolescent boys and girls and three women participated in the safe motherhood day celebration organized at Gandhi Ashram. A poster on Safe Motherhood developed by CHETNA (NGOs) on women's right to quality health services and various entitlements for safe motherhood. Session held on care during pregnancy and child birth in which 18 boys and 12 girls participated. Topics discussed were age of marriage, responsible parentage and conception; care to be taken during pregnancy, preparations for birth and complications, etc. The Government health services and schemes available to them were also discussed.

Jharkhand

Water Supply and Sanitation:

Public Health Engineering Department is the main state agency for providing safe drinking water and sanitation facilities to the people of Jharkhand. The department constructs tubewells/drilled tubewells/sanitary wells in rural areas for coverage of no sources (N) villages/hamlets and partially covered (P) villages/halmets. The Dept. also does execution of piped water supply schemes in urban, semi urban and rural areas, relocation of spot sources, water quality testing and its remedial measures. It has taken up the schemes of rural sanitation. Major urban water supply schemes, water supply and sanitary fitting in government buildings are also under the jurisdiction of Rural Water Supply and Sanitation.

Table – 3.1.3 Sources of Drinking Water

Tap	1.52
Hand Pump	30.26
Tube Well	3.35
Well	53.78
Tank, Pond Lake	0.50
River Canal	4.50
Spring	4.06
Any Other	2.05
HH	100.00

Source: Census of India, 2001

Table 3.1.4 Sanitation Facility

Pit Latrine	1.82
Water Closet	1.55
Other Latrine	1.48
No Latrine	95.15
Total HH	100.00

Source: Census of India, 2001

Laboratories:

For effective water quality surveillance and for assessment of the quality of the quality of drinking water sources, at least one laboratory in each district is necessary. Presently one central laboratory at Ranchi and five district level laboratories are functioning in the department.

Construction of Hand Tube Wells and Drilled tube well:

It is proposed to cover all no sources (N) and partially covered (p) habitation on priority basis on the norms of providing one source. For every 250 population and at horizontal distance of 1.6 kin. Sanitary wells will be constructed. Drilled tube wells are not feasible due to ground state and inaccessibility of rig machines. Rs. 6800.00 lakhs have been provided for construction of sanitary wells and rainwater harvesting structures. The aforesaid provision includes special integrated schemes as well.

Ranchi

Health:

The most prevalent diseases among communities of Ranchi district are recorded as – Malaria, Cholera, T.B. and leprosy. In order to deal with such diseases there are 35 Ayurvedic hospitals. In addition to this one hospitals with 50 beds equipped with all modern resources in 14 remote regions of rural area is under construction according to the official sources. Some other health schemes are in operation under RCH Programme such as :

Janany Suroksha

MukhyoMantry Janany Sishu Swasth

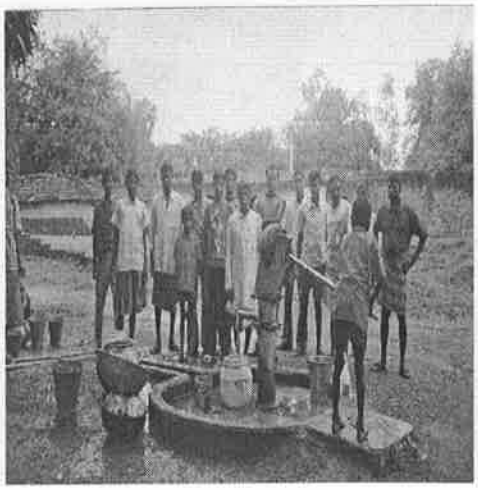
Aviyan for communities below poverty line in anti- worm therapy, anti-anemia, IFA treatment. Under this scheme children from 9 months to 5 years of age are provided with vitamin A solution.

Village Community in Health Center

Health Schemes

Screening on Malaria, Blood samples are collected from home to home basis. Screening on T.B. is also done by collecting spootam samples. Three samples are collected. Positive suspects are given drugs and kept under observation. According to official sources in Ranchi district 46 percent immunization is complete. It has improved the infants mortality rate. At present official record maintains infants death at the age 0-1 year is 50 per 1000 which is quite high.

Sources of Drinking Water in Ranchi

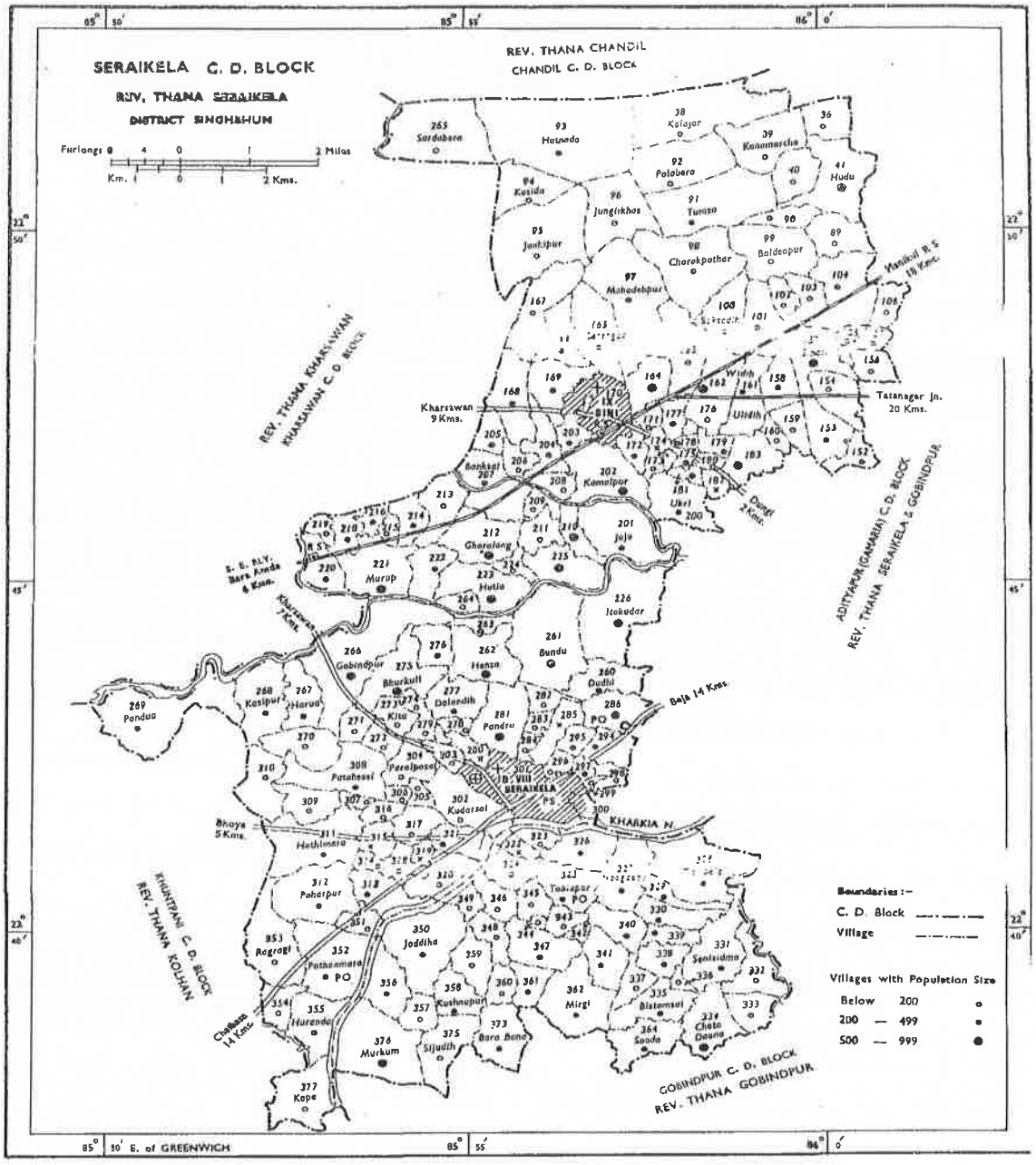


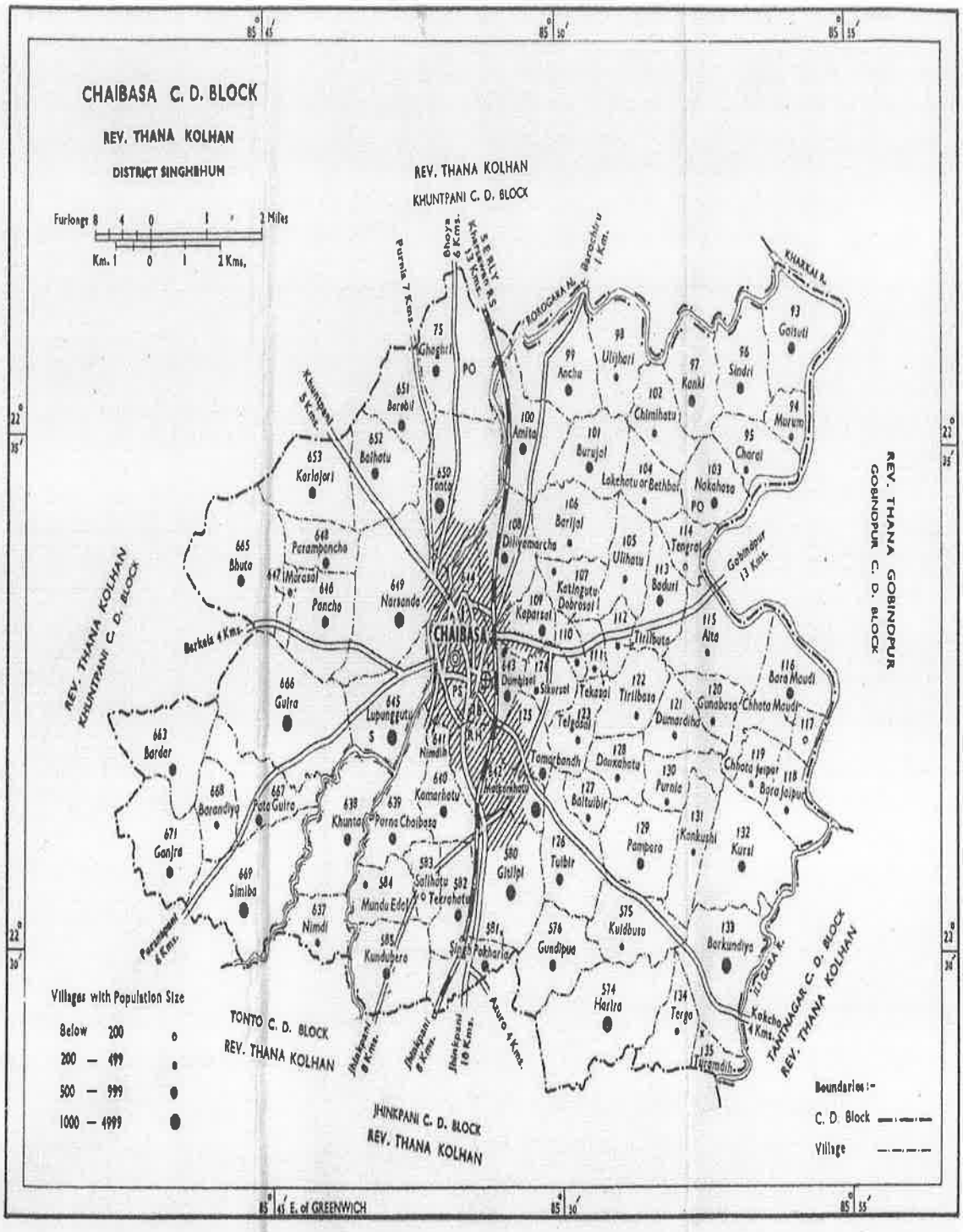
Rural Sanitation:

Low cost individual Houses and community latrines were part of rural sanitation. The people, particularly in rural areas are not aware of the importance of sanitation. In the villages, open defecation and improper disposal of human excreta are still prevalent. In order to make the people aware of the importance of sanitation and for construction of household latrines and community latrines for women folk, the department is launching a comprehensive programme. For implementation of this programme Rs. 100.00 lakhs have been earmarked for planned – budget 2001-2002 which includes special component scheme as well.

Seraikela

Kedumpsi : Drinking water facility is provided in village, which is maintained by the local villagers. Repairs and maintenance is done after the compliant registered by villagers, in which villagers support the authorities in the form of labour and money. Well-water is used for drinking purpose. Nearby **ponds** of the village are used for other works. Government ponds are under construction.


SERAIKELA C. D. BLOCK
REV. THANA SERAIKELA
DISTRICT SINGHBHUM
Furlongs 0 4 0 1 2 Miles
Km. 1 0 1 2 Kms.
REV. THANA CHANDIL
CHANDIL C. D. BLOCK
REV. THANA KHARSAWAN
KHARSAWAN C. D. BLOCK
Kharsawan 9 Kms.
Tatanagar Jn. 20 Kms.
Kharkai R. S. 18 Kms.
ADITYAPUR (GAMHARIA) C. D. BLOCK
REV. THANA SERAIKELA & GOBINDPUR
S. E. RLY. Bara Amda 6 Kms.
Kharsawan 7 Kms.
Baja 14 Kms.
Bhaya 5 Kms.
Chaibasa 14 Kms.
KHUNTPANI C. D. BLOCK
REV. THANA KOLHAN
GOBINDPUR C. D. BLOCK
REV. THANA GOBINDPUR
B. VIII SERAIKELA PS
KHARKIA N.
Boundaries :-
C. D. Block
Village
Villages with Population Size
Below 200
200 — 499
500 — 999
85° 30' E. of GREENWICH
85° 55'
86° 0'
22° 50'
22° 40'


CHAIBASA C. D. BLOCK
REV. THANA KOLHAN
DISTRICT SINGHBHUM
Furlongs 8 4 0 1 2 Miles
Km. 1 0 1 2 Kms.
REV. THANA KOLHAN
KHUNTPANI C. D. BLOCK
REV. THANA GOBINDPUR
GOBINDPUR C. D. BLOCK
REV. THANA KOLHAN
KHUNTPANI C. D. BLOCK
TONTO C. D. BLOCK
REV. THANA KOLHAN
JHINKPANI C. D. BLOCK
REV. THANA KOLHAN
TANTNAGAR C. D. BLOCK
REV. THANA KOLHAN
CHAIBASA
PS
PO
Villages with Population Size
Below 200
200 — 499
500 — 999
1000 — 4999
Boundaries :-
C. D. Block
Village
85° 45' E. of GREENWICH

Health and Sanitation :

There is no medical facility in the village. Villagers have to go to nearby city Govt. hospital which is at the distance of around 5 to 10km. Medicines are not available in these Government hospitals. Traditional *Dia* does deliveries of pregnant women. Major diseases like Malaria and Filaria are seen in the village. No medical facility is provided which resulted in death of many people during the last five years. Government does not provide any sanitation facility. No toilets are maintained. Open grounds are used as toilet.

Maintenance:

Dumbisai: There is drinking water facility available at the village which is maintained by the villagers themselves. In the event of major fault on complaint by the villagers repairs are done on partial payment. Well – water is being used in the village for drinking purpose. For other purposes ponds situated nearby are used. Government ponds are under construction.

Rajasthan

Sanitation, Water and Community Health Project (SWACH):

Guineaworm eradication project was implemented sponsored by UNICEF & SIDA since 1986. The objectives of the project are:

- To improve the quality of life & socio-economic conditions particularly in the Tribal Sub Plan Saherya and MADA area of Rajasthan particularly with reference to women and children.
- To provide safe drinking water.
- To raise the personal hygiene and sanitation levels of the population and improve the environmental sanitation facilities.
- To bring about positive changes in the attitudes and practices in the community with regard to water management & health awareness.

The main aim of SWACH is the upliftment of livelihood and socio-economic condition of tribal people with specific reference to women and child. SWACH is presently working in about 1400 villages.

Table 3.1.5 Sanitation Facility

Pit Latrine	9.45
Water Closet	1.37
Other Latrine	1.48
No Latrine	95.15
Total HH	100.00

Source: Census of India, 2001

Table – 3.1.6 Sources of Drinking Water

Tap	5.04
Hand Pump	49.68
Tube Well	3.31
Well	37.42
Tank, Pond Lake	1.81
River Canal	1.59
Spring	0.51
Any Other	0.65
HH	100.00

Source: Census of India, 2001

Tuberculosis Control Project:

The Tuberculosis Control Programme is being implemented in Scheduled area, since 1996-97. Under this scheme TB patients are identified with the assistance and technical support of Health Department. SWACH adopted the process of providing medicines in presence of Swasthya karmi so that regular intake of medicine is ensured. In addition, SWACH provides 3 KG SATTU to every patient as supplementary nutritive food. Upto March 2006, 26237 patients have been identified in 991 villages. Out of them 21349 patients have been cured and 1905 patients are presently under treatment. The Tribal Area Development Department has so far provided Rs. 692.79 lakhs and out of this Rs. 682.18 lakhs have been spent up to

March 2006. During the year 2005-06, 2969 TB patients have been cured and an expenditure of Rs. 82.84 lakhs has been made.

Fluorosis Control Project:

SWACH also took initiative for fluorosis control in Scheduled area since 1996. To increase people's participation village level animator are appointed. Distribution of domestic defluoridation kits, testing of fluoride content in drinking water and timely regeneration of activated Alumina powder are done through animator. Under this programme 28884 domestic defloridation kits have been distributed to the families living in 407 tribal villages. In the year 2005-06, the programme is being implemented in 304 villages of Scheduled area.

Part – II : Data collected from primary and secondary sources.

Primary data consist of responses collected through interview and administration of questionnaire on household heads of selected villages. These data refer to communities' awareness and knowledge towards existence of drinking water in the village, quantity, main sources, hygiene and sanitation measures; health services, to name a few.

Analysis of data shows in percentage of respondents answered the questions in a given context. In order to make the analysis simpler and comprehensive, tables and graphs are used. Major findings of this study are given below:

Findings:

Overall findings

1. Health facilities are available. There are PHCs and all the villagers are availing these facilities.
2. They prefer allopathic medicines instead of any other medicines like Homeopathy, Ayurvedic, Yunani etc.
3. Whenever any member of household gets sick, whether it is serious or mild ailment they prefer to consult PHC. 63% respondents prefer PHC and 37% prefer PMC.
4. Malaria is the prevalent disease in the area. Measures have to be taken to control this disease.
5. With reference to distance of primary health center is found that only 5% villages are covered under 0-3 km distance, 31% have to go to distance of 4 – 6 km and 64% villagers have to travel about 7 – 10 km.
6. Mode of transportation is private.
7. No emergency vehicle is available at the center.
8. Medicines are available at health center but they are not enough to fulfill the demands. When medicines are not enough they have to purchase the medicines from private source.
9. No health awareness programme was held in these areas.
10. In case of deliveries of pregnant women –
    a) 6% of pregnant mothers are taken to hospitals.
    b) 94% of pregnant mothers are usually having home deliveries with the help of *Dais,* Mid-wife and others.
11. No National Health Schemes are implemented in these blocks.
12. 100% Immunization of DPT, BCG, Polio, Measles, etc. are done for children under 5 years of age.

Sanitation

Data collected on sanitation included the level of awareness of resp toilet facilities, drainage and waste disposal.

Awareness: Fifty-five percent of people are aware of sanitation while 45% are not aware about it's importance in Chattisgarh. Those who are aware said schemes are working in Blocks. No community sanitary complex is there t the village level.

Toilets : Thirty-one percent of rural households are using PIT toilets within their premises while **sixty nine percent** said no facilities are there. **Forty-five percent** of rural households know about anganwadi toilets.

Fifty-seven percent of rural households dumps household garbage in the bins. While others (43%) dump outside. **Ninety-five percent** of households said spray of disinfectant is done in the area. According to the respondents it is done once a month. Rural communities (95%) generally tie their domestic animals outside the house as there is no provisions for community sheds and grazing center for domestic animals.

In this section answers given as per the questions asked are recorded in that order:

1. Whether drinking water (DW) exists – this question was asked to all respondents in the villages to get an authentic answer. It is found that drinking water is available in all the villages of four states as cent percent (100%) responses received in `yes' category. But this answer may the seen with reference to quantity, sources and distance covered in getting drinking water. This may be seen as mentioned in Rajasthan (Table 3.1) different blocks as 93 to 100 percent

respondents said quantity was not sufficient contrary to Gujarat's 100 percent responses were sufficient in terms of quantity (Table 3. 2).

Table – 3.1

RAJASTHAN

QUANTITY OF DRINKING WATER IN BLOCKS

BLOCKS	YES(%)	NO(%)
SLUMBER	6.9	93.1
DHARIYAWAD	7.14	92.86
SARADA		100
GIRWA		100
DUNGARPUR		100
ASPUR		100
SAGWARA		100

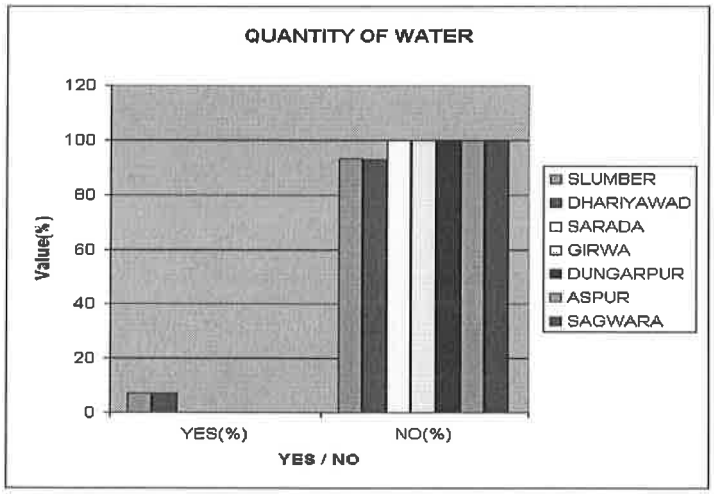
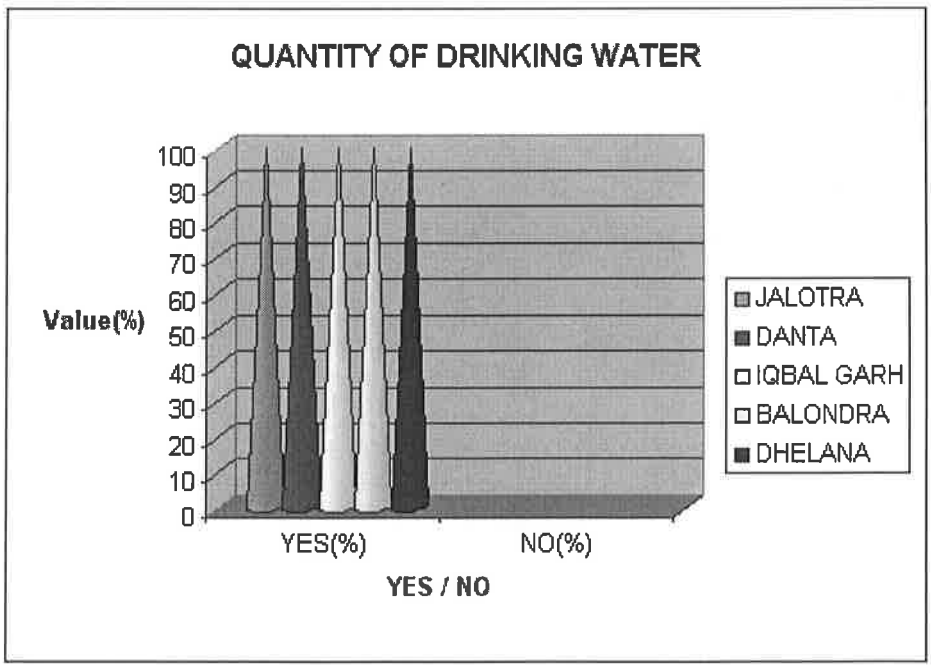


Table – 3.2

GUJARAT

QUANTITY OF DRINKING WATER IN VILLAGES

VILLAGES	YES(%)	NO(%)
JALOTRA	100	
DANTA	100	
IQBAL GARH	100	
BALONDRA	100	
DHELANA	100	



This was variable in **Ranchi, Seraikela and Westsinghbhum** districts of Jharkhand (Table 3.3). **Eighty five** percent the respondents told quantity is sufficient in Ranchi and five percent said not sufficient. In Seraikela **hundred percent** and Westsinghbhum **ninety six percent** told the quantity is sufficient. The similar picture was seen in Chhatisgarh (Table - 3.4) when **hundred percent** respondents in Raipur and **ninety percent** in **Aarang** said the quantity is sufficient.

Table – 3.3

JHARKHAND

QUANTITY OF DRINKING WATER IN DISTRICTS

DISTRICTS	YES(%)	NO(%)	CAN'T SAY(%)
RANCHI	85.36	5.25	7.01
SERAIKELA	100		
WESTSINGH	96		4

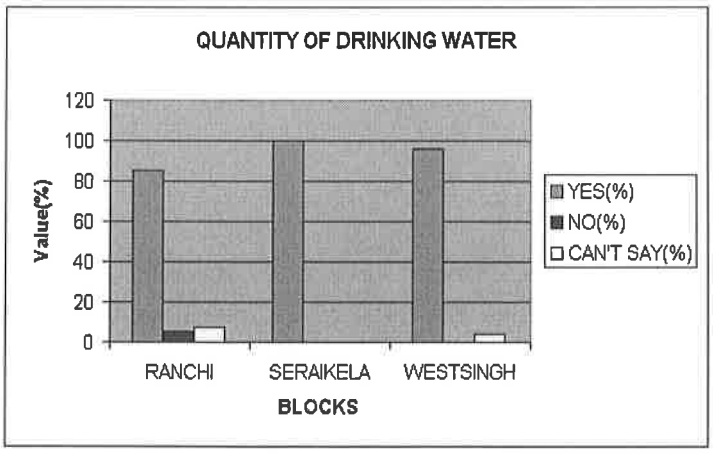
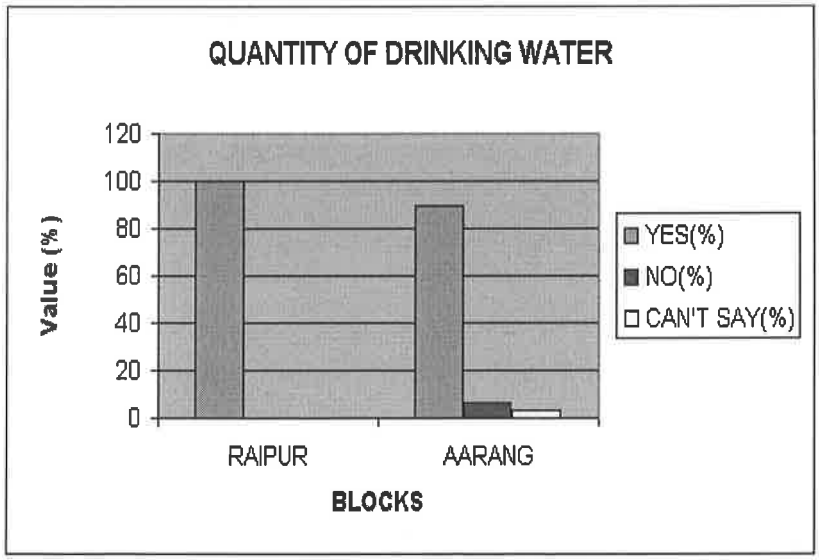


Table – 3.4

CHHATISGARH

QUANTITY OF DRINKING WATER IN BLOCKS

BLOCKS	YES(%)	NO(%)	CAN'T SAY(%)
RAIPUR	100		
AARANG	90	6.45	3.55



With regard to **sources** of drinking water in Jharkhand **forty three percent** in Ranchi, **ninety six percent** in **Westsinghbhum** and **hundred percent** in Seraikela depend on ground water in that order (Table -3.5). In Chhatisgarh **thirteen percent** in Raipur and fourty five percent in Aranag depend on ground water source (pond) and **thirty two** percent on well water. (Table – 3.6)

Table- 3.5

Jharkhand

SOURCES OF DRINKING WATER IN DISTRICTS

DISTRICTS	PIPE WATER(%)	GROUND WATER(%)	WELL WATER(%)	SURFACE WATER(%)	CAN'T SAY(%)
RANCHI		43.3	64.31		5.25
SERAIKELA		100			
WESTSINGH		96	2		2

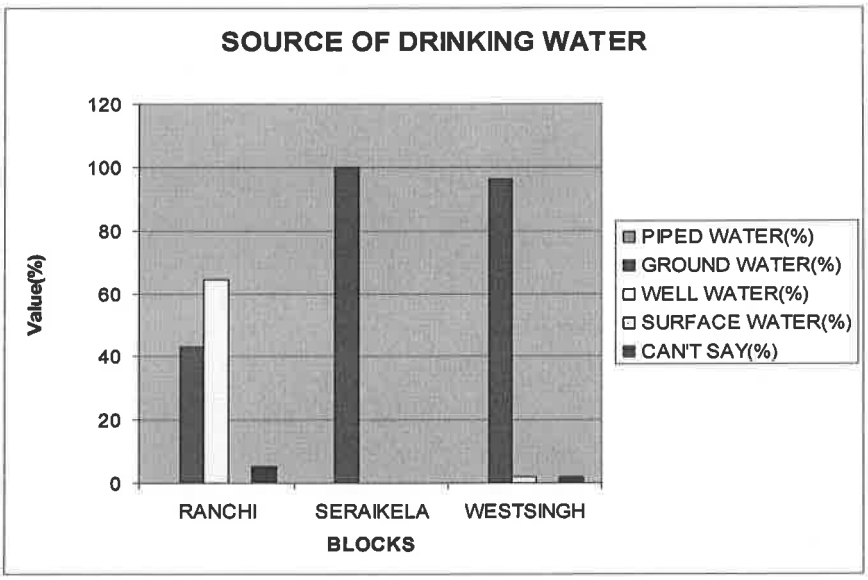
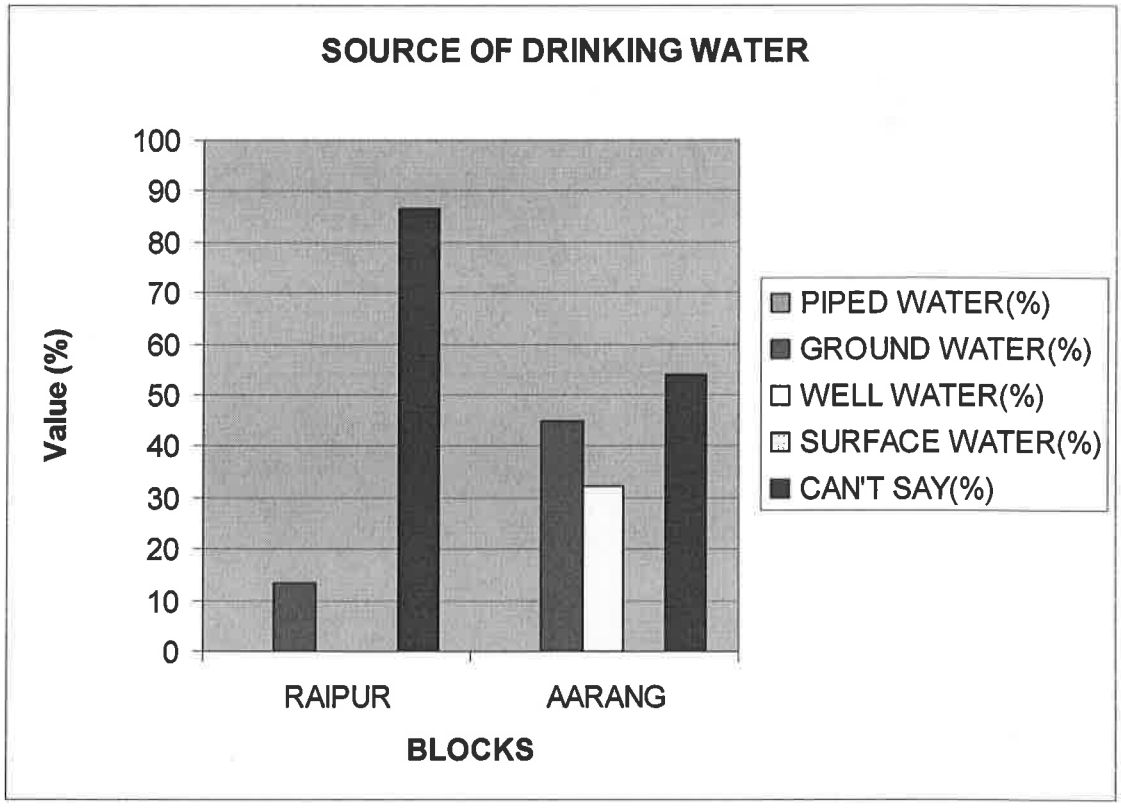


Table 3.6

CHHATISGARH

SOURCES OF DRINKING WATER IN BLOCKS

BLOCKS	PIPE WATER(%)	GROUND WATER(%)	WELL WATER(%)	SURFACE WATER(%)	CAN'T SAY(%)
RAIPUR		13.33			86.67
AARANG		45	32.25		54



In Rajasthan the responses to this was different. Block wise analysis (Table - 3.7) shows variance. Respondents of **Slumber, Dhariyawad, Sarada, Aspur and Sagwara (100%)** said that they dependent on **ground** water. Whereas in **Girwa 13 percent** said pipe water and 80 **percent** said **well** water. In Gujarat the prevalent sources of drinking water are equally found as **ground** water (pond) and **well** see in (Table 3.8).

Table 3.7

RAJASTHAN

SOURCES OF DRINKING WATER IN BLOCKS

BLOCKS	PIPED WATER(%)	GROUND WATER(%)	WELL WATER(%)	SURFACE WATER(%)	CAN'T SAY(%)
SLUMBER		100			
DHARIYAWAD		100			
SARADA		100			
GIRWA	13.33	93	80		
DUNGARPUR	2.25	97.75			
ASPUR		100			
SAGWARA		100			

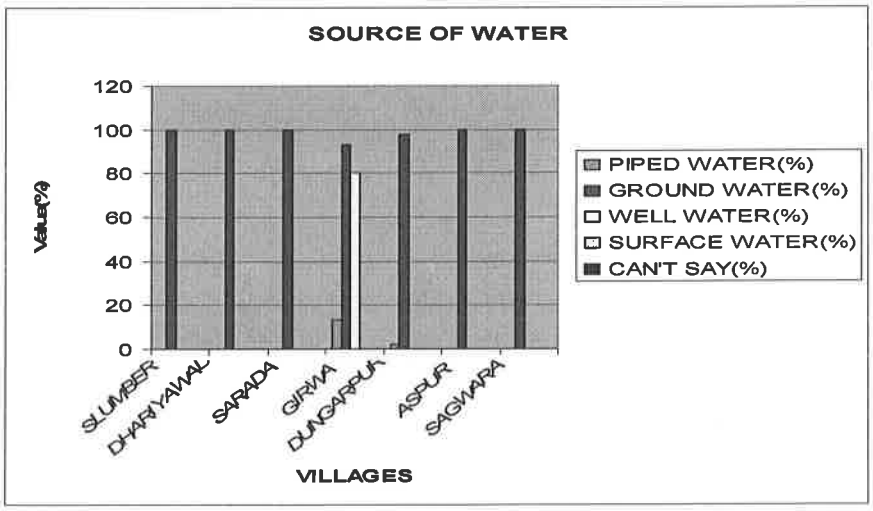
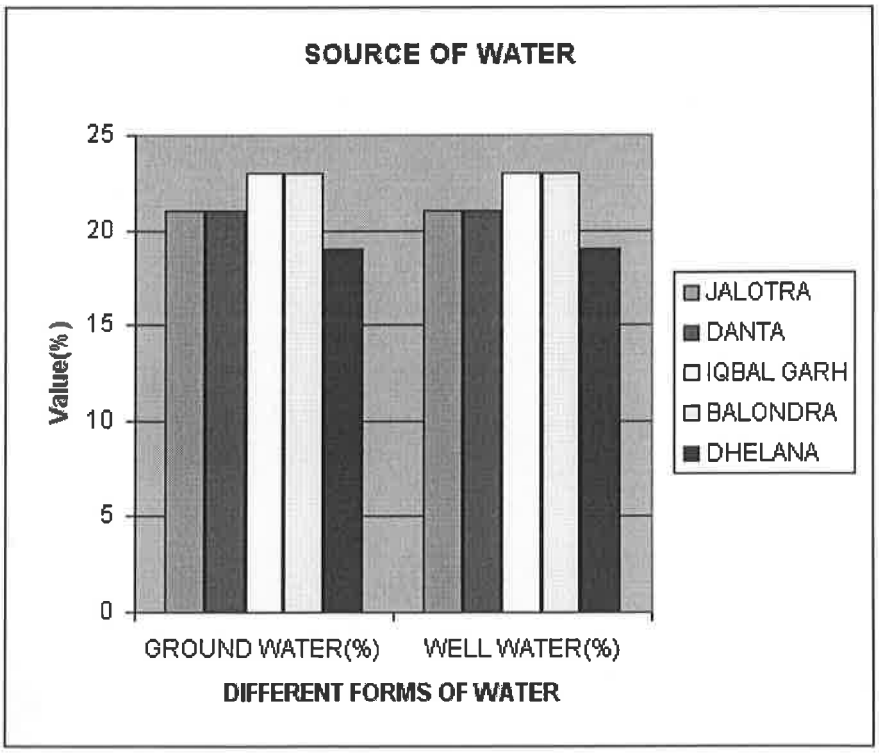


Table – 3.8

GUJARAT

SOURCES OF WATER IN VILLAGES

VILLAGES	GROUND WATER(%)	WELL WATER(%)
JALOTRA	21.03	21.03
DANTA	21.03	21.03
IQBAL GARH	23.01	23.01
BALONDRA	23.01	23.01
DHELANA	19.05	19.05



With regard to distance covered in terms of time taken was responded by 90 and 100 percent respectively in Rajasthan and Jharkhand as 15-40 minutes (Table 3.9, Table 3.10). In Gujarat 100 percent and in Chattisgarh 77 percent reported that drinking water source is available within 2-10 minutes distance(Table 3.11, 3.12).

Table – 3.9

RAJASTHAN

DISTANCE TRAVELLED GETTING DRINKING WATER

BLOCKS	2-10mins.	15-40 mins.	1-2 hrs.	3-4 hrs.
SLUMBER	6.8(%)	89.55(%)	3.65(%)	
DHARIYAWAD	17.35	82.65		
SARADA	25	75		
GIRWA	26.56	73.44		
DUNGARPUR	9.52	90.48		
ASPUR	10	90		
SAGWARA	10.52	89.48		

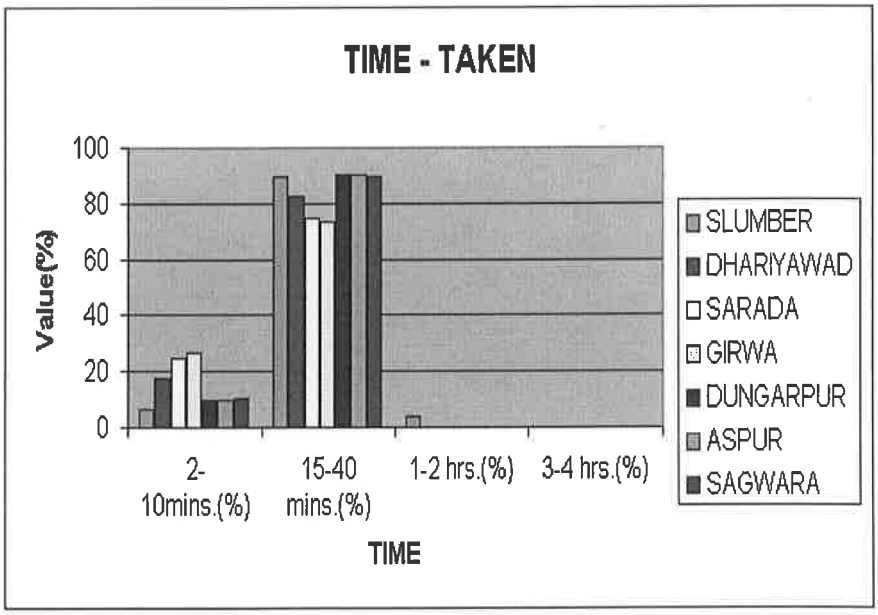


Table – 3.10

JHARKHAND

DISTANCE TRAVELLED GETTING DRINKING WATER

DISTRICTS	2-10mins.(%)	15-40 mins.(%)	1-2 hrs.(%)	3-4 hrs.(%)
RANCHI	43.35	57.39		
SERAIKELA		100		
WESTSINGH		100		

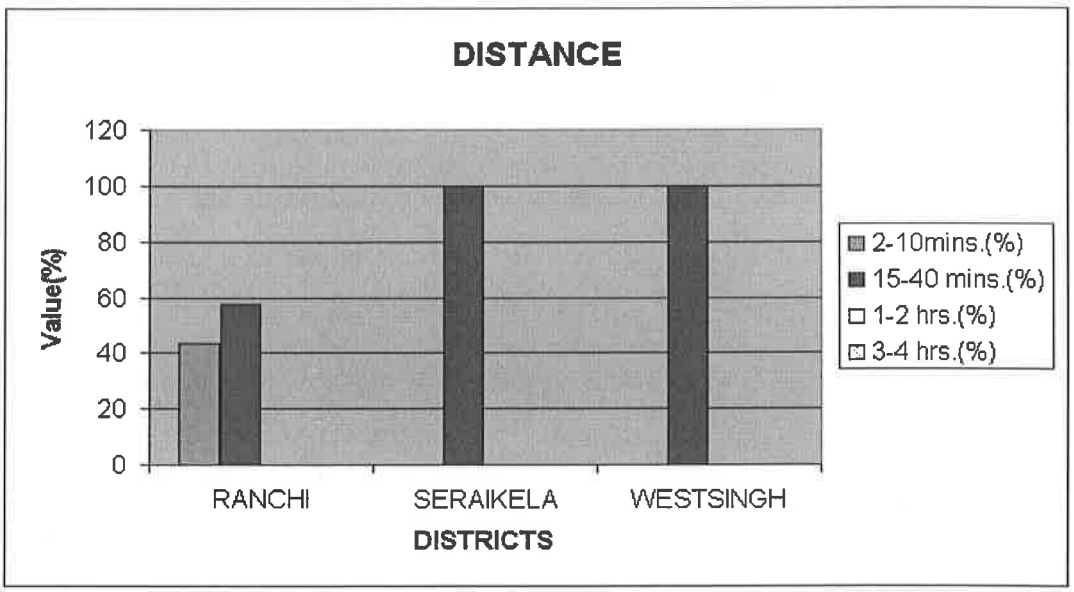


Table – 3.11

GUJARAT

DISTANCE TRAVELLED GETTING DRINKING WATER

VILLAGES	2-10mins.(%)	15-40 mins.(%)	1-2 hrs.(%)	3-4 hrs.(%)
JALOTRA		100		
DANTA		100		
IQBAL GARH	45	55		
BALONDRA		100		
DHELANA		100		

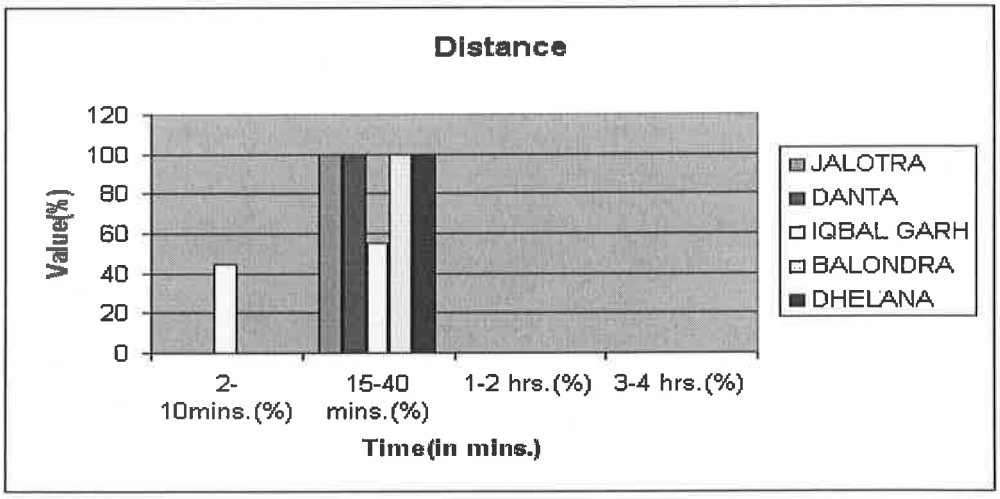


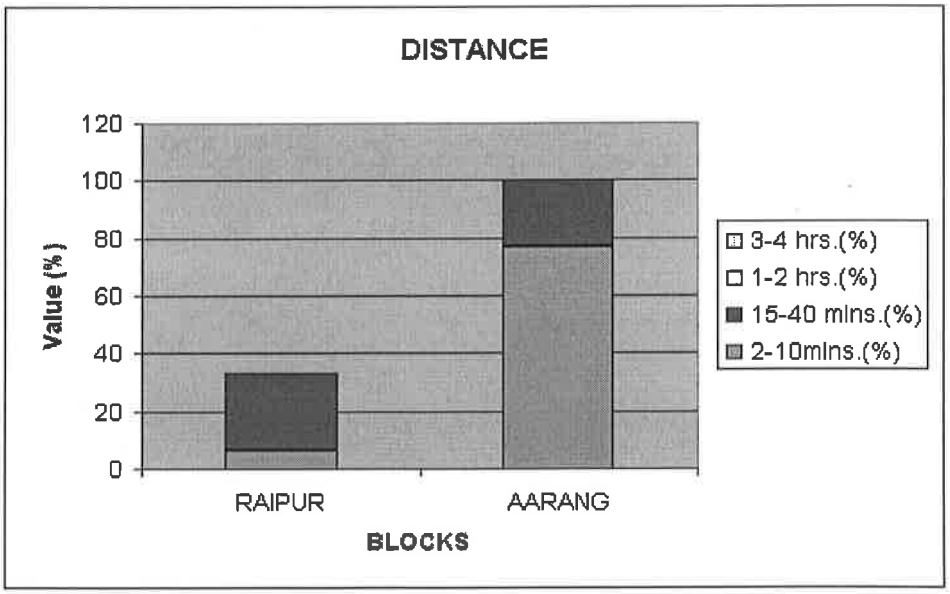
Table – 3.12

CHHATISGARH

COMPARISION OF BLOCKS

DISTANCE TRAVELLED GETTING DRINKING WATER

BLOCKS	2-10mins.(%)	15-40 mins.(%)	1-2 hrs.(%)	3-4 hrs.(%)
RAIPUR	6.65	26.56		
AARANG	77	23		



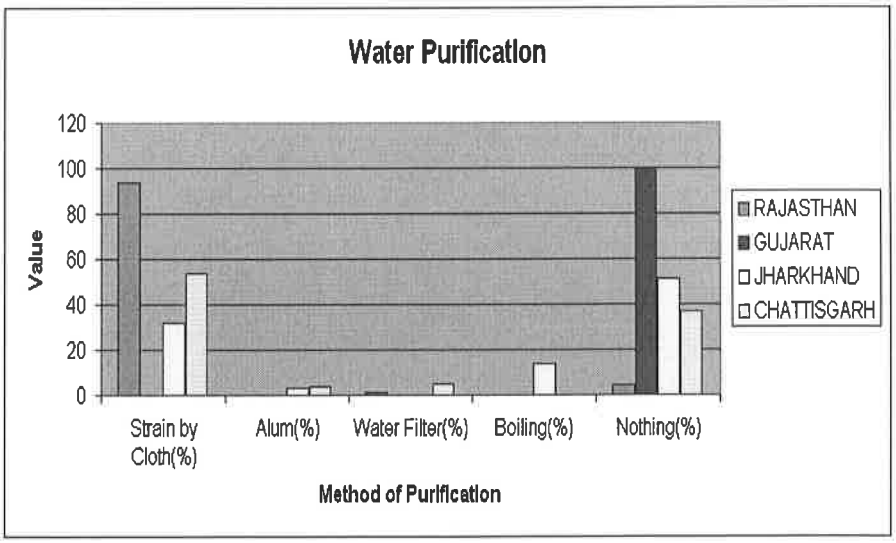
Comparison between measures of water purification on overall sample of each State reveals that about 94 percent in Rajasthan, 54 percent in Chhatisgarh and 32 percent in Jharkhand water is filtered/strained by cloth except in Gujarat where nothing is used as claimed by 100 percent respondents. **Fourteen percent** of respondents in Jharkhand said they use boiled water. (Table 3.13)

Table – 3.13

COMPARISION BETWEEN DIFFERENT STATES

MEASURES TAKEN IN WATER PURIFICATION

STATES	Strain by Cloth(%)	Alum(%)	Water Filter(%)	Boiling(%)	Nothing(%)
RAJASTHAN	94	0	1.5	0	4.5
GUJARAT	0	0	0	0	100
JHARKHAND	32	3	0	14	51
CHATTISGARH	54	4	5	0	37



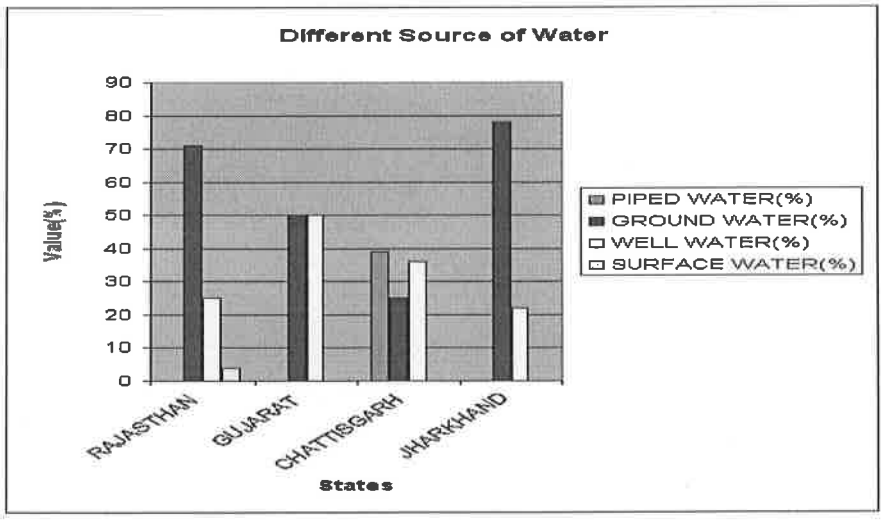
Major source of drinking water in Rajasthan, Gujarat and Jharkhand is reported as ground water by 71, 50 and 78 percent in that order. In Chhatisgarh 39 percent said they have pipe water, and 25 and 36 percent respondents said ground water as well as **well** respectively. (Table 3. 14)

Table – 3.14

COMPARISION BETWEEN DIFFERENT STATES

SOURCES OF WATER

STATES	PIPE WATER(%)	GROUND WATER(%)	WELL WATER(%)	SURFACE WATER(%)
RAJASTHAN	0	71	25	4
GUJARAT	0	50	50	0
CHATTISGARH	39	25	36	0
JHARKHAND	0	78	22	0



Health:

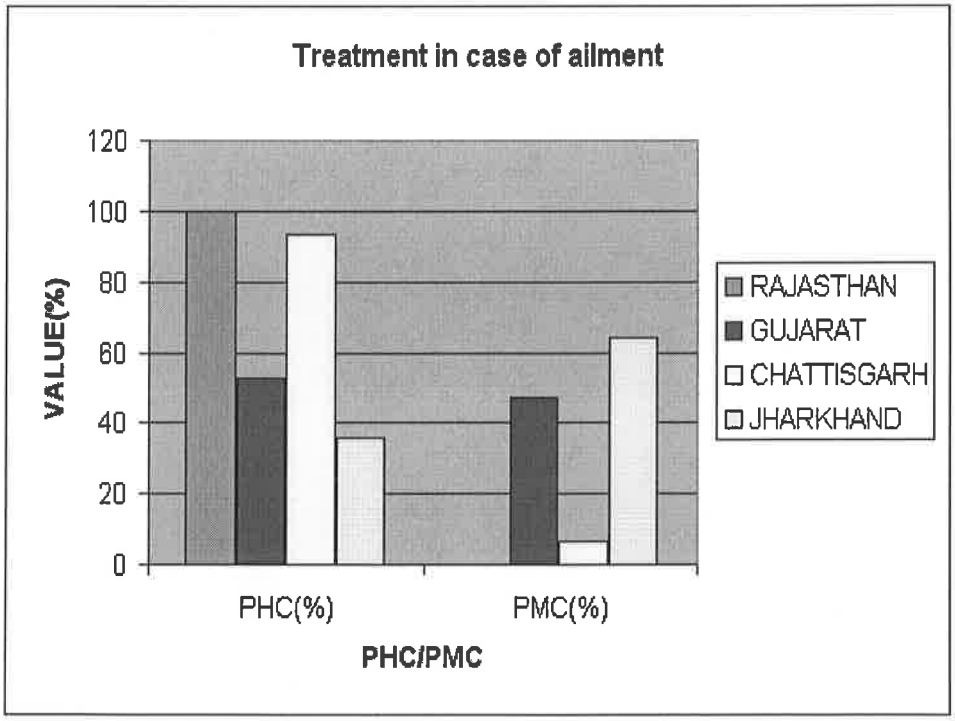
Health issues regarding availability of medical facilities in four states are compared in Table 3. 2.1. It is confirmed by 100 percent in Rajasthan, 93.48 percent in Chhatisgarh, 52.5 percent in Gujarat and 36 percent in Jharkhand in that order that there is PHC available. In Jharkhand 84 percent respondents told there is PMC. In Jharkand 10 percent said they go to traditional healer.

Table – 3.2.1

COMPARISON BETWEEN DIFFERENTS STATES

MEDICAL FACILITY –PMC/PHC

STATES	PHC(%)	PMC(%)
RAJASTHAN	100	0
GUJARAT	52.5	47.5
CHATTISGARH	93.48	6.52
JHARKHAND	36	64



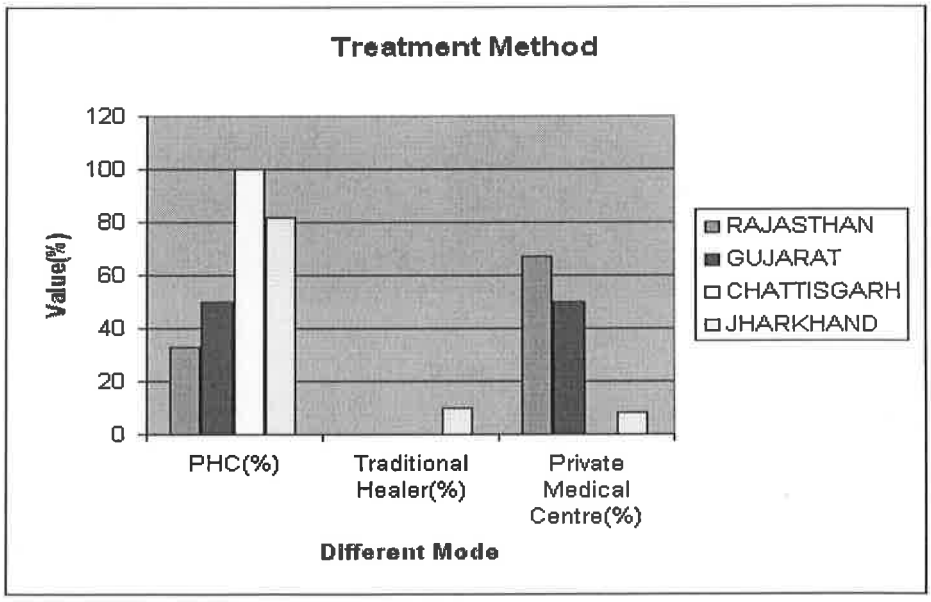
During any ailment preference for treatment availed by the communities was measured. Data show majority of the respondents (100 percent) go to government health center, PHC, in Rajasthan (33 percent), Chhatisgarh, Jharkhand (82 percent) and in Gujarat (50percent) see Table – 3.2.2.

Table – 3.2.2

COMPARISION BETWEEN DIFFERENT STATES

Method of Treatment

STATES	PHC(%)	Traditional Healer(%)	Private Medical Centre(%)
RAJASTHAN	33	0	67
GUJARAT	50	0	50
CHATTISGARH	100	0	0
JHARKHAND	82	10	8



It was also measured by asking whether any health camp or awareness programme held in the village. The response received under `yes' category as follows:

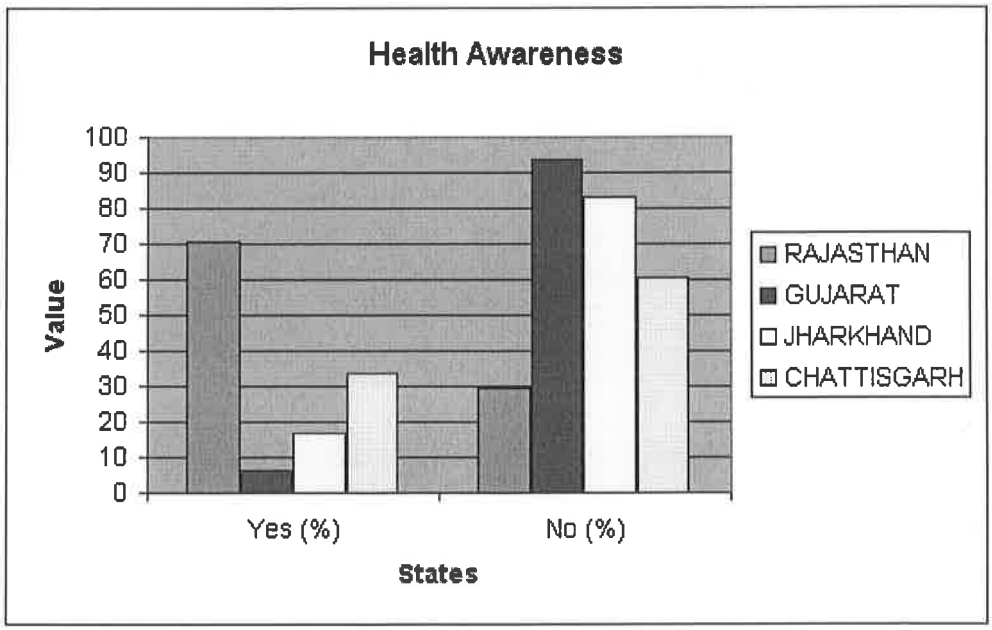
In Rajasthan 70.58 percent, Chhatisgarh 33.59 per cent in Jharkhand 15.4 percent and in Gujarat 6.12 percent. (See Table 3.2.3)

Table 3.2.3

COMPARISON BETWEEN DIFFERENTS STATES

WHETHER HEALTH AWARENESS PROGRAMME HELD – YES/NO

STATES	Yes (%)	No (%)
RAJASTHAN	70.58	29.42
GUJARAT	6.12	93.88
JHARKHAND	15.4	84.6
CHATTISGARH	33.59	60.41



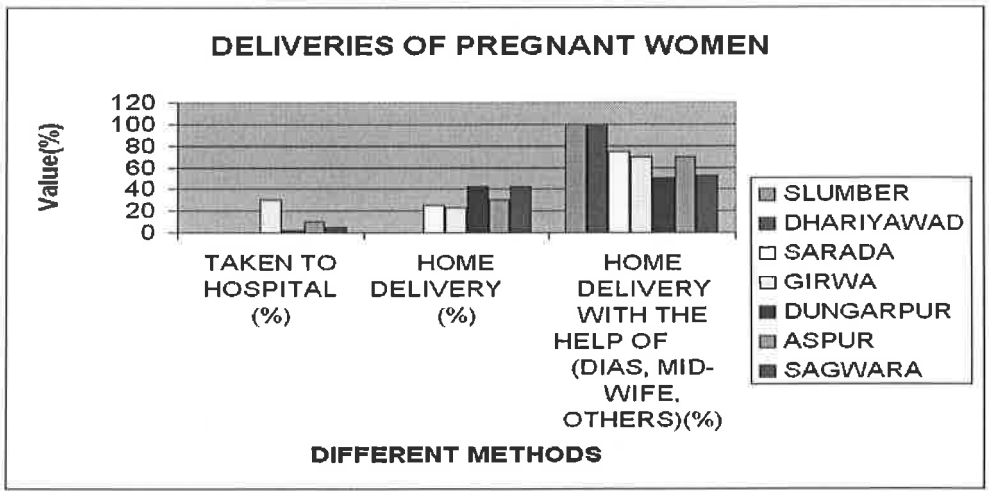
Home deliveries of pregnant women are still a common practice in Rajasthan shown in Table 3.2.4. For other states data are not available

Table – 3.2.4

RAJASTHAN

DELIVERIES OF PREGNANT WOMEN

BLOCKS	TAKEN TO HOSPITAL (%)	HOME DELIVERY (%)	HOME DELIVERY WITH THE HELP OF (DIAS, MID-WIFE, OTHERS)(%)
SLUMBER			100
DHARIYAWAD			100
SARADA		25	75
GIRWA	30	23.33	70
DUNGARPUR	2.33	42.35	50
ASPUR	10	30	70
SAGWARA	5.25	42.1	52.53



It was compared with state and district level statistics of the given areas in the following tables:

Table -3.2.5 State wise Deliveries of Pregnant Women

Districts	Institutional delivery	Institutional delivery-government	Institutional delivery-Private	Home delivery
Chhatisgarh	20.21	9.64	10.57	79.61
Gujarat	52.22	12.73	39.49	47.48
Jharkhand	22.41	5.33	17.08	77.32
Rajasthan	31.44	19.40	12.04	68.03

Source: Reproductive and Child Health District level Survey, GOI, 2003.

Table – 3.2.6 District wise Deliveries of Pregnant Women

Districts	Institutional delivery	Institutional delivery-government	Institutional delivery-Private	Home delivery
Raipur	17.28	7.09	10.18	82.25
Pashchimi Singhbhum	15.01	5.54	9.47	84.52
Ranchi	24.70	6.62	18.08	74.75
Dungarpur	30.90	24.23	6.67	68.81
Udaipur	35.10	23.61	11.49	63.73
Banas Kantha	53.67	8.79	44.48	45.97

Source: Reproductive and Child Health District level Survey, GOI 2003.

It is found that home delivery is more prevalent compared to hospital delivery as shown in Table- 3.2.5 and Table 3.2.6 respectively high percentage in all the states and districts taken for review. This is surprising that despite high awareness of the village community about health facilities they prefer to have home delivery risking both the mother and the fetus' lives. This speaks a lot about mere existence of such institutions hardly do any good to village communities.

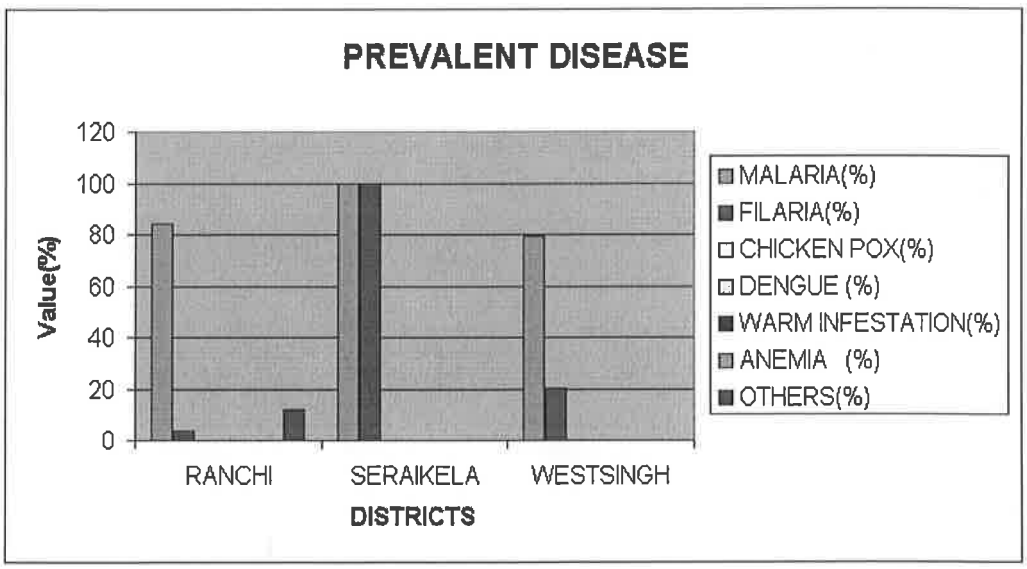
Most common diseases are reported to be malaria (84.3%) and **Filaria** (3.55) in **Ranchi** district of Jharkhand and 100 percent respondents of **Seraikela** said **malaria** and **Filaria** both are equally prevalent. (Table - 3.2.5)

Table – 3.2.5

JHARKHAND

PREVALENT DISEASE

DISTRICTS	MALARIA (%)	FILARIA (%)	CHICKEN POX(%)	DENGUE (%)	WARM INFESTATION(%)	ANEMIA (%)	OTHERS (%)
RANCHI	84.3	3.5					12.2
SERAIKELA	100	100					
WESTSINGH	79.59	20.41					



Administrative personnel in Rajasthan responded on various aspects of water quantity, maintenance of water resources, health awareness programme, sanitation in school and Anganwadi, etc. may be seen in Table 3.2.6.

Table – 3.2.6

Responses of Personnel on Water Resources, Health Awareness and Sanitation

Questions	UDAIPUR (%)		DUNGARPUR (%)	
	YES	NO	YES	NO
Female Headed Household	15	85	4	96
Whether Quantity of water sufficient	2	98	0	100
Does maintenance facility available	71	29	35	65
Whether Health Awareness Programme held	60	40	59	41
Are Anganwadi toilets available	32	68	22	78
Do they have common shed for keeping household animals	9	91	4	96
Whether they like to have provisions	81	19	35	65

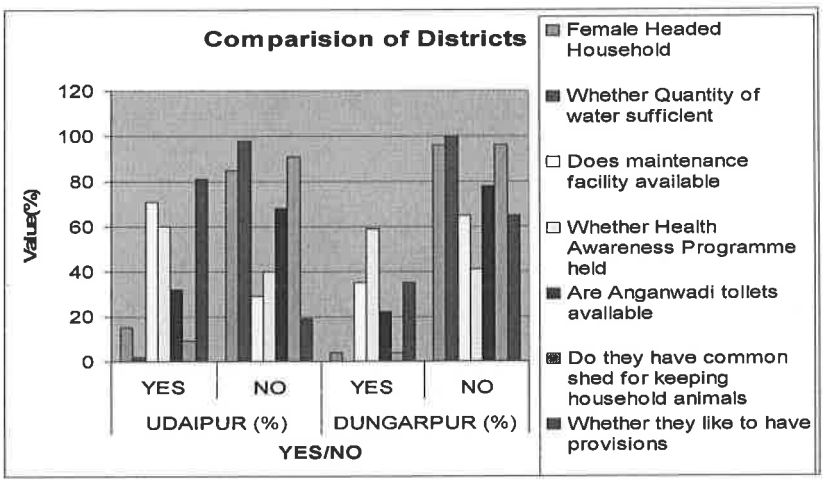


Table: 3.2.7 Distribution of Health services in tribal area

State/UT	SUB CENTRES			PHCs			CHCs		
	R	P	S	R	P	S	R	P	S
Chhattisgarh	2088	2159	-	313	251	62	78	61	17
Gujarat	2288	2209	79	343	328	15	85	70	15
Jharkhand	2166	NA	NA	325	NA	NA	81	NA	NA
Rajasthan	2239	1119	1120	335	181	154	83	30	53
All India	25764	16748	4011	3853	2809	468	954	643	180

R=Required, P=Imposition and S= Shortfall

Note: The requirement is calculated on the basis of final population of Census, 2001 in rural areas using the prescribed norms. All India shortfalls is derived by adding state wise figures of short falling ring the existing surplus in some the states.
Source :Infrastructure Division, MOHFW/GOI.

Table: 3.2.8 Percentage of children of age 0-4 years receiving immunization

	Rural		
	Boys	Girls	Children
Chhatisgarh	91.00	87.00	89.00
Gujarat	90.00	92.00	91.00
Jharkhand	88.00	86.00	87.00
Rajasthan	93.00	91.00	92.00

Source: NSS 60th Round, Jan-Jun 2004.

Table: 3.2.9 Percentage of persons hospitalized in Rural Areas and population per bed

	Rural	Pop per Bed
Chhatisgarh	12	na
Gujarat	29	709
Jharkhand	9	na
Rajasthan	18	3175

Source: NSS 60th Round, Jan-Jun 2004.

Table: 3.2.10 Percentage of spells of ailments treated, by source

	Rural	Source	Pop per Bed
		Govt.	Pvt.
Chhatisgarh	89	15	85
Gujarat	84	21	79
Jharkhand	92	13	87
Rajasthan	90	44	56

Source: NSS 60th Round, Jan-Jun 2004

Table: 3.2.11 Statewise Health and Sanitation level shown during 2005-06

% Rural	Chhatisgarh	Gujarat	Jharkhand	Rajasthan
Have Electricity	65.50	83.30	22.80	54.00
Use piped water	6.00	59.40	0.00	29.10
Have access to a toilet facility	5.60	30.10	5.00	8.40
Live in pucca house	5.70	45.70	10.40	30.50
Any Antenatal care	88.00	83.00	55.00	71.00
Institutional deliveries	8.00	42.00	11.00	23.00
Vaccination Coverage	43.00	40.00	30.00	22.00
Children Nutritional status				
Stunted	45.00	42.00	41.00	34.00
Wasted	18.00	17.00	31.00	20.00
Underweight	52.00	47.00	59.00	44.00
Infant Mortality	75.00	58.00	73.00	65.00
Trends in HIV/Aids Knowledge				
Men	59.00	73.00	42.00	65.00
Women	31.00	35.00	16.00	19.00

Sources: NFHS-3, 2005-6

Table 3.2.12: Total female population ages 15-49, live births and maternal deaths, 1997-2003

States	Sample female population (15-49)	Live births	Maternal deaths	% to total female population	% to total live births	% to total maternal deaths
Chhattisgarh	699,135	88,913	365	4.8	6.7	8.2
Jharkhand	993,945	129,006	563	6.9	9.8	12.6
Gujarat	647,056	66,310	91	4.5	5.0	2.0
Rajasthan	709,732	90,838	440	4.9	6.9	9.8

REGISTRAR GENERAL, INDIA, NEW DELHI

Chapter -4

Summary and Conclusion:

Data collected from different sources through questionnaire, interview and observation clearly show that availability of drinking water and minimum health facilities are existing variably in urban and rural villages. Drinking water facility in Gujarat as reported is the best. **Hundred percent** response to the availability of drinking water is quite misleading. Data collected during monsoon season and it is obvious that ground water source i.e. village pond or well seemed to be filled. Enquiring into the availability during the off season and summer season it was revealed that water is not available during March-May in the well and they have to go to distant alternative sources for drinking water.

An estimated 50% of rural households were served by ground water, while 26% served by pipe water and 19% were served by well-water claimed by the respondents. **Distance of dwelling unit from principal source:** Only about 31% of rural and 66% of urban households reported that their principal source of drinking water is within their premises. Further, about 60% and 32% households in rural and urban areas respectively were within 0.2 km from their principal source of drinking water. The proportion of households having sole access to their principal source of drinking water was estimated to be 41% for urban areas and 23% for rural respectively.

An estimated 13% of rural and 15% of urban households did not get sufficient drinking water from their principal sources. May, June and April were the worst months

in both rural and urban areas. About 85% of rural and 91% of urban households reported that drinking water served by their principal sources is of satisfactory quality. However, about 53% to 67% households said they were served by other sources like tank, pond or river; canal or the lake as their principal source.

Supplementary sources:

About 18% of the households, in both rural and urban areas, reported that they are using some supplementary source of drinking water. Among those households reported of using some supplementary source refer as tube well, hand pump as the most frequent source (37% in rural and 52% in urban areas), followed by well (36% in rural and 23% in urban areas). Question relating to drinking water and hygiene in rural areas, about 18% of households reported to have filtered their drinking water but very few households reported to have chemically treated, or boiled water before drinking. The situation was slightly better in urban areas, where the percentage of households reporting boiling and filtering of drinking water before consumption was 11% and 35%, respectively.

In terms of safe drinking water it is obvious that since they use untreated ground water or open well water quality is not ensured. It is also reported by majority of the respondents of all four states that they have to travel about 15-45 minutes, normally, to fetch drinking water. The quantity of water available is insufficient.

Prevalent Diseases:

It is healthy sign to note that majority of the respondents have shown confidence in government run health care facilities and availability of medical services and medicines. During the survey in villages, respondents usually complained about the following diseases:

- Joint pain
- Crippled
- Swelled gum
- Dental fluorosis
- Gastrointestinal complaints
- Polyea and Polydipsia
- Anemia

According to survey done in Rajasthan, Gujarat, Chattisgarh and Jharkhand 99% rural households are availing PHC facilities. Rural households in all the villages and blocks said to be using allopathic medicine for their treatment except in Jharkhand where the villagers prefer Homeopathy, Yunani and Ayurveda compared to Allopathic medicines. They usually visit PHC for their treatment whether it is serious or mild ailment. Malaria is the prevalent disease in the area. Measures have to be taken to prevent the disease. Primary health centers are situated at the distance of 4 – 6 km and the mode of

transportation is private. 20% of rural households get emergency vehicle at the center said. Medicines are available at the center but are not enough as reported by households.

Village community is well aware of the importance of sanitation and hygiene. Due to lack of water and community based resources, water borne diseases like malaria, cholera, diarrheas. Tuberculosis and skin diseases are prevalent among tribals. Most of the villages visited in tribal areas are found to be poor, mostly below poverty level and earn their living by daily wage or agriculture labour.

Some data analysed but not reported in the text may be read in the Appendix.

Conclusion:

In this report, analysis of data contains information received through secondary sources, i.e. reports, office records and published documents. Administrative personnel interviewed respective state, district head quarter and village communities of selected sample by administering questionnaire. It is therefore, not easy to write objectively facts gathered from different sources with due concern. It has been depended mostly on recorded facts and respondents' views and researcher's observation. Quantitative analysis no matter how sincerely done gets some information lost in order to use convenient method of reporting data in relevance.

Keeping these in mind an effort has been made to highlight the real issues and quality of information without filtering and changing the ground realities. The topic of this study is vast. This needs in-depth study for further exploration doing justice with the subject.

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APPENDIX-A

QUESTIONNAIRE ON: AVAILABILITY OF HEALTH SERVICE AND DRINKINGWATER (HSDW) IN TRIBAL AREAS (FOR ADMINISTRATION)

SEX: -

MALE ☐ FEMALE ☐

1.1 State ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

1.2 District ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

1.3 Block ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

1.4 Village ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

2. Whether Drinking water (DW) exists : -

Yes ☐ No ☐

3. What are the sources available in this area: -

Open well ☐ Tube well ☐ Bore well ☐

Hand pump ☐ Irrigation Tanks ☐

Water harvesting Structures ☐ Others ☐

4. Does any maintenance facility available: -

Yes ☐ No ☐

4.1 If yes, whether visits are held: -

Quarterly ☐ Half-yearly ☐ Yearly ☐ No visit ☐

5. Whether contribution made in construction by the community?

Yes ☐ No ☐

5.1 If yes in what form: -

Cash ☐ Labour ☐

6. Availability of Drinking water from the sources: -

Seasonal ☐ Perennial ☐

Not at all ☐

7. How the location was decided: -

☐ ☐ ☐ ☐

7.1 Whether village panchayat was consulted before implementing these schemes: -

Yes ☐ No ☐

7.2 Year of Commencement of the scheme .

☐ ☐ ☐ ☐

HEALTH SERVICES

8. What kind of Health facilities is available in this area:-

Hospitals: Govt. ☐ Private ☐

PHC ☐ Mobile Van ☐ Registered Practitioners ☐ Licensed Pharmacies ☐

9. Are there medicines available at the center?

Yes ☐ No ☐

10. If no what are the other sources for getting medicines during emergency?

---

11. What are the prevalent diseases in this area?

i. Malaria ii. Filaria iii. Chicken pox iv. Dengue v. Warm infestation
vi. Anemia vii. Others

12. Is there any special service for pregnant mothers and postnatal care?

Yes ☐ No ☐

13. Is immunization being provided to the children under 5 years.?

DPT ☐ BCG ☐ Polio ☐ Measles ☐

SANITATION

14. What schemes under sanitation programme are available in this area?

---

15. Whether there is spray of disinfectant in the area?

Yes ☐ No ☐

16. Is there any community sanitary complex?

Yes ☐ No ☐

17. Is there any programme on school sanitation and Hygiene education?

Yes ☐ No ☐

18. Are Anganwadi Toilets available?

Yes ☐ No ☐

QUESTIONNAIRE FOR HOUSEHOLD

PROJECT ON: AVAILABILITY OF HEALTH SERVICE AND DRINKINGWATER (HSDW) IN TRIBAL AREAS

---

1. Household's Particulars: -

1.1 Household's name: - ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

1.2 Sex: -

Male ☐ Female ☐

1.3Social status: -

SC ☐ ST ☐

OBC ☐ Others ☐

1.4 Whether it is female-headed household.

Yes ☐ No ☐

1.5 If yes, her present status: -

Married ☐
Unmarried ☐
Widow ☐
Deserted ☐
Divorced ☐
Others (specify)---------- ☐

1.6 Members of Household: -

Name	Relationship	Age (yrs)	Educational Status

1.7 Main Occupation: -

Self employed in own agriculture land ☐

Employed in others agriculture land ☐

Wage employed in Non agriculture sector ☐

Others (specify) ☐

1.8 Household's monthly income: -

DRINKING WATER

2 Whether Drinking water (DW) exists : -

Yes ☐ No ☐

2.1 What is the main source of Drinking water for members of your household?

1) Pipe water 2) Ground water 3) Well water 4) Surface water

2.2 Availability of Drinking water from the sources: -

Seasonal ☐ Perennial ☐

Not at all ☐

2.3 Whether the quantity of Drinking water is sufficient: -

Yes ☐ No ☐

2.4 How long does it take to go there, get water and come back in one trip?

a. 2-10 Mins
b. 15-40 Mins
c. 1-2 Hrs
d. 3-4 Hrs

2.5 What do you do to purify drinking water?

1) Strain by cloth
2) Alum
3) Water filter
4) Boiling
5) Nothing

2.6 Does any maintenance facilities available?

Yes No

2.7.If yes, whether visits are made.

Quarterly ☐ Half-yearly ☐

Yearly ☐ No visit ☐

2.8 Whether contribution made in construction by any member of your family?

Yes ☐ No ☐

2.9 If yes in what form: -

Cash ☐ Labour ☐

HEALTH SERVICES

3. What kind of Health facilities is available in this area:-

Hospitals: Govt. ☐ Private ☐

PHC ☐ Mobile Van ☐ Registered Practitioners ☐ Licensed Pharmacies ☐

3.1 Which type of medicines do you prefer?

1) Allopathic
2) Ayurveda
3) Homeopathy
4) Yoga
5) Yunani
6) Naturopathy
7) Others (specify)----------

3.2 When members of your household get sick, where do they generally go for treatment?

1) PHC 2) Traditional Healer 3) Private medical center

3.3 Which do you prefer in case of serious ailment?

3.4 Which do you prefer in case of mild ailment?

3.5 What are the prevalent diseases in this area?

i. Malaria ii. Filaria iii. Chicken pox iv. Dengue v. Warm infestation
vi. Anemia vii. Others

3.6 How far is the primary health center situated?

1) 0-3 K.M ☐
2) 4-6 K.M ☐
3) 7-10 K.M ☐
4) 11-15 K.M ☐

3.7 Mode of Transportation: -

1) Bus: -
   Public ☐
   Private ☐

2) Motorcar: -
   Public ☐
   Private ☐

3) Auto rickshaw: -
   Public ☐
   Private ☐

4) Others: -
   Public ☐
   Private ☐

3.8 Is there emergency vehicle (ambulance) at the center?

Yes- No- ☐

3.9 Are there medicines available at the center ?

Yes- ☐ No- ☐

3.10 If yes, are there enough medicines?

Yes- No- ☐

3.11 If no what are the other sources for getting medicines during emergency?

3.12 Are these sources private or public?

3.13 Are there any health awareness programmes held in this area?

Yes- ☐ No- ☐

3.14 If yes, how often?

1) Quarterly
2) Half yearly
3) Yearly

3.15 Do you get health services around the clock ?

Yes- ☐ No- ☐

3.16 Do doctors visit the people even at their homes during emergency?

Yes- ☐ No- ☐

3.17 How many doctors and nurses are available at the health center?

---

4. Did any members of this residence die during the last five years?

Yes ☐ No ☐

4.1 If yes what was the cause?

4.2 How many persons died?

4.3 Was it a male or female?

M ☐ F ☐

4.4 Age: -

0-5
6-10
11-15
16-20

4. 5 If female was the death due to pregnancy?

Yes ☐ No ☐

4.6 If yes, whether she died during delivery or before that?

---

4. 7 Are pregnant mothers:-

1) Taken to the hospitals
2) They usually have home delivery
3) They have home delivery with the help of
   a) Dais b) Mid-wife c) Others

4.8. Do you know about the different 'National Health Schemes' implemented or put forward by the government ?

Yes- ☐ No- ☐

4.9 Has immunization being provided to the children under 5 years for the followings

DPT ☐ BCG ☐ Polio ☐ Measles ☐

4.10 Are you satisfied with the services provided to you?
1) Fully satisfied
2) Partly satisfied
3) Not satisfied

4.11 What else, do you think could be done so that the masses benefit?

SANITATION

5. Are you aware of the importance of sanitation?

Yes ☐ No ☐

5.1 If yes what are the schemes working in this area under sanitation?
Dist. ☐ Block ☐ Village ☐

Name them: - _____
_____
_____

5.2 Is there any community sanitary complex?
Yes ☐ No ☐

5.3 What kind of Toilet facilities does your household have?

1. Flush toilet- Own Shared Public
2. PIT toilet- Own Shared Public
3. No facilities- Bush Filed Others

5.4 Are Anganwadi Toilets available?

Yes ☐ No ☐

5.5 Is there any programme on school sanitation and Hygiene education?

Yes ☐ No ☐

5.6 How do you dispose off the household garbage?

1. Dump outside
2. Dump in bins.
3. Burn
4. Others

5.7 Is there any committee or sanitation programme of the village to throw household garbage?

Yes ☐ No ☐

5.8 If 'Yes' what role is played by the community?

1. Group participation in cleaning ☐
2. Any Other

5.9 What measures do you have for cleaning the drains?

_____

5.10 Whether there is spray of disinfectant in the area?

Yes ☐ No ☐

5.11 If 'Yes' how often

1. Once in a month
2. Twice in a month
3. Weekly
4. Not at all

5.12 Where do you keep your domestic animals?

1. Tie them inside the house
2. Tie them outside the house

5.13 Who cleans the area?

_____

5.14 Do you have common shed for keeping household animals?

Yes ☐ No ☐

5.15 Would you like to have such provision?

Yes ☐ No ☐

5.16 If yes who should decide on this ?

Village Panchayat ☐

Village community ☐

Others ☐

Place: _____

DATE: 4-10-2006 _____ **SIGNATURE OF INVESTIGATOR**

APPENDIX- B

INFORMATION ABOUT FLUORIDE AND FLUOROSIS

GENERAL INFORMATION:

- In India 17 states out of 32 are endemic for Fluorosis.
- All the 32 districts in Rajasthan are endemic for Fluorosis.
- Fluoride is a dangerous poison and not good for health.

SOURCE OF FLUORIDE:

- Major source of fluoride is water.
- Other sources are food, dental products, drugs and industrial pollution.

HEALTH COMPLAINTS DUE TO FLUORIDE:

- Fluoride destroys the body resulting is a disease known as Fluorosis.
- Fluorosis occurs due to excess ingestion of fluoride.
- Fluorosis are of three types.
    - Skeletal Fluorosis.
    - Non-skeletal Fluorosis.
    - Dental Fluorosis.
- Early warning sings are gastrointestinal complaints, excessive thirst, frequent tendency to urinate and muscle weakness.
- House to house survey is necessary for assessing exact magnitude of the disease, which helps in prevention and control of Fluorosis.

- School Dental Fluorosis survey is an easy way to find out the endemic villages in shorter duration.
- Fluorosis has no treatment only prevention is the solution.
- Fluorosis can easily prevented, if diagnosed early.

FLUORIDE & WATER:

- Fluoride in drinking water does not change the colour, taste or odour of the water.
- Fluoride content as low as possible is better but should never exceed 1.0 mg./I in drinking water.
- Fluoride cannot be removed by boiling the water.
- Fluoride can only be removed by using removal filter.

INTERVENTIONS:

- Two interventions are practiced for prevention and control of Fluorosis:
    - Safe water
    - Nutritional intervention.

APPENDIX - C

Special features of Serai Kela district

District	- Seraikela-Kharsawa
Block	- Searaikela
Village	- Kendumposi
Total Area of the Vilalge (In hectars)	- 49.31
Total Population	- 174
Medical Facilities	- 5-10 kms
Drinking water facilities	- Well, Tank, Handpump
Post and Telegraph	- 5-10 kms
Market	- 5-10 kms
Communication	- 5-10 kms
Approach to village	- Kacha Road
Nearest Town	- Seraikela (5 kms)
Staple food	- Rice, Wheat
Unirrigated land	- 39.05 (hect.)
Cultivable land	- 3.41 Hect.)

APPENDIX - C

Special features of West Singhbhum district

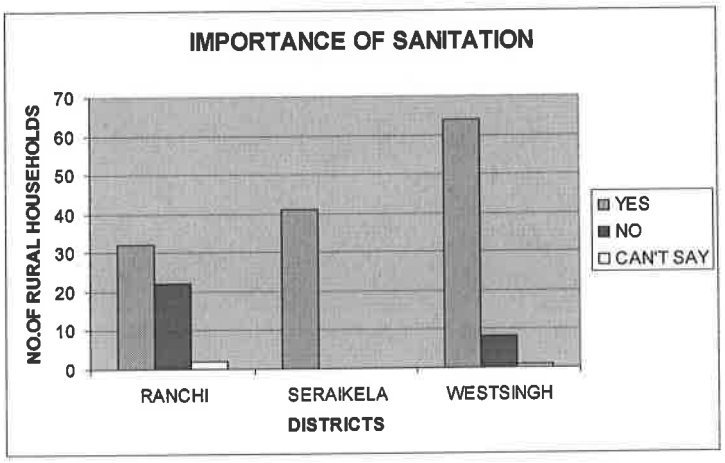
District	- West Singhbhum
Block	- Sadar Chaibasa
Village	- Dumbisai
Total Area of the Village (In hectares)	- 61-79
Total Population	- 579
Medical Facilities	- 5 kms
Drinking water facilities	- Well, Tank, Handpump
Post and Telegraph	- 5 kms
Market	- 5 kms
Communication	- 5 kms
Approach to village	- Kacha Road
Nearest Town	- Chaibasa (3 kms)
Staple food	- Rice
Unirrigated land	- 72.75 (hect.)
Cultivable land	- 4.93 Hect.)
Non Cultivate land	- 6.90 (hect.)

APPENDIX-D

JHARKHAND

IMPORTANCE OF SANITATION

DISTRICTS	YES	NO	CAN'T SAY
RANCHI	32	22	2
SERAIKELA	41		
WESTSINGH	64	8	1



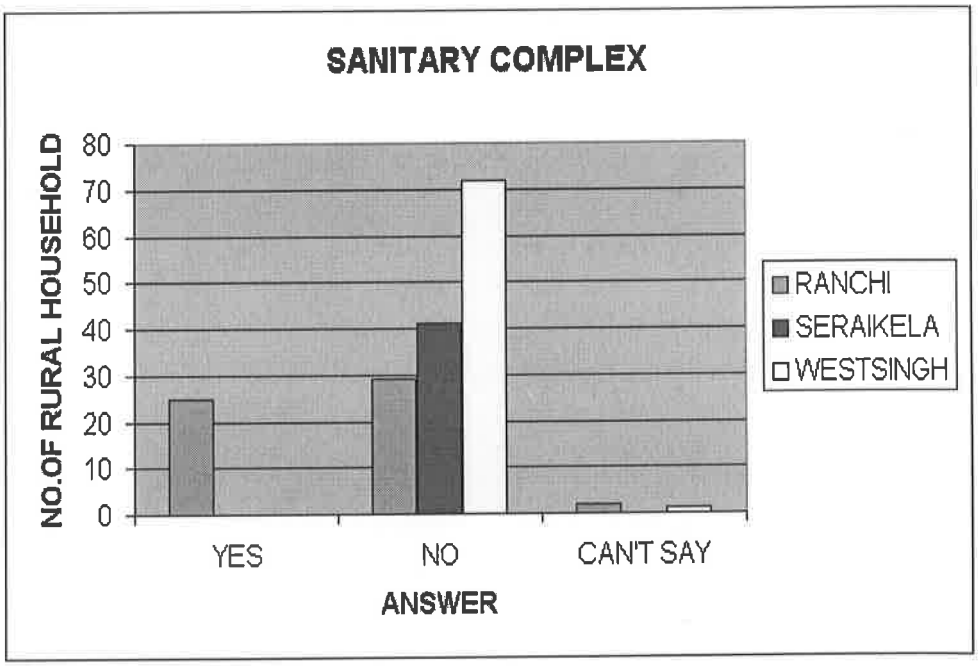
APPENDIX – E

JHARKHAND

COMPARISON OF DISTRICTS

SANITARY COMPLEX

DISTRICTS	YES	NO	CAN'T SAY
RANCHI	25	29	2
SERAIKELA		41	
WESTSINGH		72	1

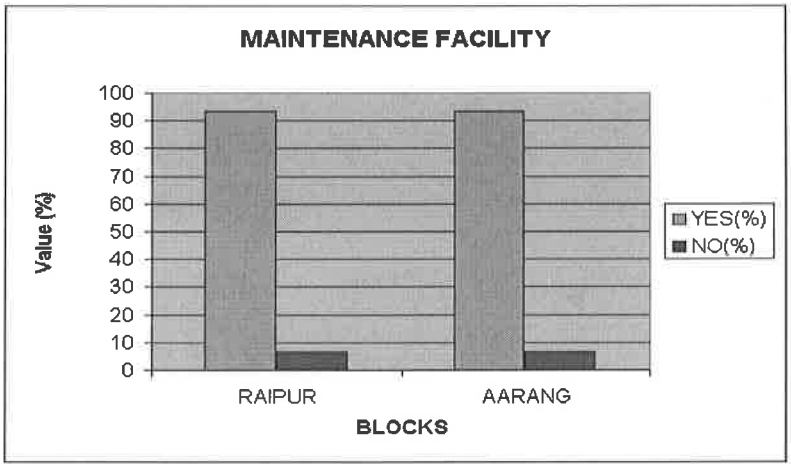


APPENDIX - F

CHATTISGARH

WHETHER MAINTENANCE FACILITY - YES/NO

BLOCKS	YES(%)	NO(%)
RAIPUR	93.33	6.67
AARANG	93.5	6.5

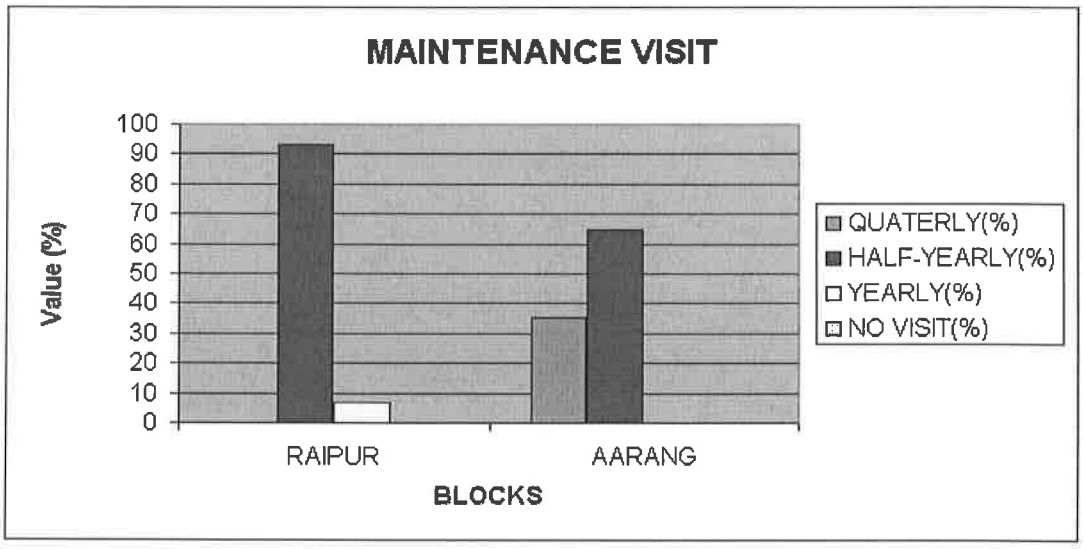


APPENDIX - F

CHATTISGARH

MAINTENANCE VISIT

BLOCKS	QUATERLY(%)	HALF-YEARLY(%)
RAIPUR		93.3
AARANG	35.5	64.5

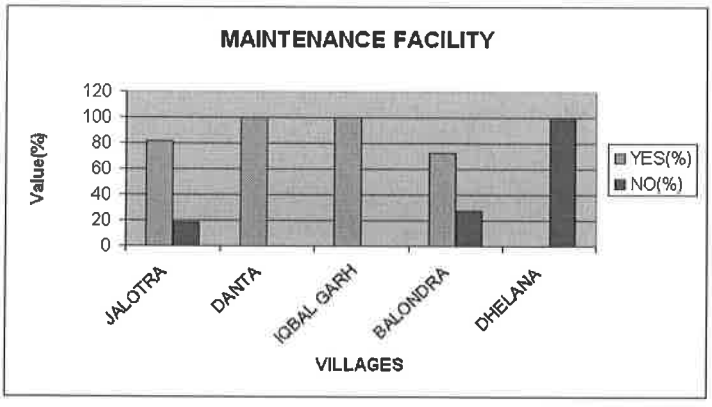


APPENDIX - G

GUJARAT

MAINTENANCE FACILITY

VILLAGES	YES(%)	NO(%)
JALOTRA	82	18
DANTA	100	
IQBAL GARH	100	
BALONDRA	72.72	27.28
DHELANA		100

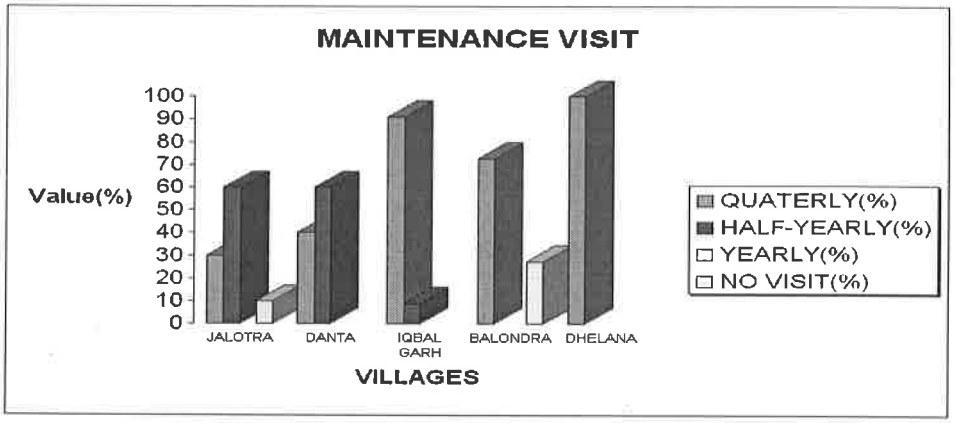


APPENDIX - H

GUJARAT

COMPARISION IN MAINTENANCE VISIT

VILLAGES	QUATERLY (%)	HALF-YEARLY (%)	YEARLY (%)	NO VISIT (%)
JALOTRA	30	60		10
DANTA	40	60		
IQBAL GARH	91	9		
BALONDRA	72.72			27.28
DHELANA	100			

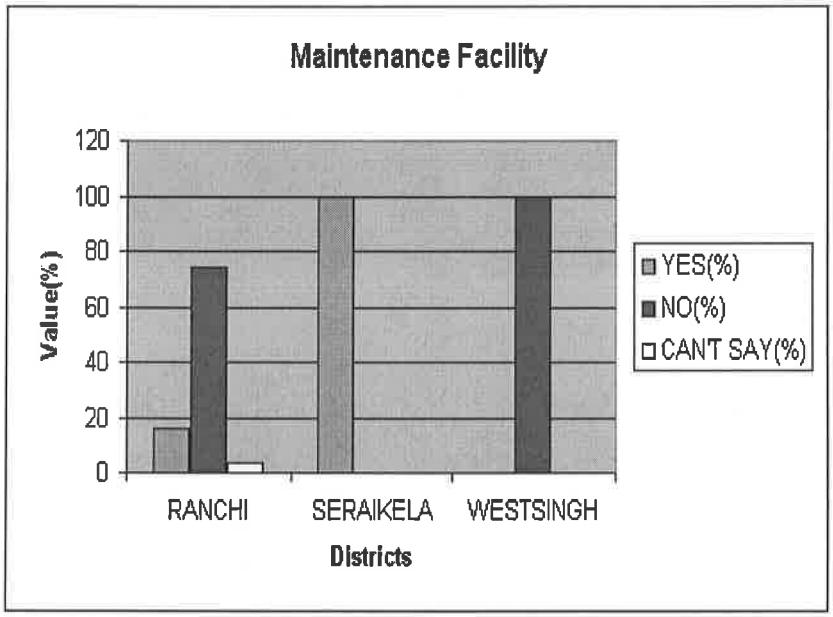


APPENDIX- I

JHARKHAND

MAINTENANCE FACILITY

DISTRICTS	YES(%)	NO(%)	CAN'T SAY(%)
RANCHI	15.78	73.94	3.5
SERAIKELA	100		
WESTSINGH		100	

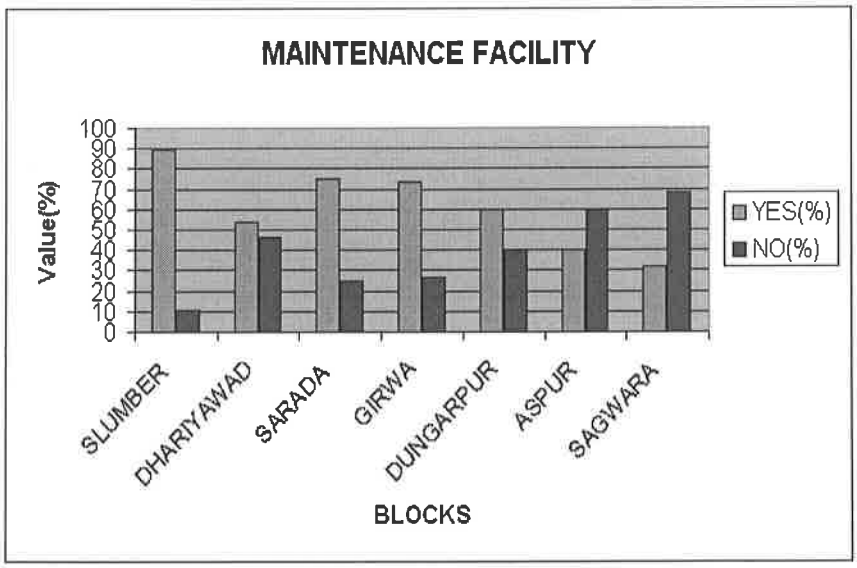


APPENDIX - J

RAJASTHAN

MAINTENANCE FACILITY

BLOCKS	YES(%)	NO(%)
SLUMBER	**89.55**	**10.45**
DHARIYAWAD	**53.57**	**46.43**
SARADA	**75**	**25**
GIRWA	**73.33**	**26.67**
DUNGARPUR	**59.52**	**40.48**
ASPUR	40	60
SAGWARA	31.57	68.43



Dr. (Mrs.) Lipi Mukhopadhyay

13.9.2007

To

Mr. C.F. Joseph
Dy. Director (MER)
Ministry of Tribal Affairs
Govt. of India
August Kranti Bhawan
Bhikaji Kama Place
New Delhi- 66.

Sub : Submission of final report on "Availability of Health Services and Drinking Water in Tribal Areas in the States of Gujarat, Jharkhand, Chhatisgarh and Rajasthan"

Dear Sir,

With reference to our discussion I hereby submit ten copies of the report mentioned above for your consideration. It is also requested to release the last installment at an early date. An acknowledge of the receipt of report would be appreciated.

With regards,

Yours sincerely

Lipi Mukhopadhyay
Project Director