

## CHAPTER THREE

### REGIONAL PROFILE OF GUJARAT

#### 3.0 Evolution of the State

Although in linguistic-cultural terms Gujarat is one of the homogeneous states of India, it contains a number of notable historical, social and political disparities. One fact is that Saurashtra, Kachchh and the northern part of the mainland were under princely rule before 1947. There were some, but markedly fewer princely states in the central and southern mainland. Meanwhile, the five British districts, where local government, modern administrative practice and political mobilization in the nationalist movement got a two-generation head start, were all in the central and southern mainland. Apart from the Gaikwads of Baroda, whose territories were scattered throughout Gujarat, most of the other kings, particularly in the peninsula, ruled feudal autocracies where government, though periodically benign, repressed all attempts towards popular participation.

The 'peoples' weak links of the princely states with the nationalist movement necessarily implied that, after Independence the political leadership of Gujarat would come principally from the ex-British mainland. In particular, the strong participation of the Patidar community, the dominant landed caste of the mainland, and the prominent role of their leader Sardar Vallabhbhai Patel, resulted in its predominance over rural politics and developmental activities after Independence. Lower caste tenants and labourers, claiming Kshatriya status later challenged this predominance. In Saurashtra and Kachchh, the reverse was usually the case: the dominant landholders before Independence were Kshatriyas (Rajputs and Kolis), and their tenants were Kanbis, related to the Patidars of the mainland. After Independence, particularly after initiation of land reforms, the Kanbis largely replaced the Rajputs as the dominant land-owning caste in the peninsula. As in the mainland, the Rajputs fought back by promoting the cause of backward castes who sought Kshatriya status. The result throughout Gujarat has been rural tension along caste lines. However, the most significant legacy of princely versus British rule, found more participatory versus the peninsula's more passive political culture in the mainland. However, as Achyut Yagnik<sup>72</sup> mentions, *'In response to this friction, institutions, attitudes and traditions emerged from within Gujarati society to preserve the social order and create conditions for balance and continuity.'*

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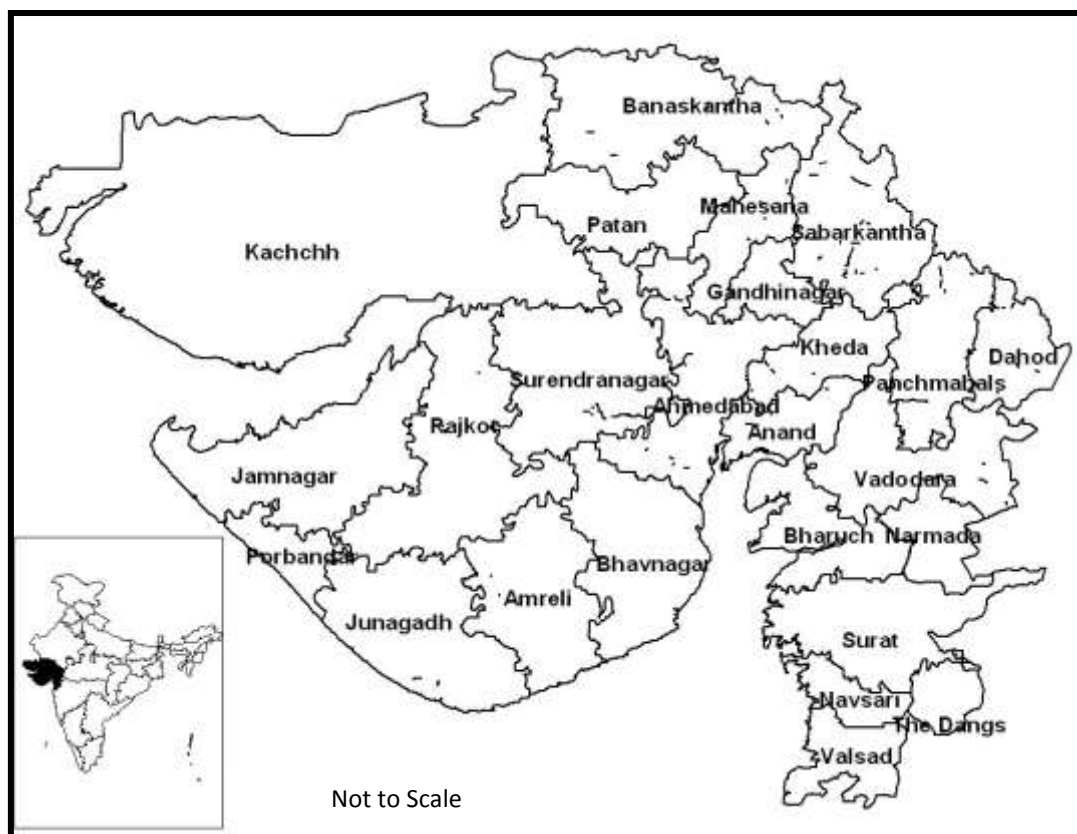
<sup>72</sup> Yagnik, Achyut and Suchitra Seth (2005): *The Shaping of Modern Gujarat: Plurality, Hindutva and Beyond*, Penguin Books, New Delhi, p.18

### 3.1 Physical Characteristics of the State<sup>73</sup>

The Gujarat Ecology Commission has conducted a five-year study on the State of Environment in Gujarat - 2005, and published the report in year 2007. The study has briefly described the physical characteristics of the State in its report.

#### 3.1.1 Location

Gujarat is located between 20 degree 1 minute and 24 degrees 7 minutes north latitudes and 68 degree 4 minutes and 74 degree 4 minute East longitudes, extending over an area of 196024 Sq. Km, which is approximately 6 per cent of the total geographical area of India. It is bounded by the Arabian Sea in the West and south-west and by Rajasthan state in north and northeast, Madhya Pradesh in the east and Maharashtra in the south and southeast. The State has an international boundary with Pakistan in the North West (see Figure 3.1).



**Figure 3.1: Location Map: Gujarat State (2001)**

#### 3.1.2 Climate

The Tropic of Cancer passes through the State, creating sub-tropical climatic conditions. The State can be divided into five climatic regions such as,

<sup>73</sup> GEC (2007): *State of Environment Report - 2005*, Gujarat Ecology Commission, Vadodra, PDF, accessed from website [www.gec.gov.in](http://www.gec.gov.in)

- (a) Sub-humid from south of Narmada river;
- (b) Moderately Humid in Central Gujarat between Narmada and Sabarmati River;
- (c) Humid and Sultry regions of south facing coastal areas of Saurashtra;
- (d) Dry region in Central Gujarat, North of Ahmedabad and Central Saurashtra and
- (e) Arid and Semi Arid zones extends is parts of North Gujarat and Kachchh.

The climate of the State is influenced by monsoon rainfall, physiography, insularity and the neighbouring Thar Desert in Rajasthan state in the north. Most parts of the State have sub-humid and semi-arid climate, merging with arid zone in the north and north-west. Around two decade back, the State used to experience severe drought cycles. This has been consistently changing due to increased intensity and duration of rainfall in various parts of the State.

The State receives most of its rainfall during the months June-September on the advent of the South West Monsoon with maximum intensity during July-August. According to the Indian Metrological Department (IMD), the Mainland Gujarat receives 800-2000 mm of rainfall in a year while the region of Saurashtra and Kachchh receive only 300-600 mm. The coefficient of variability of the annual rainfall is quite large, about 60 per cent in Kachchh. It decreases gradually towards the southeast, reaching a lower coefficient of 30 per cent in The Dangs.

During the summer season, maximum temperatures vary from 36 degree Celsius in the coastal regions to 43 degree Celsius in the inland areas. The mean winter minimum temperature ranges from 8 degree Celsius to 10 degree Celsius. Aridity in Gujarat ranges between 10 per cent in south-eastern hilly region to 40 per cent in Kachchh. The wind intensity is generally light to moderate in the State, which increases during the late summer and monsoon periods.

### 3.1.3 Geology

Over half the State's geographical areas are covered by alluvial deposits of the Quaternary period (1.5 million years BP). The remaining is made up of a large variety of exposed rock formations, ranging in age from the oldest Precambrian (i.e. more than 2,500 million years) to the Recent. The geological evolution of Gujarat was initiated sometime in the Triassic with the breaking up of Gondwanaland, related to the northward drift of the Indian sub-continent. The Mesozoic and Cenozoic tectonism related to the breaking up of the western continental margin and the subsequent drift have mainly controlled the geological evolution of Gujarat. The depositional history and Deccan volcanism are part of this major tectonic phenomenon.

An immense accumulation of volcanic rocks formed principally by basaltic lavas known as Deccan Trap had taken place. In Kachchh and Central and Southern peninsular Gujarat, it is found extensively. The plains of North Gujarat on the other hand, consist of very deep alluvial deposits similar to the Indo-Gangetic plains of North India, brought down by Banas, Rupen and Saraswati rivers.<sup>74</sup>

### 3.1.4 Drainage

The rivers Banas, Sabarmati, Mahi, Narmada and Tapi form important drainage systems in Gujarat plains flowing into the Gulf of Khambhat. The rivers Bhadar, Ojat and Shetrunji of the Saurashtra Peninsula drain into the Arabian Sea. There are also some small seasonal rivers draining into the Gulf of Kachchh.<sup>75</sup>

### 3.1.5 Soil

Deep black and coastal alluvium soils in South Gujarat, medium black soils in Central Gujarat, grey brown and coastal alluvial soils in North and North West, and medium black and to some extent coastal alluvial soils in Saurashtra Peninsula mark the soil characteristics of the State. While only about 28 per cent of the total geographical area of the State has soil of over 150 cm depth, about 15 per cent has soil depth of 100-150 cm. In terms of texture, loamy soil covers about 37 per cent of the State while 40 per cent is clayey and 7 per cent in sandy. The Bhal region has a type of soil that is clayey in texture preventing percolation of water resulting in extensive marshy and saline condition in large parts of Kachchh during monsoon.

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<sup>74</sup> Ibid., Chapter 2-3, pp. 7-8

<sup>75</sup> Ibid. p.8

### 3.2 Regional Characteristics of Gujarat

A 'region' has a homogeneous character over space, pertaining to the physical either/or the human features. The spatial differentiation over the physical and human elements over space makes a region unique and comparable to other regions. The physical characteristics may include topographical, climatic, vegetal or biotic features, and the human characteristics, the economic, agricultural, social and levels of development. Physical and human geographers use any of these elements depending on the purpose of their study.

#### 3.2.1 Regional Classification

The State has two regional identities based on the popular notions, i.e., mainland Gujarat and peninsular Gujarat. There are four sub-regions namely: (a) North Gujarat, (b) Central Gujarat (c) South Gujarat (d) Saurashtra and Kachchh. Another way of regionalizing the State is based on the ecological (including topographical), and cultural characteristics. Accordingly, the regions identified include, (a) North Gujarat - *Rocky Highlands of North and North Gujarat Plains*, (b) Central Gujarat - *Eastern Hills and Central Plains*, (c) South Gujarat - *South Eastern Hills, South Gujarat Plains and South Gujarat Coastal Zone*, and (d) Saurashtra and Kachchh - *Saurashtra Peninsula, Coastal Zone of Saurashtra Peninsula, Ranns and Banni of Kachchh and Peninsula of Kachchh*. Broadly, however, the State has two main parts.

#### (a) Mainland Gujarat

Mainland Gujarat can be subdivided into four sub-regions: 1) the southern plains; 2) the central plains; 3) the northern plains; and 4) the hilly tribal belt running along Gujarat's eastern border. The highest rainfall (1000 - 2000 mm annually) and the richest soils are found in the southern plains of Valsad and Surat Districts. As one proceeds northward through the central plains of Bharuch, Vadodara, Kheda and Ahmedabad districts, and rainfall diminishes (800 - 1000 mm annually) but the soils retain the characteristics. The northern plains feature good soils in Mehsana district, but become semi-arid in the northernmost districts of Banaskantha and Sabarkantha, where rainfall is minimal (300 - 400 mm annually). The hilly tribal belt, consisting of the eastern-forested areas of all the above-mentioned districts plus the predominantly tribal districts of Dangs and Panchmahals, reflects the same pattern of increasing water scarcity as one proceeds from south to north. It also suffers from inferior soils and environmental degradation.

The mainland has a predominant share of Gujarat's rivers, seventeen in all, including major ones such as the Tapi, the Narmada, the Mahi and the Sabarmati, all of which originate

in neighbouring states and flow from east to west into the Gulf of Khambhat. In addition, all the mainland districts have the advantage of core area centrality; they straddle the main transportation routes from Delhi to Mumbai and form the northern half of one of the most dynamic corridors of industrialization in India.

#### **(b) Peninsular Gujarat**

Peninsular Gujarat consists of two sub-regions: Saurashtra and Kutch. Apart from Junagadh District, which fronts on the Arabian Sea, most of Saurashtra is semi-arid, receiving about 400 mm of rainfall annually. There are a few exploitable rivers, such as the Bhadar and the Shetrunji, but they dry up in the hot summer months. Kutch is even more arid; it receives only 300 mm of rainfall annually, and apart from a southern section with agricultural potential, it consists mainly of saline marshes and desert. Both the peninsular sub-regions suffer from increasing salinity as the depletion of existing groundwater is causing ingress of seawater all along the long coastal fringe. Most of Saurashtra and all of Kutch are as drought-prone as the northern mainland districts. Their peripheral location and resource limitations add to the difficulty of inducing agricultural change in an inhospitable environment.

About 24 per cent of the total geographical area of the State is covered by the peninsula of Saurashtra, 13 per cent by Rann and Banni of Kutch and 14 per cent each by Northern Alluvial Plains. The coastal zone of Gujarat, from the southern tip in Vapi, extends through Valsad, Surat, Bharuch, Vadodra, Kheda, Bhavnagar, Amreli, Junagadh, Porbandar up to Jamnagar. The northern hilly tracts and southern rocky highlands share 12 and 7 per cent respectively, forming the hilly tracts of the State. The central alluvial plains, which is the also the main agricultural belt, has 8 per cent share of the State's geographical area.

### **3.2.2 Other Regional Classifications**

The State can also be classified differently based on various features. These are as under;

#### **(a) Folk Regions**

The folk regions in Gujarat broadly correspond with the erstwhile princely states of the State. "The Halar folk region was covered by the Jamnagar State, the Sorath folk region by Junagadh, Gohilwad by Bhavnagar and Jhalawad by the Surendranagar. Other

folk regions are Bhal (Cambay), Nal (around Nal Sarovar), Charotar in Kheda, Vankal near Baroda, Kanam near Bharuch and so on.<sup>76</sup>

### **(b) Cultural Regions**

A cultural region or area is a spatial entity where there is homogeneous spread of the cultural traits and institutions. Gujarat can be subdivided into six cultural zones viz., Kachchh, Saurashtra, North, Central, Eastern and South Gujarat. Each region differs from the other by settlement pattern, type of land tenure, agricultural practices, food habits, dress, marriage types, family organisation, worship of deities and gender sensitivity.

### **(c) Eco-Regions**

The Gujarat Ecology Commission in its classification of the eco-regions in the State demarcates eight distinct regions based on the stratigraphy and structures, physiography and drainage, climatic characteristics, soil type, water regimes and ecosystem. Based on ecological characteristics, Gujarat can be divided into eight zones namely, northern rocky highland, southern rocky highland, northern alluvial plain, central alluvial plain, Ranns and Banni of Kachchh, peninsula of Kachchh, peninsula of Saurashtra and coastal zones of Gujarat.<sup>77</sup>

## **3.3 Population and Demography**

Gujarat was separated from Maharashtra and formed into a State on May 1, 1960. By 2001, it had a population of 50,596,992 (Census 2001) on its 196,024 Sq. Km. area. At present it is divided into 26 districts. The Scheduled Tribe (ST) and the Scheduled Caste (SC) segments of the State population are about 15 and 7 per cent respectively.

The population of Gujarat has increased from 9.1 million in 1901 to 60.38 million in 2011 (provisional). The compound annual rate of growth during 1950s, 1960s and 1970s was high but declined considerably between 1971 and 1991, from 2.6 per cent between 1961-71 to 2.4 per cent in 1971-81 and 1.9 per cent between 1981-1991 indicating stabilization of population.<sup>78</sup> However, the population during 1991-2001 has shown an increase to 2.05 per cent mainly due to rise in natural population growth rate in Dahod (3.9), Banaskantha (3.5),

<sup>76</sup> Lobo, Lancy (1993): "Regional Culture and Religion", Vidhyajoti-Journal of Theological Reflection, LVII (4), pp. 231-242.

<sup>77</sup> Patel, P. P. (1997): *Eco-Regions of Gujarat*, PDF, Gujarat Ecology Commission, Vadodara, pp.1-61

<sup>78</sup> Hirway, Indira and Mahadevia (2005): *Gujarat Human Development Report-2004*, Mahatma Gandhi Labour Institute, Ahmedabad, PDF Document, UN Nations website [www.un.org](http://www.un.org), p.21

Dangs (3.8) and Surendranagar (3.4). Similar annual increase of 2.06 per cent is also observed during 2001-2011 decade.

The sex ratio in the State has continuously declined from 942 in 1981 to 934 in 1991 and 921 in 2001 to 918 in 2011. The rate of decline accelerated during 1991-2001, from 8 points during 1981-91 to 13 points during 1991-01 and has registered a marginal decline of 3 points during 2001-11. However, the juvenile sex ratio (0-6 years) has displayed a steep decline to nearly 600 females per 1000 males in some districts arousing serious concern.

**Table: 3.1**  
**Trends in Population and Its Characteristics**

Year	Population (Millions)		Sex Ratio		Inter-Census Growth Rate p.a. %		Population Density (per Sq. Km)	
	Gujarat	India	Gujarat	India	Gujarat	India	Gujarat	India
1901	9.1	238.3	954	972	-	-	46	77
1911	10.0	252.0	946	964	0.8	0.6	50	82
1921	10.2	251.2	944	955	0.4	0.0	52	81
1931	11.5	278.9	945	950	1.2	1.1	59	90
1941	14.5	318.5	941	945	1.8	1.3	70	103
1951	16.3	361.0	952	946	1.7	1.3	83	117
1961	21.0	439.1	940	941	2.4	2.0	105	142
1971	27.0	548.2	934	930	2.6	2.2	136	178
1981	34.1	683.3	942	933	2.4	2.2	174	221
1991	41.3	846.8	934	927	1.9	2.1	211	273
2001	50.05	1002.7	921	927	2.05	2.1	258	324
2011*	60.38	1210.1	918	940	2.06	2.06	NA	NA

*Source: Based on respective population Census\*Provisional Results Census2011, NA= Not Available*

The tribal segment of the State population is mainly concentrated in South and Eastern Gujarat, which includes eleven districts. In the eastern part, one finds the Bhil, Patelia, Dhanka, Naika and Rathwa tribes. The Vasava, Tadavi, Dubla, Gamit, Kokna, Dhodia, Warli, Bhil, Naika and Choudhary tribes are concentrated in the southern zone. More than 32 out of a total of 225 *talukas* (blocks) in the State have more than 50 per cent ST population in their population. Together these *talukas* account for more than 60 per cent of the total ST population in the State.



**Table 3.2**  
**Region/District-Wise Decadal Population Change**

<b>Region/District</b>	<b>1961-71</b>	<b>1971-81</b>	<b>1981-91</b>	<b>1991-01</b>	<b>2001-11</b>
<b>Central Gujarat</b>					
Ahmedabad	37.15	34.01	24.95	27.25	22.31
Anand	22.44	23.42	13.39	13.04	12.57
Dashed	27.91	27.51	34.60	28.44	29.95
Panchmahals	24.52	24.28	22.34	20.39	17.92
Vadodara	29.96	29.58	21.07	19.87	14.16
Kheda	25.39	22.60	14.81	13.32	12.81
<b>Subtotal</b>	<b>27.89</b>	<b>26.9</b>	<b>21.86</b>	<b>20.38</b>	<b>18.29</b>
<b>South Gujarat</b>					
Narmada	27.39	20.14	19.85	14.47	14.77
Navsari	24.52	24.18	19.34	13.24	8.24
Bharuch	22.93	15.35	18.36	19.37	13.14
Surat	35.01	47.83	41.00	54.30	42.19
Valsad	26.70	24.17	25.87	29.65	20.74
The Dangs	31.60	20.68	26.77	29.59	21.44
<b>Sub Total</b>	<b>28.02</b>	<b>25.39</b>	<b>25.19</b>	<b>26.77</b>	<b>20.08</b>
<b>North Gujarat</b>					
Banaskantha	27.35	32.10	30.87	26.38	24.43
Gandhinagar	35.53	28.78	21.67	21.73	12.15
Mehsana	28.05	20.90	17.41	12.08	9.91
Patan	25.66	23.41	12.17	14.16	13.53
Sabarkantha	29.29	26.49	17.23	18.25	16.56
<b>Sub Total</b>	<b>29.18</b>	<b>26.34</b>	<b>19.87</b>	<b>18.52</b>	<b>15.32</b>
<b>Saurashtra</b>					
Amreli	25.69	26.37	14.97	6.50	8.59
Bhavnagar	25.44	34.76	23.13	19.31	16.53
Jamnagar	34.15	25.35	12.24	21.79	13.38
Junagadh	33.99	28.79	15.29	17.07	12.01
Porbandar	30.84	20.28	10.23	14.35	9.17
Rajkot	34.39	28.88	20.12	26.08	19.87
Surendranagar	27.51	22.32	16.89	25.34	15.89
<b>Subtotal</b>	<b>30.29</b>	<b>26.68</b>	<b>16.12</b>	<b>18.63</b>	<b>13.63</b>
Kachchh	22.02	23.58	20.22	25.40	32.03
<b>Gujarat</b>	<b>29.39</b>	<b>27.67</b>	<b>21.19</b>	<b>22.66</b>	<b>19.17</b>
Source: Census Data (1961-2001), Provisional Census Figures 2011					

Regional population changes are reflections of natural population growth as well as growth due to in-migration to the constituent districts. There is a general decline in the population growth rates in the districts over the last four decades, with exceptionally high growth rate in Surat district due to increased in-migration (Table 3.2).

The regional distribution shows high population growth rate in the central and south Gujarat, whereas, the eastern hilly districts of the same regions have low per centage compared to the districts along the major transportation corridors. The Saurashtra region has experienced steep decline in population growth rates as compared to other regions, which can be attributed to out migration of communities into other regions of state.

The high growth rates (above 27 per cent) are also indicative of low human development as along with high urbanisation in the districts. For example, in Ahmedabad, Rajkot, Gandhinagar and Valsad, high growth rate is ascribed to increased urbanisation rates during the last four decades. Similarly, low literacy and failure of family planning programmes have been the cause of high population growth rate in the backward districts of Surendranagar, Bhavnagar, Jamnagar, Dahod, The Dangs and Banaskantha. The extreme low growth rate (below 1.5 per cent) in Amreli, Narmada, Anand, Navsari, Kheda and Porbandar might be the movement of the population from this region to others.

Another demographic reason for the high population growth in backward districts can be result of high birth rate and low death rate. Since 1971, the birth rate has reduced from 41.0 to 23.5 (17.3 points decline) in 2001, whereas the death rate has reduced from 17.1 to 7.5 (9.6 points decline) between 1971 and 2001 in the State. Due to this differential in the high birth rate and low death rate, the population growth in the State and in some of the regions, might cause high population growth rate. Low death rate shows, control on the distribution of diseases and availability of health facilities, enhancing the life expectancy of people in the State. There can be indirect factors such as female literacy and little decline in the Infant Mortality Rate (IMR) during the same period affecting the high growth rates in backward *talukas*.

### **3.3.1 Sex Ratio**

The districts such as, Dangs, Dahod, Vadodara, Panchmahals, Kheda, Anand, Amreli and Junagadh showed decline in sex ratio during 1981-2001. During 1991-2001 however, seven districts namely, Amreli, Dangs, Dahod, Narmada, Panchmahals, Surendranagar and

Vadodara have not shown decline in sex ratio. However, in most of the districts the sex ratio of population between 0-6 year's age (juvenile sex ratio) has declined during 1991-2001.

**Table: 3.3**  
**District wise Sex Ratio in Gujarat (1981-2011)**

Sr. No	District	Sex Ratio				Sex Ratio (0-6 yrs)	
		1981	1991	2001	2011 *	2001	1991
1	Ahmedabad	888	897	892	903	813	896
2	Amreli	980	985	986	964	901	923
3	Anand	905	912	910	921	873	896
4	Banaskantha	947	934	931	936	906	934
5	Bharuch	938	925	920	924	909	955
6	Bhavnagar	954	944	936	931	885	925
7	Dangs	970	983	986	1007	973	999
8	Dahod	984	976	985	985	964	1001
9	Gandhinagar	943	934	911	913	816	888
10	Jamnagar	949	949	941	941	843	916
11	Junagadh	954	960	955	955	901	934
12	Kachchh	999	964	942	907	918	929
13	Kheda	924	924	922	937	880	900
14	Mehsana	974	951	926	925	797	899
15	Narmada	954	947	948	960	952	985
16	Navsari	975	958	955	961	912	955
17	Patan	963	944	932	935	862	903
18	Panchmahals	942	934	938	945	934	970
19	Porbandar	967	960	946	947	896	909
20	Rajkot	947	946	930	924	853	916
21	Sabarkantha	976	965	948	950	876	933
22	Surat	924	901	835	788	873	944
23	Surendranagar	934	921	923	929	861	905
24	Vadodara	915	913	919	934	872	934
25	Valsad	989	957	919	465	947	976
	<b>Gujarat</b>	<b>942</b>	<b>934</b>	<b>919</b>	<b>918</b>	<b>878</b>	<b>928</b>
Source: Population Totals, Census of India, 2001, *2011(P)							

looking at overall sex ratio. Regional trends as depicted in the *taluka* maps show decline over 1961-2001 in the overall sex ratios. The trend during 2001-2011 also shows decline in sex ratio in some of the traditionally better performing districts, however, some improvement in poor sex ratio.

It is important to note that, decline in sex ratio, especially juvenile sex ratio during 1991-2001 is alarming in the State, despite high economic growth rate achieved by the State during this period. This implies that even with a high rate of growth, the condition of women has not improved and preference of male children over females prevails extensively in the State. The data also suggest the general neglect of girl child and high maternal mortality rates (MMR) while

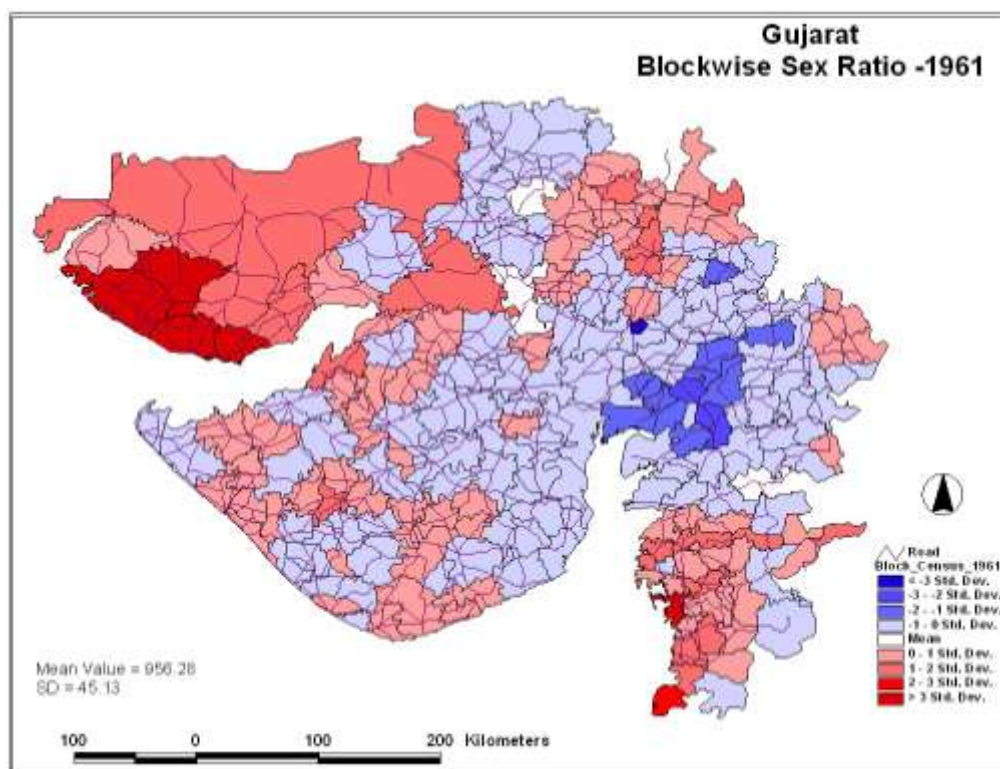


Figure 3.2: Block -Wise Sex Ratio 1961

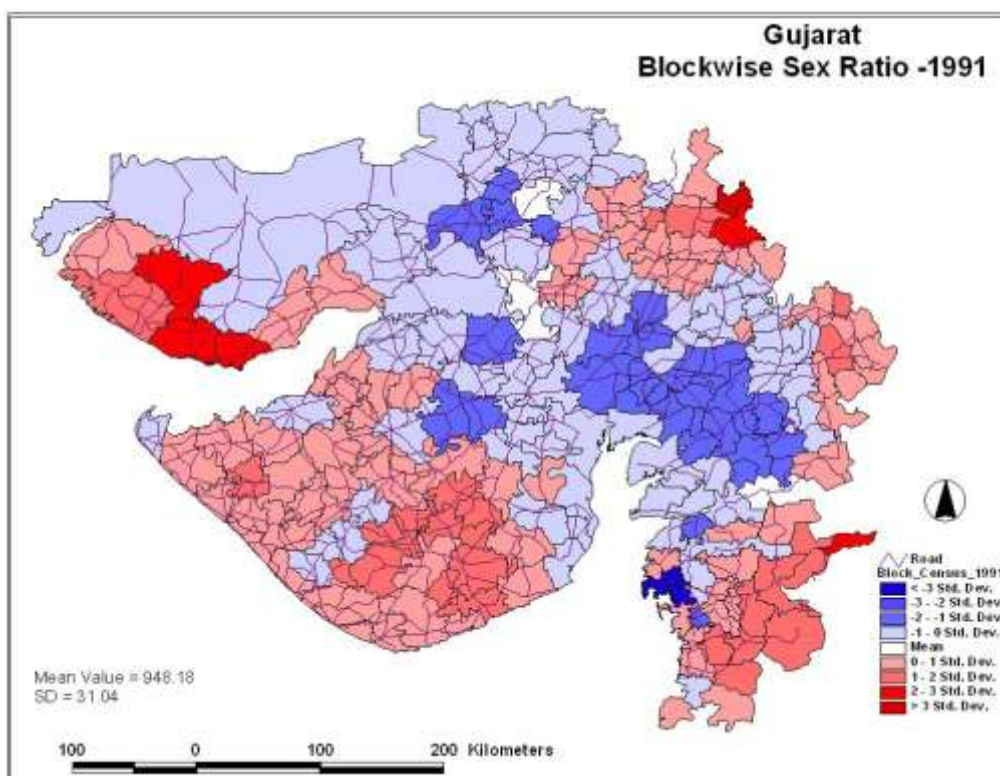
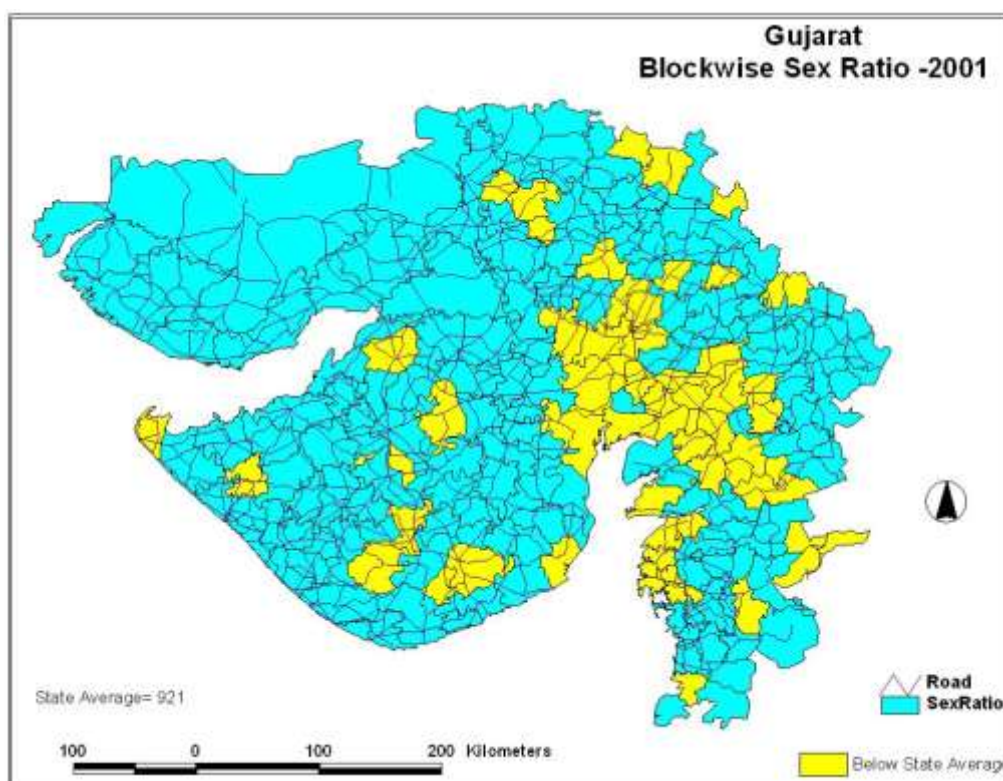


Figure 3.3: Block wise Sex Ratio 1991

### 3.3.2 The Gender Discrimination

Gender discrimination in the State is clearly evidenced in its consistent decline in sex ratio, caused mostly by social and economic factors. In central Gujarat, the poor gender ratio is the result of high social neglect and non-preference of the female over the male child. The huge influx of migrants in the south Gujarat region mainly along the national highway has also changed the sex composition of the towns and villages. Mainly Surat and its out grown areas have shown considerable decline since 1961. The standard deviation map below (Figure 2.3) shows mean sex ratio in the central, north and eastern Saurashtra until 1961. Although sex ratio has increased during 1991, 2001 and 2011 in the Kachchh, South and North Gujarat, the state-wide decline of sex ratio across the periods has resulted in low Human Development Index as well as Gender Equity Index<sup>79</sup>.



**Figure 3.4: Block wise Sex Ratio 2001**

Surprisingly the blocks i.e. *Talukas* in the tribal regions, namely Songadh, Uccal, Nizar, Sankheda, and others have also shown poor sex ratio, in spite of their gender equal character.<sup>80</sup> The decline in sex ratio in the agrarian regions and industrial regions has been

<sup>79</sup> Ibid. p.12

<sup>80</sup> It is assumed that out migration of tribals with family, leaving dependents and destitute may lead to distortion in sex ratio.

steep across the State which poses a serious concern to the State's development efforts and economic prosperity (*Figure 3.3*).

### 3.3.3 Literacy

There is a marked improvement in literacy rates in the State, up from 43.70 per cent in 1981 to 61.29 per cent in 1991 and 69.57 in 2001. This increase is observed for both males and females, in rural as well as urban areas. The female literacy rate has increased from 38.46 per cent in 1981 to 58.60 per cent in 2001, and the male literacy rate has increased from 65.14 per cent to 80.50 per cent.

At the 2001 Census, Gujarat was placed at the sixth position in terms of literacy rate amongst 15 leading states in the country. The overall effective literacy rate (population 7+) in 2001 was 69.67 per cent in Gujarat against 65.38 per cent in India. The effective female literacy rate was 58.60 per cent as against 54.16 per cent in India. Significant improvement in literacy achievement has also been recorded during 2001-11. Today (2011), around four-fifth (79.31 %) of the State's population is literate as against about three-fourth (74.04%) in the country as a whole, placing it at the eighth position. Around 87.23 per cent of the males and 70.73 of the females in the State are literate today. This is a significant improvement as a result of the efforts of the State Government on the enrolment of children during 2001-2011.

**Table: 3.4**  
**Gujarat - Literacy Rates, 1961 to 2011 (Per centage)**

		1961	1971	1981	1991	2001	2011*
Population	Male	41.3	46.11	54.41	61.03	68.56	87.23
	Females	19.10	24.75	32.30	40.62	50.19	70.73
	Persons	30.45	35.79	43.70	51.17	59.75	79.31
SC	Male	33.87	30.89	53.14	75.47	82.56	NA
	Females	10.72	14.95	25.61	45.54	57.58	NA
	Persons	22.46	27.74	39.79	61.07	70.50	NA
ST	Male	19.06	21.83	30.41	48.25	59.18	NA
	Females	4.09	6.15	11.64	24.20	57.58	NA
	Persons	11.69	14.12	21.64	36.45	47.74	NA

\*Provisional Figures, NA=Not Available

**Table: 3.5**  
**District-Wise Literacy Rates (Per centage) - 1961-2011**

	1961			1991			2001			2011		
District	M	F	P	M	F	P	M	F	P	M	F	P
<b>Central Gujarat</b>												
Ahmedabad	53.4	30.36	42.81	82.9	63.3	73.6	87.8	71.1	79.9	92.44	80.29	86.65
Anand	52.1	26.47	40.04	81.2	53.4	67.9	86.3	62.5	75	93.23	77.76	85.79
Dahod	21.4	6.97	14.35	49.7	21.5	35.8	55.9	31.7	45.6	72.14	49.02	60.6
Panchmahals	33.8	9.99	22.37	66.2	31.6	49.6	76.6	45.4	61.5	84.07	59.95	72.32
Vadodara	46.2	23.8	35.58	74.2	52.2	63.7	80.2	61.2	71.3	87.59	74.4	81.21
Kheda	45.1	19.33	32.77	79.8	46.9	64	86.6	57.8	72.7	93.4	74.67	84.31
<b>Subtotal</b>	<b>42</b>	<b>19.5</b>	<b>31.3</b>	<b>72</b>	<b>44.8</b>	<b>59.1</b>	<b>79</b>	<b>55</b>	<b>67.7</b>	<b>87.2</b>	<b>69.4</b>	<b>78.5</b>
<b>South Gujarat</b>												
Narmada	32.8	11.34	22.34	64.9	37	51.4	72.9	47.2	60.4	82.6	63.62	73.29
Navsari	48.4	28.34	38.2	76.7	59.5	68.3	82.9	68.7	76	90.06	79.3	84.78
Bharuch	50.6	24.44	37.87	76.3	54.3	65.8	83.4	65.4	74.8	88.8	76.79	83.03
Surat	45.4	25.35	35.53	72.6	55.1	64.4	81.8	66.7	75	91.05	81.02	86.65
Valsad	38.2	17.46	27.81	70.2	50	60.3	78.1	59.9	69.4	86.48	74.96	80.94
The Dangs	14.3	2.45	8.62	59.6	35.3	47.6	71.3	49	60.2	84.98	68.75	76.8
<b>Sub Total</b>	<b>38.3</b>	<b>18.2</b>	<b>28.4</b>	<b>70</b>	<b>48.5</b>	<b>59.6</b>	<b>78</b>	<b>59.5</b>	<b>69.3</b>	<b>87.3</b>	<b>74.1</b>	<b>80.9</b>
<b>North Gujarat</b>												
Banaskantha	20.6	4.39	12.72	55.2	22.7	39.5	66.9	34.5	51.3	79.45	52.58	66.39
Gandhinagar	46.7	21.2	34.19	84.9	62	73.8	87.9	64.8	76.8	93.59	77.37	85.78
Mehsana	48.6	23.83	36.38	81.1	55.2	68.4	86.5	64	75.5	91.88	76.12	84.26
Patan	35.3	16.04	25.91	67.9	39.2	53.9	74.1	46.4	60.6	84.28	62.01	73.47
Sabarkantha	36.2	11.22	24.01	74.5	43.1	59	81.2	52.9	67.3	87.45	65.29	76.6
<b>Sub Total</b>	<b>37.5</b>	<b>15.3</b>	<b>26.6</b>	<b>73</b>	<b>44.4</b>	<b>58.9</b>	<b>79</b>	<b>52.5</b>	<b>66.3</b>	<b>87.3</b>	<b>66.7</b>	<b>77.3</b>
<b>Saurashtra</b>												
Amreli	37.7	16.85	27.48	71.2	49.7	60.5	77.7	57.8	67.7	81.82	66.97	74.49
Bhavnagar	38.6	16.1	27.72	70.9	43.9	57.8	78.8	54.5	67	86.15	66.92	76.84
Jamnagar	36.4	16.24	26.56	70	47.5	59	77	56.9	67.2	82.35	65.97	74.4
Junagadh	35	12.74	24.14	72	46.8	59.6	79.4	59.6	68.3	85.8	67.59	76.88
Porbandar	40	17.05	28.74	73.2	50.1	61.9	78.9	58.8	69.1	84.56	68.32	76.63
Rajkot	42.5	20.6	31.74	76.8	56.7	67	83.7	67.6	75.9	88.67	75.26	82.2
Surendranagar	33.8	14.66	24.52	67.8	40.7	54.8	73.5	48.7	62.5	83.47	62.2	73.19
<b>Subtotal</b>	<b>37.7</b>	<b>16.3</b>	<b>27.3</b>	<b>72</b>	<b>47.9</b>	<b>60.1</b>	<b>78</b>	<b>57.7</b>	<b>68.2</b>	<b>84.7</b>	<b>67.6</b>	<b>76.4</b>
Kachchh	33.4	16.9	25	64.3	40.9	52.8	71	49.1	60.4	80.6	61.62	71.58
<b>Gujarat</b>	<b>41.1</b>	<b>19.1</b>	<b>30.5</b>	<b>73</b>	<b>48.6</b>	<b>61.3</b>	<b>80</b>	<b>58.3</b>	<b>69.7</b>	<b>79.3</b>	<b>87.2</b>	<b>70.7</b>

Source: Tabulated from Census of India (1961-2001) M=Male, F=Female, P=Persons



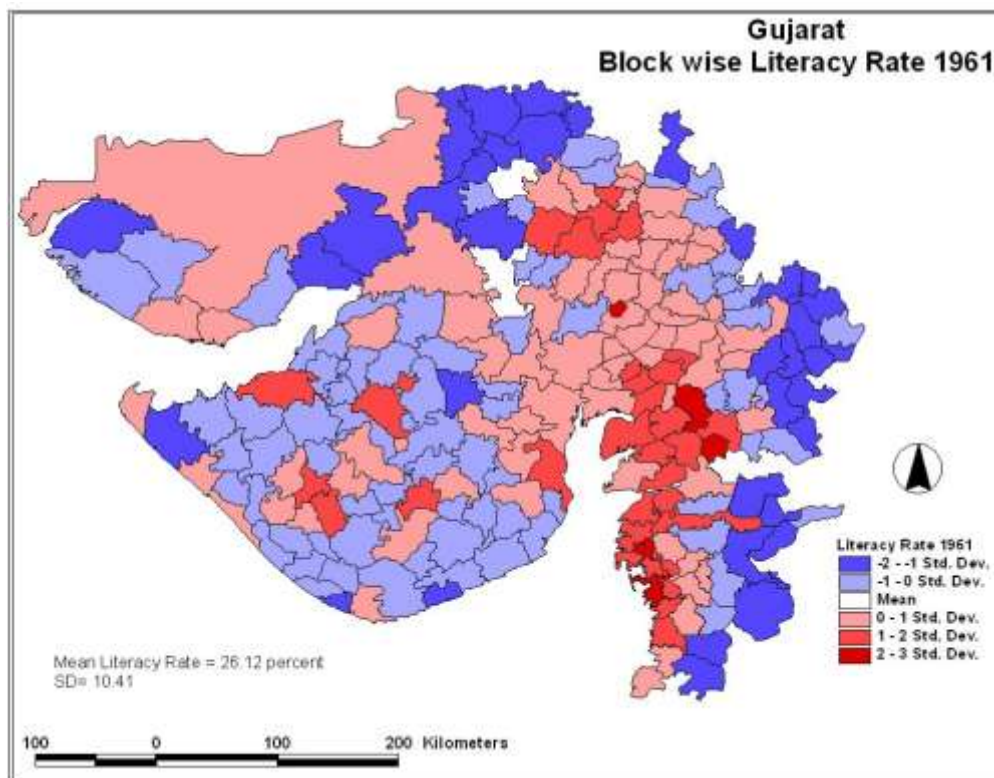


Figure 3.5: Block wise Literacy Rate - 1961

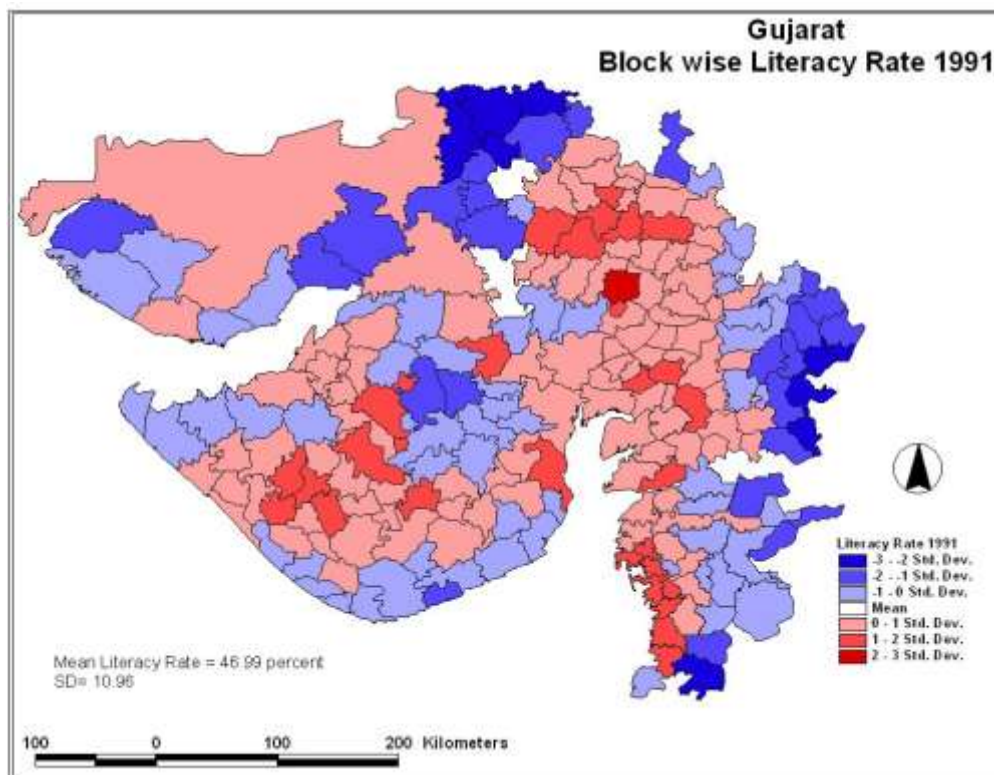
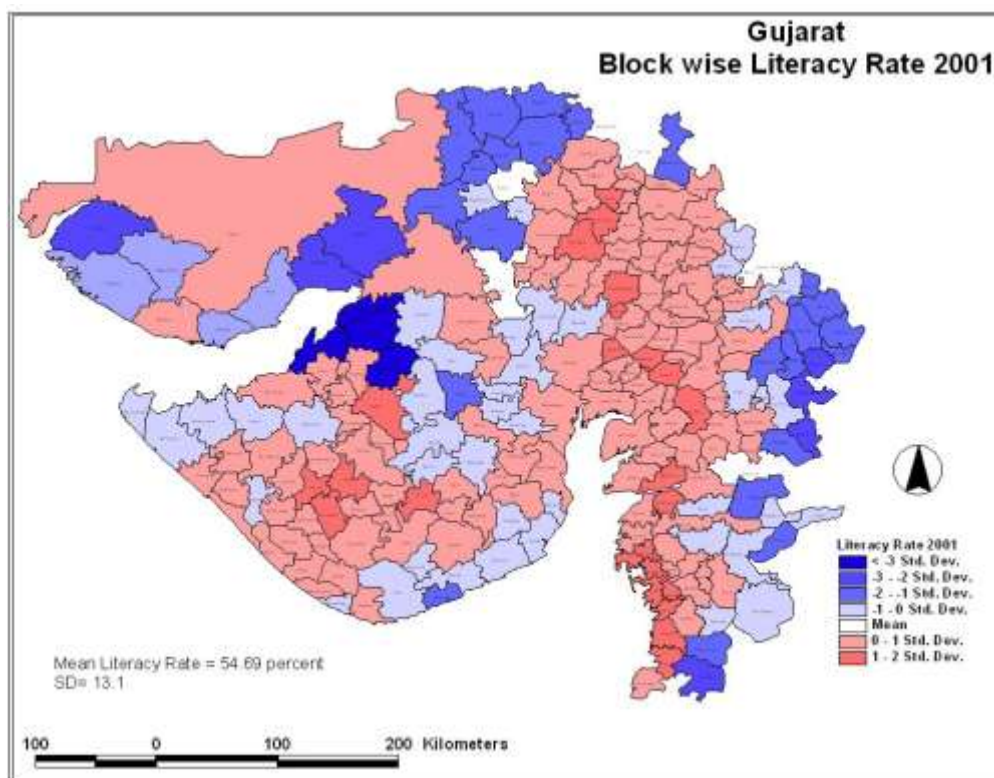


Figure 3.6: Block wise Literacy Rate - 1991





**Figure 3.7: Block wise Literacy Rate - 2001**

The literacy rate amongst the general population has shown improvement during the last four decades, whereas amongst the ST population it has not been so. The extremely low literacy amongst the STs has not improved as compared to the general population or even the other social backward groups like the SCs (Table 3.4). At the district level, Banaskantha, one of the predominantly tribal districts, has the lowest literacy rates in the State (Table 3.5).

### 3.3.4 Spatial Patterns of Literacy (1961-2001)

The above map shows the extent of educational development and backwardness in the State. The central Gujarat plains along the *Golden Corridors* from Mehsana to Vapi shows better literacy levels and Saurashtra plateau region. During the last 50 years of the State development efforts, slow improvements are seen in the literacy rates in the eastern tribal regions, North Gujarat (Banaskantha), Eastern Saurashtra and Coastal Saurashtra region. The progress of the *taluka* (Block) located in the central plain is better in improvement of literacy rates, whereas the inequality amongst the backward and developed *talukas* remains same across the four decades. The population increases in the backward regions during 1991-2001 have also added to the backlog in improvement of the literacy rates in the State.

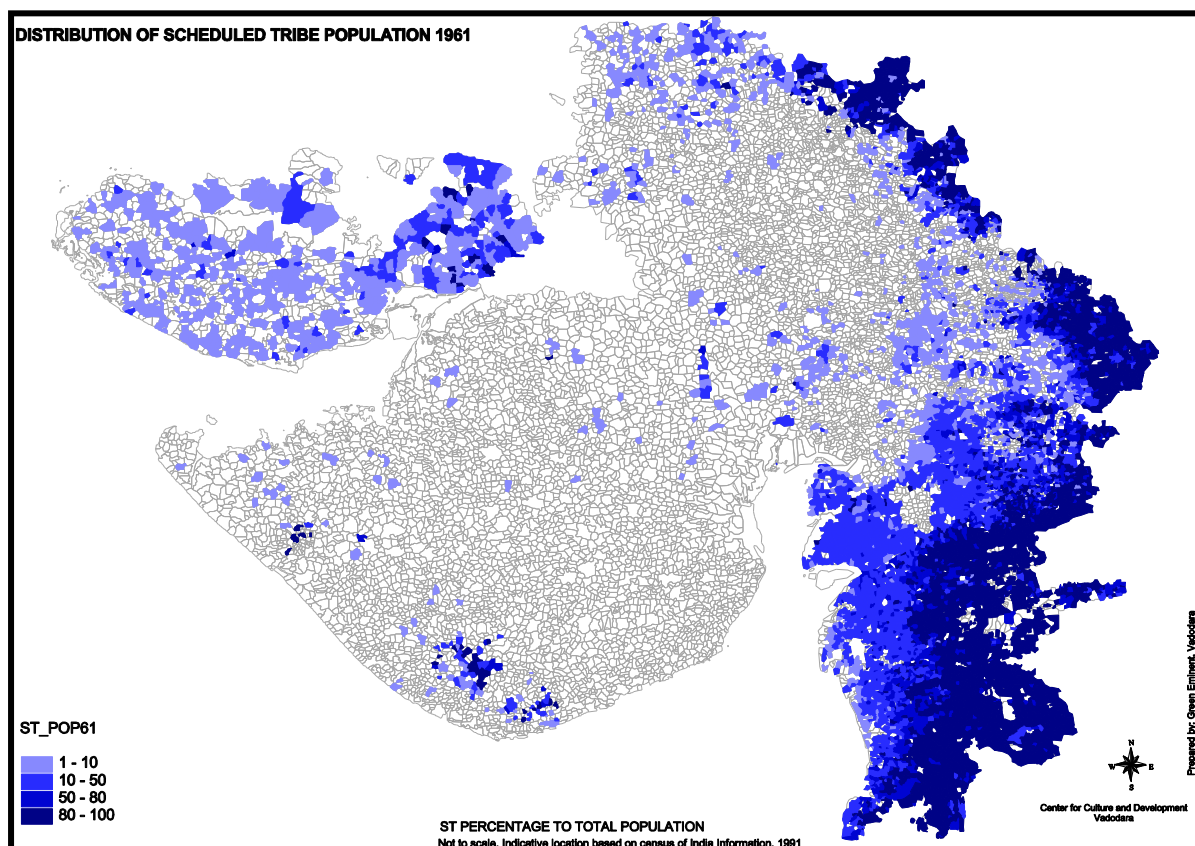
**Table 3.6**  
**Share of Scheduled Caste and Tribe Population in Gujarat and India**

Year	Population (in Millions)		Per cent Scheduled Caste		Per cent Scheduled Tribe	
	Gujarat	India	Gujarat	India	Gujarat	India
1961	20.63	439.23	6.6	14.7	13.4	6.9
1971	26.70	548.16	6.8	14.6	14.0	6.9
1981	34.09	683.33	7.2	15.8	14.2	7.8
1991	41.31	846.30	7.4	16.5	15.0	8.1
2001	50.67	1028.73	7.09	16.20	14.76	8.2

Source: Census of India (1961-2001)

### 3.3.5 Scheduled Tribes: Regional Demographic Changes

By mapping the distribution of tribal population as per the census data from year 1961 to 2001, the demographic changes in the tribal population is recorded. The maps represent the Gujarat state and its constituents.



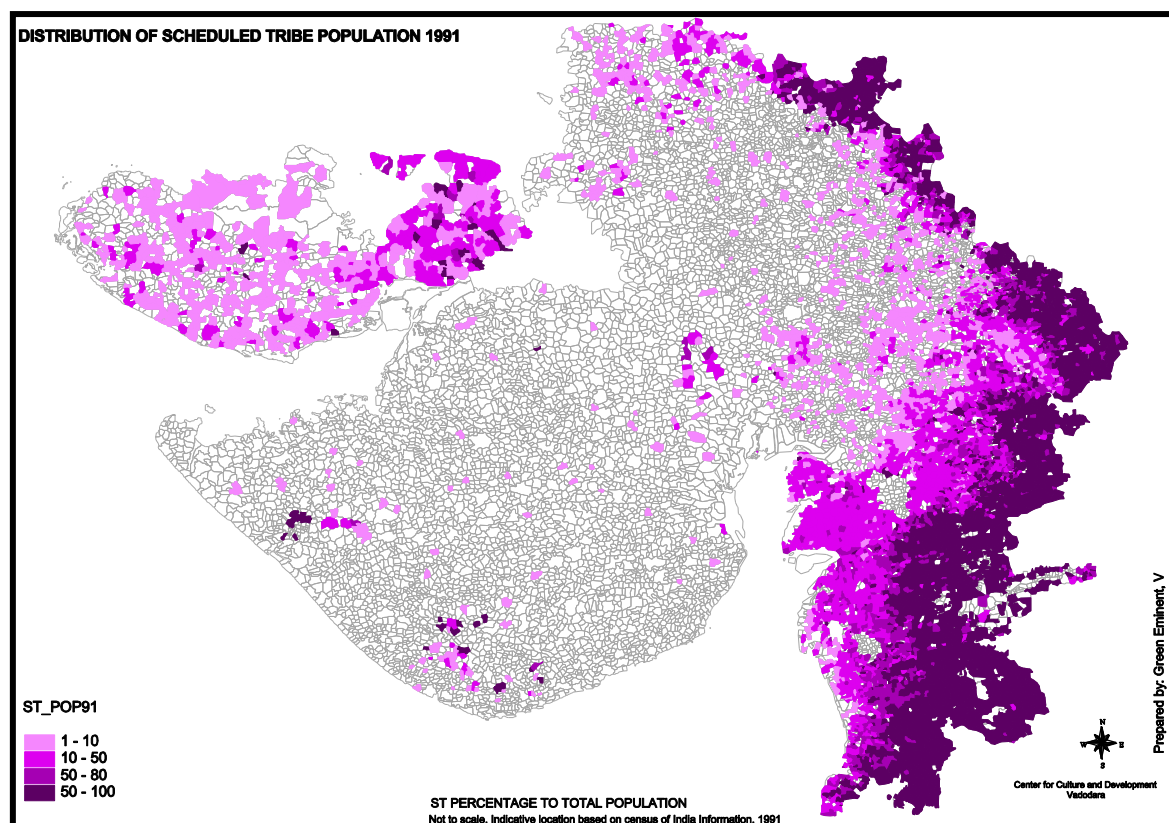
**Figure 3.8: Distribution of Scheduled Tribe Population -1961**

In the year, 1961 Gujarat had majority of Scheduled Tribe population settled in the hilly tracts of the State comprising of parts of eastern hills in central Gujarat, South Gujarat having more than 80 per cent of population. In South Gujarat all the physiographic regions i.e. Coasts, Plains and hills had presence of tribal's from 10 per cent to 100 % of the total population. Dangs is the only district, which recorded more than 90 per cent of the tribal population. The parts of Sabarkantha, Banaskantha and Mehsana district comprises the north-eastern region of the State.

Until the year 1991, the census of India recorded increase in the population of the tribal's in the regions already populated since 1961. However, the presence of tribal's in pockets of the central plains and north Gujarat had also increased. The presence of tribal's mainly *maldharis*<sup>81</sup> in Gir Forest areas in Junagadh and *Kolis* in Kachchh districts has remained similar to 1961. There are pockets of settlement shifts in Saurashtra for the tribal's since their presence has increased in some villages. The density of the tribal's present in eastern parts of Vadodara districts and Surat has declined from the high-density areas in 1961 (80-100 % population) to 50-80 per cent population share of tribal's. This also shows influx of non-tribal's in some of the regions or declassification of certain tribal's in the region. However, this phenomenon needs further investigation to ascertain the facts.

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<sup>81</sup> Maldharis, a communities engaged in animal rearing so termed notify the group mostly living in Saurashtra region.

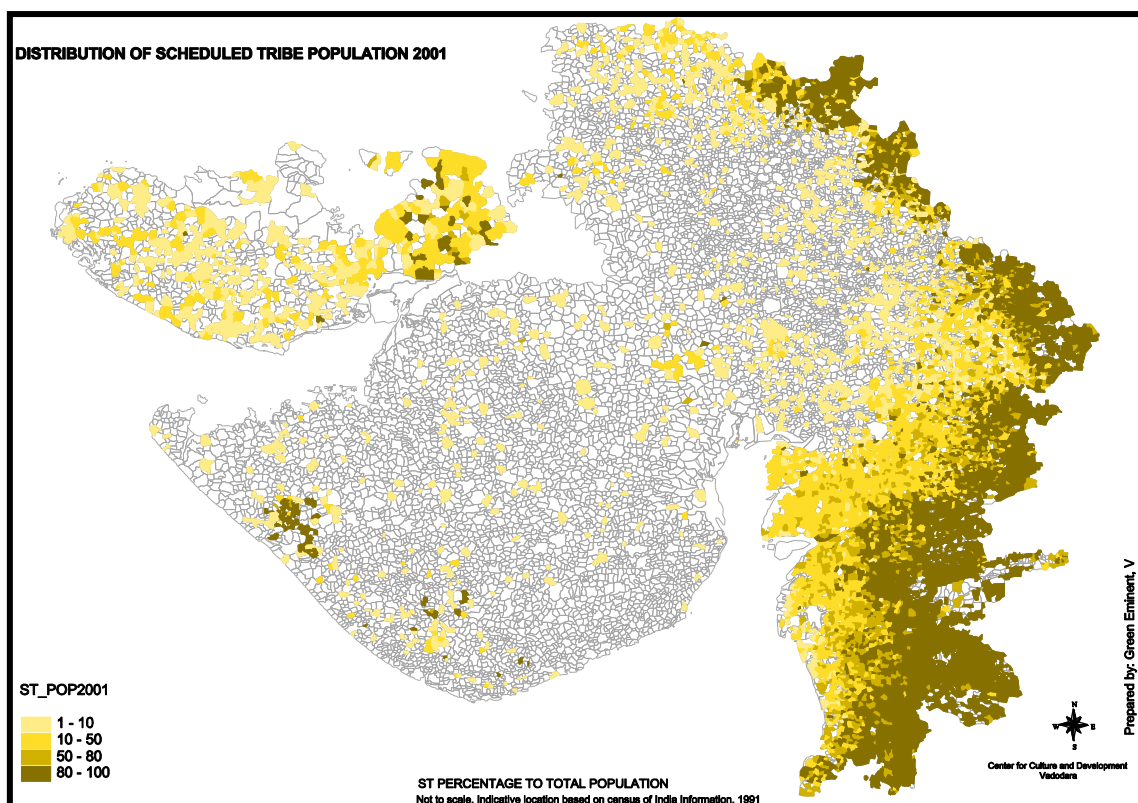


**Figure 3.9: Distribution of Scheduled Tribe Population -1991**

Population has increased in most of the tribal settlements located in the foothill regions closer to the plains. This may be due to out-migration of the tribal's from the predominantly tribal's areas of eastern hills (Aravalli Ranges) to the plains. However, in the coastal regions of the State, mainly in Surat and Valsad districts, certain pockets show decline in the tribal share in the total population ranging between 10 to 50 per cent. This can be perhaps attributed to land use changes in the coastal areas and/or shift of population, which needs to be investigated.

During the year 2001, there is marked population change in the tribal settlements across the State and particularly during the decade 1991 to 2001. The pockets of the high tribal density have declined but the spread of the population from the hilly regions to the plains have increased in the central Gujarat, North Gujarat as well as in South Gujarat.





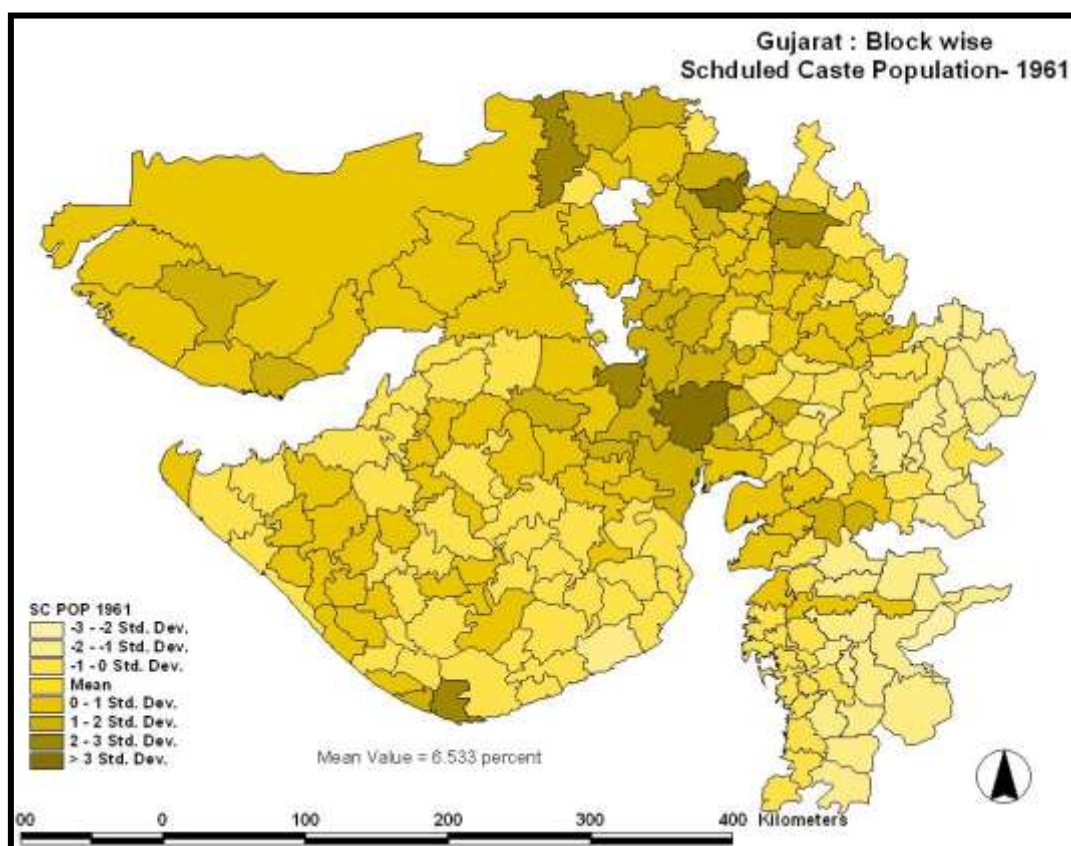
**Figure 3.10: Distribution of Scheduled Tribe Population - 2001**

The transportation routes from the tribal hilly regions to the plains are major locations where shifting of population has taken place. The changing occupational pattern from hunting, fishing or shifting cultivation to settled agriculture by the tribal's residing in the hilly pockets might have also been the reason for the shift of large section of tribal population to the plains. This may be the pattern emerging in South Gujarat between Narmada and Tapi belt since either they are engaged in settled agriculture or working as agricultural labourers in the plains. However, the phenomenon needs field verification before arriving at a definite conclusion.

Lack of natural resources like access to forest, decline in forest produce or increased livelihood demands of the tribal's may also compel them to move outside the forested regions. However, the forests in Gujarat had been regulated post-1960 and the trend of shifting of population from the forest to plains might have been initiated around this period. No definite data is available on the extent of forest tribes migrating outside the forest except in the cases of the forest declared as reserve forest. This needs to be tabulate from the data sheets concerning the forest declaration available from respective forest ranges.

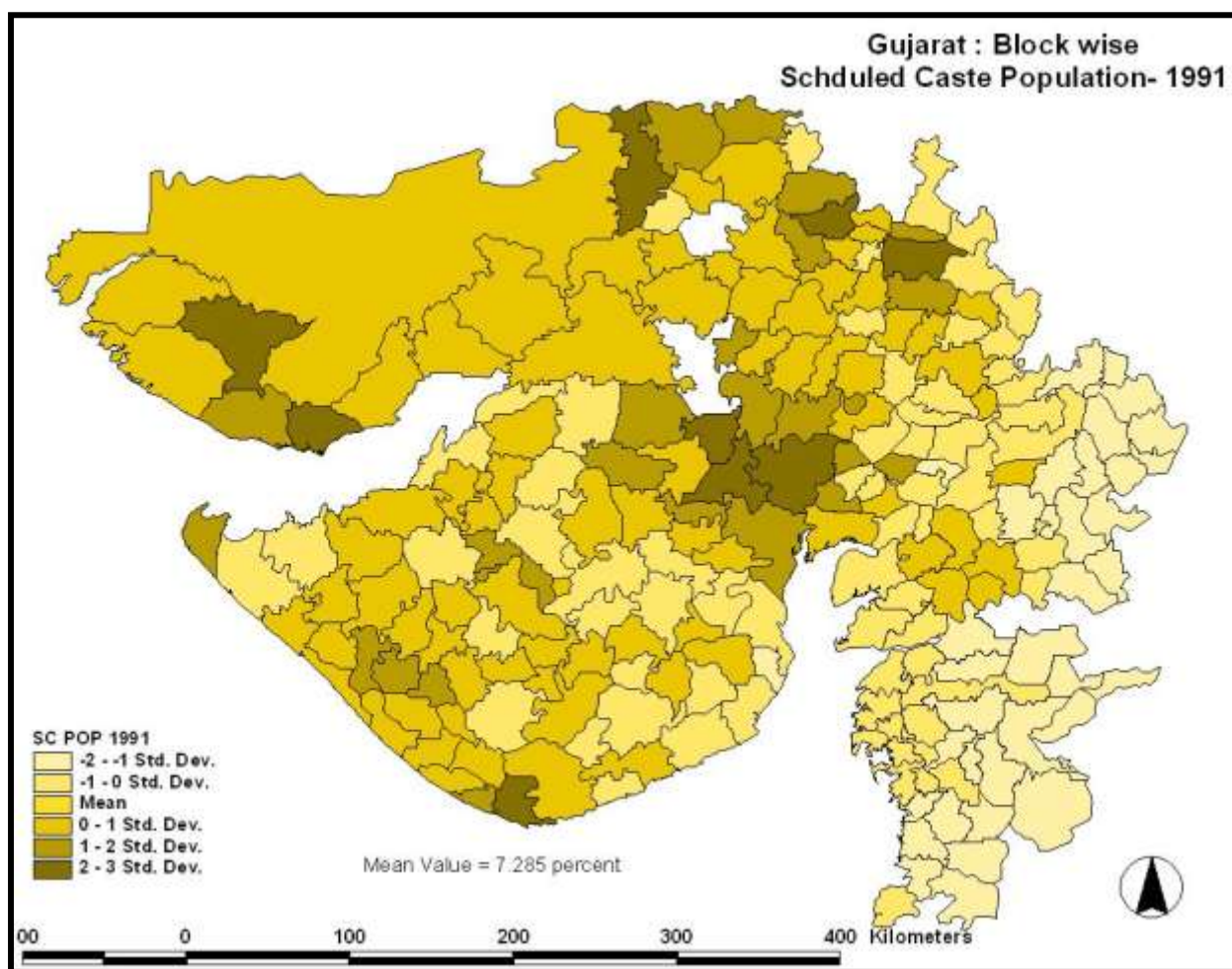
### 3.3.6 Scheduled Caste (SC): Regional Distribution

The Scheduled Caste population represents one of the most backward social groups in highly stratified caste ridden society in India. The Constitution of India lists Scheduled Castes under Article 341 specified for each state since 1950. The Gujarat state had 6.61 per cent of the population belonging to Scheduled Caste (SC) category in 1961, whereas India had 14 per cent share of SC population. The population was mainly concentrated in the north and central Gujarat in the main land Gujarat. Within Saurashtra, higher concentration of around 10 per cent was recorded in the blocks located in Porbandar and Jamnagar District. The highest concentration of the SC population was in Ahmedabad and Banaskantha district. About 65 per cent of the SC was residing in the rural areas in 1961.



**Figure 3.11: Distribution of Scheduled Caste Population - 1961**

Although the share of the SC population had increased to 7.4 per cent in 1981-91, it reduced to 7.2 per cent during 1991-2001. A comparison of the distribution of the SC in the blocks shows shrinking of concentration to the limited areas, which is an indication of probable marginalization of this social group.



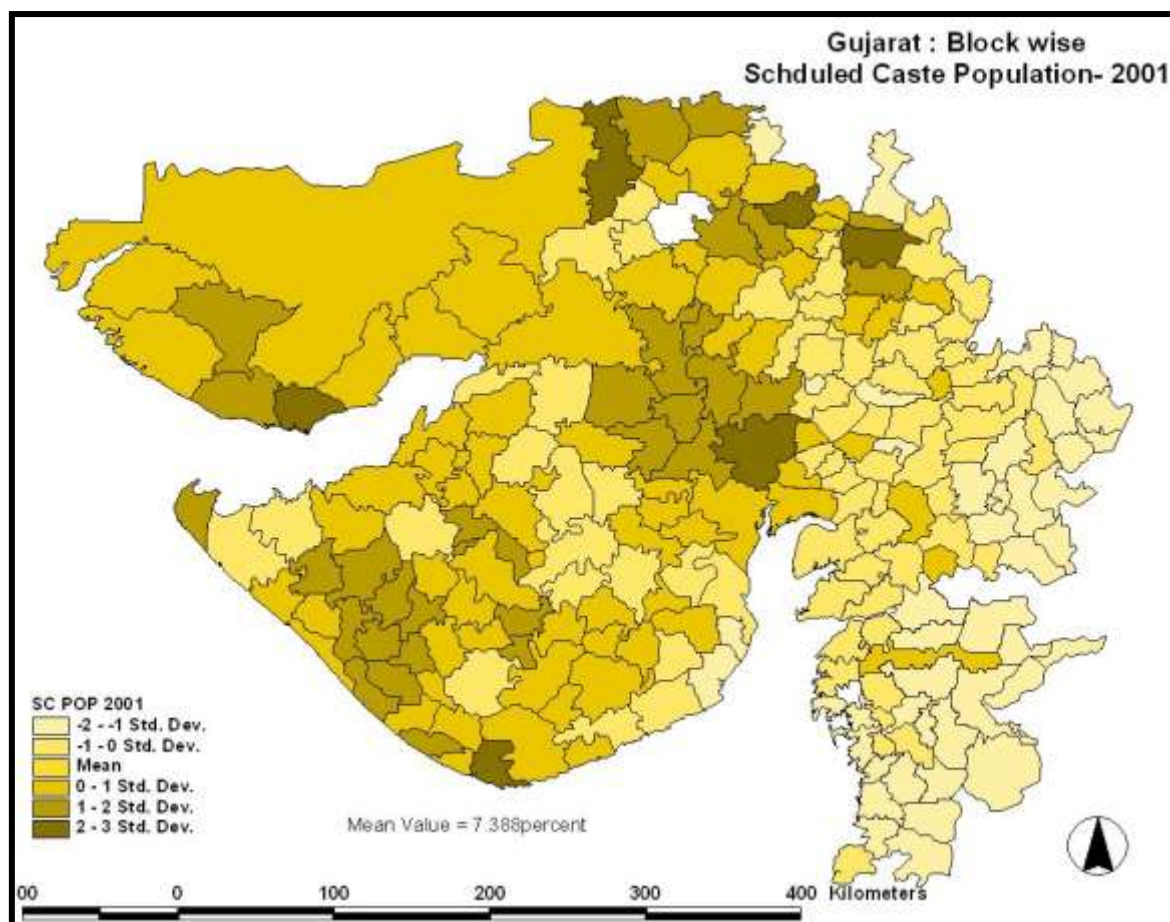
**Figure 3.12: Distribution of Scheduled Caste Population -1991**

A dramatic shift is observed in the year 1991 over 1961 from central Gujarat towards Northern parts of the State (Figure 3.11). There is also shrinking of population share in the southern region, might be due to decline in service requirements of shifting of *patidars*<sup>82</sup> from South Gujarat plains to the central plains near Anand and Kheda districts. As a result there has been re-consolidation of the SC population in the traditional blocks in Kachchh, Saurashtra and North Gujarat<sup>83</sup>.

<sup>82</sup> During the British period *Patidars* (the land holding community) from Central Gujarat started large scale cultivation in the villages primarily land situated in the tribal areas. They were serviced by the Scheduled Castes. After Independence, the tribals were given their land rights and also they asserted for the land which they had lost to *Patidars* (known as Garasia Movement) in Valia, Sagbara, Valod, etc. *taluka* in Bharuch district. This resulted in shifting of *Patidars* to Central or Mainland Gujarat, affecting the distribution of SCs in the South Gujarat region in subsequent census years.

<sup>83</sup> North Gujarat specially being centre for their family deities such as *Bahucharaji Mata*, *Meldi Maa* etc





**Figure 3.13: Distribution of Scheduled Caste Population -1991**

The continuity of demographic changes with respect to distribution of the SC is also reflected in the subsequent census year, 2001, which registers further reduction of population share in the central plains particularly around Kheda and Nadiad region. The high growth of the SC also continues around Ahmedabad and Banaskantha Districts. A high growth rate of population is observed in the Sabarkantha and Surendranagar districts, indicating probable poor literacy and lack of awareness of the family planning initiatives of successive governments. The population growth rate of SC declined from 3.4 (1971-81) to 2.7 per cent (1981-91), which bounced back during 1991-2001 to above 2.8 per cent per annum. This is reflected in the increased concentration in the traditional SC strongholds.

With regard to urban share of the SC population it is observed that, during 1961 only 24 per cent of SC lived in urban areas where as during 1991 it increased to 34 per cent and 39.30 per cent in 2001. This shows improvement in the socio-economic conditions along with shifting of occupational pattern amongst the SCs in Gujarat.



### 3.4 Development Trends in Gujarat

During the first two decades of its existence, i.e., 1960s and 1970s, Gujarat witnessed a period of green revolution, while the 1980s and 1990s marked by rapid industrialization. The development of industries was concentrated on the Ahmedabad-Vapi belt (known as *Golden Corridor*) until the early 1990s. With the New Economic Policy (NEP) of 1991 beginning from 1992-93, the State government has been encouraging industrial units in the Saurashtra and Kachchh regions. These regions are rich in natural resources, with raw material for cement, soda and ash industries. Mining is a pre-requisite for them, so Saurashtra is projected as the *Silver Corridor*. From 1983 to 1996, the State Government sanctioned 5,309 medium and large-scale industrial units at an investment of about Rs 191,807 crores. Thus, there is a clear shift in investment from central-south Gujarat to Saurashtra and Kachchh region. After the golden corridor from Mehsana to Vapi industries seem to be moving to a new silver corridor in the coastal Saurashtra and Kachchh regions. Around 83 per cent of the new units in the State are in these regions.

#### 3.4.1 Economic Growth

Gujarat ranks seventh in terms of size and tenth in population in India, but it is one of India's more developed states. Currently, it ranks third among the major states in urbanization, fourth in literacy, and third according to the physical quality of life index. It is one of the more industrialized states, with a concentration in chemicals, fertilizers, textiles and dairy products. It is also one of the most productive states in cash crops such as cotton, tobacco and groundnuts. Currently, there is serious concern that Gujarat's overall economic growth is stagnating. While in 1991-92 Gujarat ranked fourth among the major states in per capita State Domestic Product (SDP), subsequently its performance has levelled off or actually declined relative to that of other states.

**Table 3.7**  
**Gujarat – Current Position in India (2007-08)**

State	Amount (in Crore)	Rank
GSDP (Constant Price 1999-00)	Rs. 213092	6
GSDP (Current Price) 2007-08	Rs. 303734	6
NSDP (Constant Price 1999-00)	Rs. 177871	6
NSDP (Current Price), 2007-08	Rs. 255780	6
Per Capita NSDP (Current Prices) 2007-08	Rs. 45433	7
Per Capita NSDP (Constant Prices 1999-00)	Rs. 31594	8
Source: <i>Gujarat Among States of India -2010</i> , Directorate of Economic and Statistics, GoG, PDF		

**Table 3.8**  
**Sectoral Growth Rates in Gujarat at Constant Prices (1980-81) in Gujarat (CARG)**

Sectors	1960-61 to 1969- 70	1970-71 to 1979- 80	1980- 81 to 1989- 90	1990- 91 to 1999- 00	1993- 94 to 1999- 00	2000- 01 To 2004- 05*	2004-05 To 2009- 10*
Primary Sector	2.91	4.15	1.74	1.95	-0.68	1.22	0.90
<i>Agriculture</i>	2.27	4.22	1.77	-0.18	-1.10	2.3	3.4
Secondary Sector	3.62	5.64	6.51	7.25	6.09	5.68	6.04
<i>Manufacturing</i>	3.04	5.55	7.33	6.98	6.32	9.89	11.10
Tertiary Sector	3.51	5.86	7.10	7.39	7.22	11.58	10.61
Trade	-	-	6.08	10.34	7.17	8.80	7.25
Banking & Insurance	-	-	12.11	12.94	6.56	6.50	2.1
<b>Overall SDP</b>	<b>3.32</b>	<b>4.95</b>	<b>5.02</b>	<b>5.53</b>	<b>5.06</b>	<b>7.80</b>	<b>12.61</b>
Per Capita Income	-	-	3.14	3.94	3.58	4.52	8.89

Source: (a) EPW Research Foundation (1998) (b) Directorate of Economics and Statistics (2002) in Indira Hirway and others, 2005, *Gujarat: Human Development Report-2004*, MGLI, Ahmadabad, PDF Document), CARG – Compound Annual Growth Rate, SDP – State Domestic Product, \* Provisional Assessment by author based on CARG, 2004-05 to 2009-10 Socio-Economic Review with base year 2004-05

The recent economic growth in Gujarat had been lauded by many scholars. As Bibek Debroy, an eminent columnist and analyst points out, “There has been a discernible pick-up in Gujarat’s growth performance since the 10th Plan (2002-07), the five-year Plans being natural periods for breaking up the time-line. It’s tempting to argue that there is nothing exceptional in this. Gujarat grew fast during the 8th Plan (1992-97) too.”<sup>84</sup>

<sup>84</sup> Debroy, Bibek (2012): *Gujarat: Governance for Growth and Development*, Academic Foundation, New Delhi.

### 3.4.2 Agricultural Development

Even after the 60 per cent of the irrigation potential of the State has been utilized, the Socio-Economic Report -2004 mentions that, “output of agricultural sector in Gujarat state has been largely dependent on the south west monsoon”. The State has a total gross cropped area of 107 lakh hectares during 1999-2000 which was 4.45 per cent less than the previous years (1998-99)<sup>85</sup>.

Further, cultivable areas under the food crops were 44.31 per cent, and area under non-food crops was 55.91 per cent during the year 1999-2000. The areas under the food crops are declining continuously over time. This is reflected in the production data as well as area under different crops (Table 3.9).

**Table: 3.9**  
**Decadal Change in Crop Production in Gujarat (1980-81 to 2003-04)**  
(in ‘000 tones, Cotton in ‘000 bales)

Crops	1980-81	1990-91	Change (1981-91)	1995-96	1999-00	2000-01	Change (1991-01)	2001-02	2002-03
Total Cereals	4438	4459	0.47	4287	3992	2348	-47.34	4526	3294
Food Grains	4958	5083	2.52	4774	4438	2549	-49.85	4906	3621
Oil Seeds	2005	2044	1.95	2212	1826	1656	-18.98	3630	1685
Cotton	1738	1531	-11.91	2408	2146	1161	-24.17	1703	1673

*Source: Based on the Socio-Economic Report -2003-04, GOG, 2004*

Table 3.9 on crop production shows that the production of the cereals and food grains in the State between the industrialised phases of 1991-2001 has declined nearly by half of what it used to be during the 1990s. The State until the 1980s had been producing more than 4,400 thousand tonnes of cereals which declined to a meagre 2,348 thousand tonnes (47 per cent decline). With respect to food crops also, the State production declined from 4,958

<sup>85</sup> Govt. of Gujarat (2004): *Socio-Economic Review: Gujarat State 2003-04*, Directorate of Economics and Statistics, Gandhinagar, p. 8

thousand tonnes in the year 1980-81 to 2549 thousand tonnes in 1991-01, amounting to a decline of 49.85 per cent. The State is losing the area under cultivation at a faster rate since the last two decades which was rather slower during the 1960-80. The reason for such a decline is due to more and more area is being brought under the non-agricultural use, fallow and waste lands by the State. The State has not been able to reclaim the wastelands on the one hand, and losing the cultivable land to under the forest, urbanisation and other development projects.

The Gujarat Human Development Report (2004) refers to the saturation of the earlier strategies and lack of a new approach based on the new technology on the one hand, and increasing intensity and frequency of droughts on the other.<sup>86</sup> It further dwells on the lack of technical competency of the State rather than loss of agricultural land as the major cause of decline in production. The value of agricultural production of above Rs.10,000 per hectare was recorded only in seven districts, whereas in the rest of the districts it remained below Rs. 7,000 per hectare. This is the situation where 52-59 per cent of its work force is dependent on agriculture (1999-2000). The changing scenario of the agricultural sector is indicative of the fact that the income of the agricultural households has been steadily declining and they are gradually being deprived of their livelihood.

### 3.4.3 Development in the Mining Sector

Generally, the Central Government determines the policy for major minerals whereas minor minerals such as rocks/minerals used in construction etcetera, come under the purview of the State Government. To regulate the minor minerals, the State Government has framed Gujarat Minor Mineral Rules -1966 under the Section-15 of Mines and Minerals (Regulation and Development) Act-1957 and the Central Government has framed Granite Conservation and Development Rules -1999 and Marble Development and Conservation Rules -2000. In addition, mines are being regulated under other Acts and Rules of Central Government such as Mines Act -1952, Mines Rules -1955, Mineral Conservation and Development Rules - 1988.<sup>87</sup>

Gujarat is placed at the third position as on March-2002 with respect to mineral production value of the major minerals (including Oil and Natural Gas). The State ranks second in working mines leases. Gujarat is the lone producer of minerals such as agate, chalk

<sup>86</sup> Indira Hirway and others, 2005, p.26

<sup>87</sup> Govt. of Gujarat (2003): *Mineral Development Policy - 2003*, PDF, [www.gujaratindia.com](http://www.gujaratindia.com)

and perlite in the country. Production-wise Gujarat ranks first in fluorite and silica sand, second in bauxite, lignite, fire clay and clay (others) and third in quartz and ball clay and fourth in limestone and China clay.

Compared to 89 minerals occur in the country, there exist total 1201 mining leases in 32741 hectares of area for 33 major minerals, and 5388 quarry leases in 8939 hectares of area for 17 minor minerals in Gujarat as on March 2003.

### Mineral Reserves

The State has a total 1.27 lakh sq. kms of area under various rocks, which are mineral probable areas. Of the total area, only around 19 per cent of area has been surveyed in detail by the concerned department which indicates resource potentiality as under:

**Table: 3.10**  
**Important Minerals, Occurrences (Districts) and Estimated Reserves**  
**(in lakh tons) in Gujarat**

Sr. No.	Mineral	Lakh Tons	Districts
1	Limestone	1,19,870	Amreli, Bhavnagar, Jamnagar, Kachchh, Junagadh, Porbandar Panchmahals, Sabarkantha, Banaskantha
2	Bauxite	1,050	Kachchh, Jamnagar, Junagadh
3	Lignite	21,390	Kachchh, Bhavnagar, Surat, Bharuch
4	Dolomite	7,200	Vadodara
5	Silica sand	9,835	Bharuch, Sabarkantha, Kachchh, Surendranagar,
6	Base metal	85	Banaskantha
7	Chalk	570	Porbandar, Rajkot, Jamnagar
8	China clay	1,630	Mehsana, Sabarkantha, Kachchh
9	Fluorspar	116	Vadodara
10	Fireclay	1,552	Surendranagar, Rajkot
11	Granite	NA	Amreli, Banaskantha, Mehsana, Sabarkantha, Panchmahals
12	Manganese	25	Panchmahals, Vadodara
13	Marble	2,596	Banaskantha, Vadodara
14	Wallostonite	30	Banaskantha
15	Quartz	40	Panchmahals
16	Bentonite	1,050	Kachchh, Bhavnagar
17	Coal	30	Surendranagar, Kachchh
18	Gypsum	33	Kachchh, Jamnagar

As on March 2003, there existed 7,334 leases of major and minor minerals in Gujarat. Total area of which is 42,680 hectares. To make explored areas available for mining, mining lease and quarry lease areas increased to 61,024 hectares in a phased manner at an annual rate of 10 per cent by 2008.

#### **3.4.4 Industrial Development**

Gujarat has been the front-runner in the overall economic development of the country during the last few decades. It is evident from the fact that occupying a mere six per cent of geographical area and accommodating only five per cent of population, the State contributes 21 per cent of the country's exports and 6.42 per cent of the National GDP at constant prices. If the decadal growth of performance of some of the Indian states vis-à-vis other Asian economies are compared with that of Gujarat, one gets quite an encouraging scenario. The industrial growth of Gujarat with a figure of 8.52 per cent could be way ahead of many Indian states and other Asian Tigers viz. Singapore, Malaysia and Korea. There are 76 industrial clusters at 90 different locations in Gujarat. The Government has decided to recognise a cluster with a critical mass of a minimum of 50 units located within the radius of 10 kms. at a particular location<sup>88</sup>. Some of the estates were set up during the 1960s and 1970s with well designed infrastructure and all other requirements of those times.

Until the 1980s, the operating environment in India was under the shadow of the closed economy. Despite the Government of India initiating the process of economic reforms in the early 1990s, most of the States continued operations under the principles of the closed economy. However, Gujarat during the early 1990s had partially liberalised the public sector and attracted private sector investments. During the initial phase of economic reforms, leading industrialised states like Gujarat could derive maximum advantages in terms of attracting investments as the locational restrictions imposed by the earlier regime of controlled economy were removed. The State could attract reasonably a large chunk of investment from 1991 onwards. However, during the initial phase of liberalisation and globalisation, the industrialised states like Gujarat did not get any specific advantage in terms of growth of economy and investment. But later in mid 1990s the State could attract investment in factory sector.

Again, by 2000, most of the States agreed to withdraw the incentives given in the form of subsidies and sales tax and Gujarat was one of them. The Government has planned to

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<sup>88</sup> Govt. of Gujarat (2004): *Socio-Economic Review: Gujarat State 2003-04*, Directorate of Economics and Statistics, Gandhinagar, p. 8

convert the existing land allotted on leasehold basis to freehold basis to the allottees by charging appropriate premium. The Government also plans to facilitate broadband access in major industrial estates. The new industrial estates set up by Gujarat Industrial Development Corporation (GIDC) now will have all modern amenities.<sup>89</sup>

The number of working registered factories in the State increased from 18,880 in 2001 to 19,696 at the end of year 2002. The industries in the State employ 8.40 lakh persons. The State ranks next to Maharashtra in net value added by the manufacturing generated by the factory sector. The State wants to upgrade industrial and urban infrastructure, complete the power reform and port led development of Special Economic Zone (SEZ) as per the policy declared in 2003.<sup>90</sup>

In order to fulfil the aspirations of the people and to spread the benefits of industrialization in the far-flung areas, especially when the waters of Narmada started flowing in various parts of the State, the Gujarat Government has decided to develop three economic corridors within its span. These corridors include the areas falling along Bharuch-Dahej-Umbergaon, Vadodara-Mehsana-Palanpur and Surendranagar-Rajkot-Morbi-Kandla. For the purpose, the Government plans to commission reputed consultants to compile potentiality study reports in the near future. The broad objectives of the studies include: the assessment of natural resources, existing infrastructure, present status of industrialization, additional infrastructure facilities required for further development, identification of new sectors for industrial investment, policy interventions required in accordance with the potential of each corridor and an action plan to attract industrial investment in the regions along these corridors. The Government has plans to aggressively market the potential of these corridors to the investors all over the world, which in turn, will raise the economy of the areas covered.<sup>91</sup>

### 3.4.5 Transport and Communication

Though Gujarat has relatively a good network of roads, it plans to strengthen this network further by converting existing roads into multi-lane roads and expressways depending upon the traffic requirements. The total length of road in the State had increased to 74,075 kms. by year 2002. Of these, 95 per cent of the roads are surfaced. National highways,

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<sup>89</sup> Ibid, p.9-11

<sup>90</sup> Ibid, p.22

<sup>91</sup> Ibid, p.59

state highways, major district roads, other district roads and village roads in the State were 2,439 kms, 19,163 kms, 20,953 kms, 10,422 kms and 21,098 kms long respectively.<sup>92</sup>

Gujarat has the longest coastline of 1,600 kms in the country, which is currently dotted with 41 ports, of which Kandla is the major one. The State Government is developing 10 ports that are better placed for industrial development. In order to harness the potential of such a long maritime border for effectively establishing international trade linkages, the Government has decided to assist the process of port-driven industrialization in the State. For the purpose, infrastructure facilities in the form of road connectivity, rail connectivity, airport connectivity etcetera are planned to be developed, apart from up gradation of port infrastructure at the existing port locations. Plans are also afoot to develop product specific jetties at some locations for the products that are manufactured in the State and enjoy good export potential. Further, the State will also undertake the exercise to study the requirements of port development on regional basis to cater to the requirements of hinterland traffic. In addition, industrial estates and SEZs are also planned at some of the important port locations.

### 3.4.6 Urban Development

Gujarat has many big towns and cities. It is the third most urbanized state where 38 per cent of its population lives in the urban areas. It is expected that by 2025, 50 per cent of Gujarat will be urban, at a rate of about 50,000 persons to be added to towns and cities every month. Ahmadabad Agglomeration alone would be crossing more than one crore by the year 2025. Ensuring sustainable growth of towns and cities is one of the most significant challenges facing the State today.

**Table 3.11**  
**Growth of Urban Population in Gujarat**

Census Year	Number of Towns	Population		Level of Urbanisation
		Total	Urban	Per Cent
1961	181	20.6	5.3	25.77
1971	216	26.7	7.5	28.08
1981	255	34.1	10.6	31.10
1991	264	41.3	14.2	34.49
2001	242	50.7	18.9	37.34

Source: Census of India, 2001.

<sup>92</sup> Ibid, p.71



**Table 3.12**  
**Gujarat's Towns and Cities-2001**

<b>Class</b>	<b>Number</b>	<b>Population (in lakhs)</b>
Municipal Corporations	7	93
Class-A Municipal Cities	10	27
Class-B Municipal Towns	30	21
Class-C Municipal Towns	44	18
Class-D Municipal Towns	58	12
Capital – Gandhinagar	1	2
Total	150	173

### Municipal Corporations in Gujarat

About 17 per cent of Gujarat lives in its largest seven cities, which are currently being projected as ‘modern face’ of Gujarat. These cities also provide trade and industrial link to the country as well as other parts of the world. These are crucial to the Gujarat economy as centres of excellence and innovation nurturing the growth of the State. These seven cities are crucial to economic growth, innovation, competitiveness and future well-being of Gujarat. The Urban Development Authorities (UDA) and Municipal Corporations of these urban agglomerations manage their administration. The share of population (2001) among the largest cities in the State is Ahmadabad (35), Surat (24), Vadodara (13), Rajkot (9.6), Bhavnagar (5), Jamnagar (4.5) and Junagadh (1.7).

### Urban Primacy

Gujarat has 242 urban habitations (2001) regulated under the BPMC Act and Gujarat *Nagarpalika* Act (1963). The towns having population less than 15,000 are governed under the Gujarat *Panchayat* Act (1993). About 80 per cent of urban population resides in only 63 cities and seven municipal corporations. Of these, 50 per cent resides in seven municipal corporation whereas 26 per cent in other Class I and II towns. Out of 250 *taluka* around 31 *talukas* of the State account for 72 per cent of urban population and 40 per cent of the State population.

Swami and Mukundan (2008)<sup>93</sup> in their analysis of industrial investment and urbanisation trends in the State, ascribe '*...concentration of industrial development in certain areas of the State, particularly around the corporation cities of Ahmedabad, Surat, Vadodara, Bhavnagar, Rajkot and Jamnagar*' for this primacy.'

### Urban Development Policy

The larger cities of the State have urban development authorities controlling the urban space by way of Development Plans and Town Planning Schemes. The development control regulation in the State allows the cities to acquire land required for development of infrastructure for the cities. In most of the time, the land for the urban areas added for the population growth potential of the region. The area under the urban authorities can extend up from 100 sq. km to 200 Sq.kms and in case of the metro cities and from 10 to 200 Sq.kms in case of the municipalities. The State has 142 urban centres having a total area of approximately 15,000 sq. kms are under its ambit.

### **3.5 Regional Development**

The study of 'development' from the perspective of the 'regional' features of the space is important for attaining real, good and spatially uniform development as well as finding the pointers for the impact of development on resources and goods. The States' physiographic divisions and natural resource potentials are the key determinants for the development of the regions. Sometimes availability of natural resources has been the root cause of suffering for the people who are displaced for forestation, mining and water resource projects. The eastern belt (Panchmahal, Dahod, and eastern Vadodara), Bharuch, Narmada (Rajpipla), eastern Surat, Valsad, Navsari and the Dangs which are rich in natural resources, have remained poor due to over exploitation of its resources for the development of the mainland Gujarat.

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<sup>93</sup> Swami H M and Mukundan K (2008): "Gujarat Urban Development Dynamics", in Swaminathan R. (ed.), *Gujarat Perspectives of the Future*, Academic Foundation, New Delhi, p. 195

**Table 3.13**  
**NSS-Region-Wise Incidence of Poverty**

NSS Region	Incidence of Poverty (%)*	
	1987-88	1993-94
<b>Total</b>		
Gujarat Eastern	34.49	25.06
Northern Plains	29.03	24.58
Southern Plains	25.85	22.45
Gujarat Dry Regions	40.20	23.30
Saurashtra	28.18	18.80
<b>Rural</b>		
Gujarat Eastern	34.19	24.12
Northern Plains	25.87	20.52
Southern Plains	22.85	23.51
Gujarat Dry Regions	46.95	22.52
Saurashtra	18.95	10.03
<b>Urban</b>		
Gujarat Eastern	39.32	34.33
Northern Plains	34.23	30.05
Southern Plains	30.89	20.89
Gujarat Dry Regions	53.88	27.03
Saurashtra	53.77	34.04
*Estimates of Poverty Level (EOPL) estimates taken, which are based on the Expert Groups Methodology, Source: Dubey and Gangopadhyay (1997)		

The change amongst the incidence of poverty as per the NSS survey 1987-88 and 1993-94 (Table 3.13) unravels the differential decline in the poverty in the regions of the State. While the decline in poverty level amongst the northern and southern plains was 5 and 3 per cent respectively, it was as high as 17 and 10 per cent in the Gujarat dry and Saurashtra regions. However, in the rural part of the southern region, the incidence of poverty has increased from 22.8 in 1987-88 to 23.5 per cent in 1993-94.

Gujarat has been dependent on the primary sector over the years for a major portion of employment. Nevertheless, there is gradual shift from this sector to secondary and tertiary sectors where the per capita income is higher. The per centage of employment generated by the primary sector declined from 59 per cent in 1991 to 56 per cent in 2001. This expected development considering that 56.50 per cent population, which was involved in primary sector, contributed 23.93 per cent of Net State Domestic Product (NSDP) where as secondary sector with 19.21 per cent employment contributed 33.41 per cent and tertiary sector with

24.29% of the employees contributed 42.65 per cent. This shows that even though agriculture employs the maximum number of people its contribution towards NSDP is less than other sectors. This is due to high underemployment and low productivity.

### 3.6 Human Development

Similarly, as per the Human Development Report 2004, there are distinct disparities among the different districts in Gujarat in terms of human development. In HDM-1 related to income, education, health, housing and participation, Ahmadabad district stands at the top followed by the State capital Gandhinagar. Rajkot, Navsari and Surat. The least developed districts in the State are Dahod, Dangs, Banaskantha, Panchmahals, Surendranagar and Patan. It is worth noting that the leading districts in human development are the most industrialised and urbanised ones, whereas the backward districts having high concentration of the tribes are not only environmentally highly degraded but also exhibit poor human development. On the income front Kachchh, reported high per capita bank deposits even if they do not have high domestic production. The poor housing and health has been reported from Dahod, Banaskantha, Dangs and Panchmahals districts.

The State was lowered to the fifth position in 2004 in terms of per capita income from the fourth position in 2003. Among the States of the country, Gujarat ranks sixth in income-poverty index, fifth in education index, ninth in health index and sixth in participation index. The State has also recorded a much higher population growth rate than the National average of 21.24 per cent, similar to Bihar and Uttar Pradesh during the 2001 census. The districts that have experienced a decadal population growth rate above 25 per cent are Valsad (29.66), Dangs (29.58), Dahod (28.35), Banaskantha (26.31), Surendranagar (25.24), Rajkot (28.95), Ahmadabad (26.61) and Surat (47.04).<sup>94</sup> Except in case of Ahmadabad and Rajkot districts, researchers cite the natural increase in the population as the most important factor rather than in-migration as the cause of higher rate of population growth in the districts of Gujarat. The rest of districts are backward and lack development to attract interstate migrants.

In terms of HDI (2008) components income, health and education, the State does not present an encouraging picture. The HDI for Gujarat was 0.527 and it ranked 10<sup>th</sup> among the

<sup>94</sup> Mahadevia, Darshini (2003): *Gujarat's Development Experience and Success of Hindutva*, in Lessons in Gujarat, Vikas Adhyan Kendra, Mumbai.

major state. Kerala stood first with score 0.790, Himachal 0.652, Punjab 0.605, Maharashtra 0.572 and Haryana 0.552.

### 3.7 Development Concern for State

**Health:** Gujarat ranked 10<sup>th</sup> in rate of decline in Infant Mortality Rate (IMR). The gap between rural and urban IMR is widening. There is decline in use of government health service across the entire income group, barring the lowest income group in rural areas. In urban areas too, there is a similar declining trend in use of services but the decline has been quite significant in the lowest income group. In addition the per centage of women suffering from anaemia has risen from 46.3 per cent in 1999 to 55.5 per cent in 2004, whereas in children it has increased to 74.5 per cent to 80.1 per cent during the same period.

**Poverty:** In the last five years, the rural monthly consumption expenditure grew at 2.05 per cent per annum (National Average 2.4 %), which is much lower than what was achieved by states like Maharashtra and Tamilnadu. Gujarat has 23.22 per cent people living below the poverty line as per NSSO 2009-10. This is much higher than Haryana (19.88) and Tamil Nadu (17.42). In terms of hunger it was revealed by State Hunger Index (2008) that Gujarat is ranked 13<sup>th</sup> among the 17 large states and even worse than Odisha.

In the urban areas, the growth in average monthly consumption expenditure in the State was marginally less than the national average during 2005-10 (2.13 per cent per annum compared to average of 2.4 per cent). It has been said that, the advantage state had during 1993-05 was lost during 2005-10.

In terms of per capita income in 2011, Gujarat ranked sixth among major state with per capita income of Rs. 63,996, after Haryana (Rs.92,327), Maharashtra (Rs. 83,471), Punjab (Rs. 67,473), Tamilnadu (Rs. 72,993) and Uttarakhand (Rs. 68,292).

**Banking and Finance:** The amount of per capita deposit and per capita credit for Gujarat was Rs. 37,174 and Rs. 24,268; while for Tamilnadu it was Rs. 42580 and Rs. 47,964; Karnataka Rs. 49,598 and Rs. 38,154 and Maharashtra Rs. 1,10,183 and Rs. 89,575 and Kerala Rs. 43,890 and Rs. 27,912. In 2010, Gujarat's share in total deposits of the scheduled commercial banks was 4.70 per cent as against 5.42 per cent, 6.20, 6.34 and 26.60 per cent for Andhra Pradesh, Tamilnadu, Karnataka and Maharashtra respectively. The share of Gujarat in total credit disbursed by these commercial banks was 4.22 per cent while same for Maharashtra, Karnataka and Tamilnadu was 29.65%, 6.71% and 9.61% respectively.

**Employment:** Manufacturing in Gujarat is characterized by low employment generation, slow growth in wages, increasing use of contract workers and overall reduced position of workers in the manufacturing sector. According to NSSO data (2009-10) Gujarat recorded zero growth rates in employment during the period 2004-05 to 2009-10. The compound annual growth rate (CAGR) of employment during 1993-94 to 2004-05, using NSSO suggests that employment grew at 2.69 per cent per annum. Between 2005 and 2010, the employment has fallen in agriculture and manufacturing sector where as there is marginal growth recorded in services sector, especially in urban areas that too the job created are casual in nature. There has been increase in contractual work scenario from 19 per cent in 1993-94 to 34 per cent in 2001-08, may be due to stagnation of regular employment. In terms of wages also while the all India growth rate of wages in the manufacturing sector has been 3.7 per cent, in Gujarat the growth rate has been just 1.5 per cent.

**Education:** The comparative position of the State in literacy rates and per centage of children currently in school, both six years and above and six to 14 years has deteriorated between 1999-2000 and 2007-08. The state ranked 30<sup>th</sup> among all the States for per centage of school enrolment six years as against 23<sup>rd</sup> earlier. In the per centage budgetary allocation Gujarat ranks lowest in India.

**Investment:** It is also fact that over the past decade (2002-12) Gujarat had been projected as preferred domestic investment destination. The data released from Economic Survey 2011<sup>95</sup>, shows that the domestic investment is concentrated in few industries- infrastructure (38%), chemicals and petrochemicals (25%), engineering and electronics (12%) and glass, ceramic, cement (9%). Recent labour unrests in the State (2009-10) further affected the confidence of investors.

In Foreign Direct Investment (FDI) the other states in India has lead the MoUs during 2006-10, Gujarat signed MoUs worth Rs. 5.35 lakh crores with potential of 6.47 lakh jobs. But during the same period Maharashtra and Tamilnadu with Rs. 4.20 lakh crore and Rs. 1.63 lakh crore worth MoUs, expect about 8.63 lakh and 13.61 lakh jobs. Similarly, Chhattisgarh and Odisha was signed MoUs worth 3.61 lakh crore and 2.99 lakh crore without creating much hyped event in Gujarat.

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<sup>95</sup> Govt. of Gujarat (2010): *Socio-Economic Review: Gujarat State 2009-10*, Directorate of Economics and Statistics, Gandhinagar, PDF Document.

### **3.8 Conclusion**

The above chapter described the salient features Gujarat and its regions as a prelude to the detailed investigation of various factors affecting the current situation. There are many economic indicators, which supports the high growth characteristics of Gujarat along with the Human Development Index specifying the development concerns of the State. An attempt is made in the subsequent chapters to obtain a deeper geographical insight on various aspects of development and highlight the implications on the regional development.