CHAPTER-VI

Chapter No :VI THE PROBLEM

6.1 : Rationale for the study

Leprosy is an insidious disease which progresses slowly and does not in its early stages, produce symptoms which cause alarm or discomfort. Often the plight of sufferers from the disease is compared by social attitude which instead of bringing sympathy and support, results in social ostracism not only of the individual but of the entire family. "Leper" is a term of abuse and leprosy is pronounced as a curse on evil doers.

Leprosy is still one of the major health problems of developing countries. More than 1.6 billion people live in countries, where the estimated prevalence is greater than one case per 1000 of population. According to 1981, WHO report there are 12 million estimated leprosy cases in the world. Over 121 countries reportedly have more than 100 registered leprosy cases. About 1600 milion people are at risk in endemic areas.

Seeing the geographical distribution, globally, it was observed that leprosy is highly prevalent in central Africa, India and South east Africa. Although most of the leprosy sufferers live in Asia, the prevalence rate is highest in Africa. Thus we see that leprosy is most prevalent in tropical countries, But because of the fear, shame and social stigma associated with the disease, leprosy is greatly under-reported and still some coun-

tries are reluctant to reveal their true prevalence rates.

Available scanty information points to the fact that socio-cultural factors play a deciding role in the eradication of leprosy in the country. Ignorance about the basic scientific facts on leprosy, misunderstandings about the disease, social stigma attached to leprosy, the fear and the trauma connected with the disease are but some of the inhibiting factors of lerposy eradication. Empirical data on these in relation to culture and ethnic specificity among other, are required to be collected marshalled and analysed before area-specific and need-specific programme are formulated for implementation.

Thus one of the best experience in leprosy work is to see that how many (highly qualified and experienced) people from various fields are willing to make their contribution towards freeing mankind from this scourage. Till now much has been said medically about the course of leprosy, sign and symptoms of leprosy as well as the reaction, treatment, prevention and control of leprosy. But there are many gaps in our knowledge of the epidemiological aspects of leprosy and the socio-economic conditions contributing to the occurence of the disease.

The Indian government, in its five years plans, had given much stress to area development planning. The steps identified by the planners in this regards, are the diagnosis of present

situation and spatial integration. These two processes can best be tackled by geographers because of their training in locational analysis and in synthesising the human and envirnmental phenomena over space and time. For this a Geographical information system can also be built up with locational factors from village level to district level.

6.2 Statement of the problem :

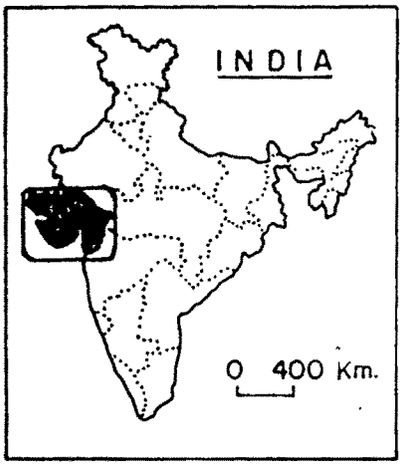
The main objective of this research is to study the patterns of prevalence of leprosy in the state of Gujarat and take the district of Vadodara as a case study to see how far the physical and social environment is responsible for the incidence, prevalence and spread of leprosy.Since the disease occurs both in urban and rural areas the study aims at surveying the circumstance of prevalence in both the rural and urban environnment.

Thus the present study aims at a geographical appraissal of the disease, corelating the physical (Environmental) and social factors with some clinical aspects of the disease. The purpose is to identify certain envirnomental factors which may be directly or indirectly contributing to the incidence of the disease, as well to create an integrated, systems approch to study an affected region.

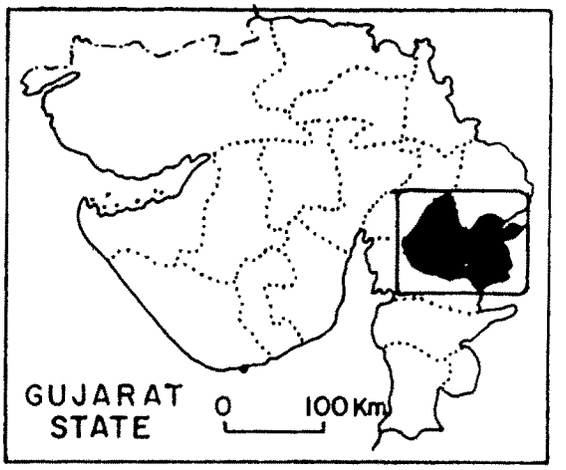
6.3 Study Area :

This study is confined to the district of Vadodara popularly known as Baroda, which is economically, socially and culturally, one of the most advanced district of state of Gujarat. Situated in the central part of mainland Gujarat, it extends approximately between 21^{o} 51' and 22^{o} 50' north latitude and 72'45'and74'30' east longitude as shown in figure 6.1. It thus covers an area of 7794 sq km making it the twelfth largest among the nineteen districts of the state accounting for 3.97 percent of the state's total geographical area. The district is divided for administrative purpose into three subdivisions viz, Vadodara, Dabhoi and Chhota Udeipur (accoridng to 1981 census) which are futher sub divided into eleven talukas and one Mahal (Tilakwada).The area, population and density of population per square kilometre of each of the adminstrative unts are shown in Table 6.1

LOCATION OF THE STUDY AREA



Gujarat State in India



Vadodara District in Gujarat State

73°0' E 74°0' E

VADODARA DISTRICT
(Adminstrative Division)

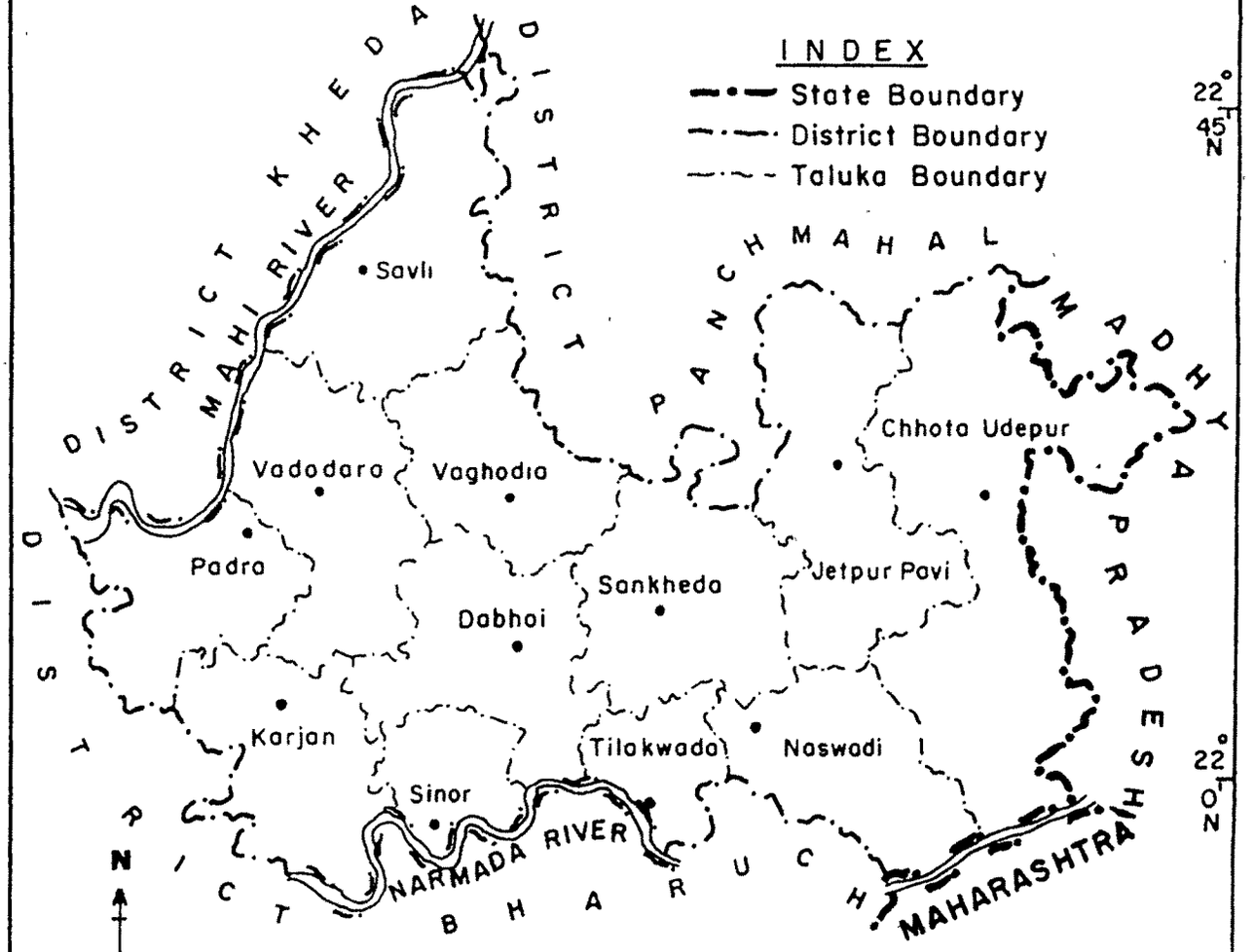


Fig : 6·1

Table 6.1 Census details of Vadodara district.

Sr No	Adminstration Unit	Area (Sq.Km)	Population (Lakh)	% of dist. Population	Number of Vill.	Town.	Popultion density per Sq Km
1	Vadodara	679.8	9.92	33.60	102	8	993
2	Karjan	601.9	1.37	5.80	93	1	191
3	Padra	534.6	2.02	8.65	82	1	320
4	Savli	792.0	1.94	8.13	137	-	203
5	Vaghodia	564.4	1.05	4.15	95	1	158
6	Dabhoi	631.6	1.64	7.33	118	1	229
7	Sankheda	722.7	1.49	6.75	184	3	185
8	Jetpure Pavi	805.2	1.67	6.75	212	1	172
9	Chhota Udepur	1373.2	2.47	9.54	276	2	137
10	Naswadi	535.2	0.89	3.67	219	-	136
11	Sinor	292.5	0.69	2.86	40	1	194
12	Tilakwada	244.5	0.49	2.20	97	-	178
	Vadodara dist.	7794.0	25.58	100.00	1655	19	328

Source : Vadodara district census Handbook - 1981

Although no systematic study on the distribution of leprosy has been carried out within the district of Vadodara, the epidemiological data obtained from secondary source using formula as shown in appendix - I (Table 6.2) makes it apparent that both the prevalence and incidence rates of lepresy in the distriet have always been fairly high when compared to the overall situation in Gujarat (Table 6.3). Hence this district was brought under the multidrug therapy programme in 1984. A review of the situation of leprosy in this district, therefore, can help to prepare a sound strategy for the control of disease in other districts as well.

Table 6.2 : Epidemiological Information under NLEP in Vadodara District.

YEARS	Prev-alance per 10000 (1)	Incid ence Rate per 10000 (2)	Incdance Rate per 10,000 3a Ad.	3b Ch.	MB Cases Rate (4) 4a Old	4b New	MB detetion Rate per 10,000 (5) 5a Ad.	5b Ch.	Childhood Rate (6) 6a Old	6b New	Annual Disease Arrested Rate (7)	Deformity Rate (8) 8a Old	8b New	Lepro-matous Rate (9)	Trea-tment Rate (10)	Annual Defau-lt Rate (11)	Annual Repa-Rate (12)
1981-82	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1982-83	36.9	8.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1983-84	41.2	8.5	7.6	NA	18.95	21.50	NA	NA	2.20	NA	6.77	12.25	8.65	18.95	89.36	5.59	4.32
1984-85	45.2	10.8	9.8	0.44	19.68	40.04	40.0	4.4	2.24	1.06	7.14	11.33	6.15	19.88	87.26	6.31	4.73
1985-86	38.3	8.6	7.4	1.16	54.44	41.00	41.0	5.0	3.01	2.98	35.79	14.46	5.72	28.01	93.07	9.87	0.16
1986-87	17.7	9.1	8.0	1.10	67.01	31.30	31.3	3.5	7.31	6.20	160.65	12.10	4.29	34.04	96.58	9.28	0.11
1987-88	10.0	6.4	5.5	0.86	70.20	32.70	18.0	10.5	7.93	8.00	136.48	9.96	4.39	70.20	95.54	11.22	0.20
1988-89	7.9	6.5	5.6	0.88	56.88	17.40	17.4	5.3	11.05	11.00	111.31	5.18	2.09	56.88	96.46	7.64	0.91
1989-90	6.4	6.3	5.5	0.84	56.43	24.63	24.6	9.7	13.18	13.10	126.00	2.62	2.62	56.4	84.60	6.60	3.50
1990-91	5.8	6.0	5.0	1.00	60.55	24.72	24.7	7.0	12.61	16.80	111.00	4.41	2.97	6.40	98.30	3.50	2.10
1991-92	4.7	4.5	4.2	0.60	61.83	28.58	28.6	10.3	12.00	13.1	*	4.89	*	*	*	*	*
1992-93	4.3	5.1	3.4	0.78	66.60	31.30	20.9	15.0	10.60	18.7	*	4.90	*	*	*	*	*

Source : District Leprosy office of Vadodara district.
*District Authority had not yet calculated.

Table 6.3 : Leprosy situation in Gujarat under NLEP

	(1)	(2)	(3)		(4)		(5)		(6)		(7)
	Prevalence Rate per	Incidence Rate per	Incidence Rate per 10,000		MB Cases Rate		MB Detect- Rate per 10,000		Childhood Rate		Annual Disease arrested
YEARS	10,000	10,000	3a Adult	3b Child	4a Old	4b New	5a Adult	5b Child	6a Old	6b New	rate
1981-82	17.5	3.37	NA	NA	NA	NA	NA	NA	NA	NA	25.62
1982-83	21.1	3.72	NA	NA	NA	NA	NA	NA	NA	NA	31.04
1983-84	22.3	3.41	NA	NA	NA	NA	NA	NA	NA	NA	31.48
1984-85	22.7	3.53	2.6	0.67	29.3	30.0	32.1	18.5	20.4	19.0	40.10
1985-86	22.5	3.43	2.6	0.65	28.4	29.0	31.6	15.8	20.1	19.0	47.06
1986-87	20.9	3.41	2.5	0.62	27.8	28.5	31.1	14.5	19.6	18.3	112.14
1987-88	16.2	3.62	2.5	0.83	20.4	21.4	25.0	6.8	24.8	23.0	176.17
1988-89	11.4	3.30	2.4	0.65	23.4	23.7	27.2	9.4	21.3	19.8	241.30
1989-90	8.2	3.46	2.5	0.70	32.8	32.9	38.0	14.7	21.3	20.3	157.20
1990-91	5.0	2.84	2.1	0.55	38.2	37.7	44.1	16.1	21.0	19.3	136.60

Source : Direcerorate office at leprosy, Gandhi Nagar (Gujarat State)