



## A Geographical Study of Population Distribution and Density in Ahmednagar District

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### Abstract

In this research paper attempt is made to determine and analyses the spatial patterns of population density and distribution in the Ahmednagar district of Maharashtra during 2011. Present study is mainly based on secondary sources of data which is collected from Primary Census Abstract of Ahmednagar District, 2011. Population distribution refers to the actual pattern of spacing of units of individuals. Distribution of population mainly depends upon the physical and human factors, viz. physiography, climate, rainfall, soil, drainage pattern, economic resources, stage of economic growth etc. It is observed that the highest population concentration was found in central part, high to moderate in the northern part and relatively low was found in southern part of district. It is clear from the study that there is found close relationship in between relief feature, climate, rainfall, soil, availability of water, transportation network, urbanization, industrialization and distribution of population. This study has been conducted in 14 tehsils of Ahmednagar district. In these tehsils, the population characteristics are not uniform and the reasons for this have been sought. A brief study of the population density and distribution has been done by tehsil-wise.

**Keywords:-**Population density and distribution, Spatial Patterns, Economic Activities.

### ➤ Introduction

The population data are not only required for nation, but also for its geographic subdivisions and socio-economic and cultural categories. Distribution refers to the ways people get located in their special spread, where as density refers to ratio between the size of population (population number) and the area ( i.e. man-land ratio).<sup>1</sup>

Not gold but only (Wo)men can make a people great and strong. (Wo)men who for truth and honour's sake, stand fast and suffer long (Wo)men who toil while others sleep – who dare while others flee – they build a nation's pillars deep and lift it to the sky. ---Ralph Waldo Emerson

The population of the district is unevenly distributed. In this regard the remark of George B. Cressey about the population of Asia that “Asia has many places where people are few and few place where people are very many” is true about the pattern of population distribution of the world also.<sup>2</sup>

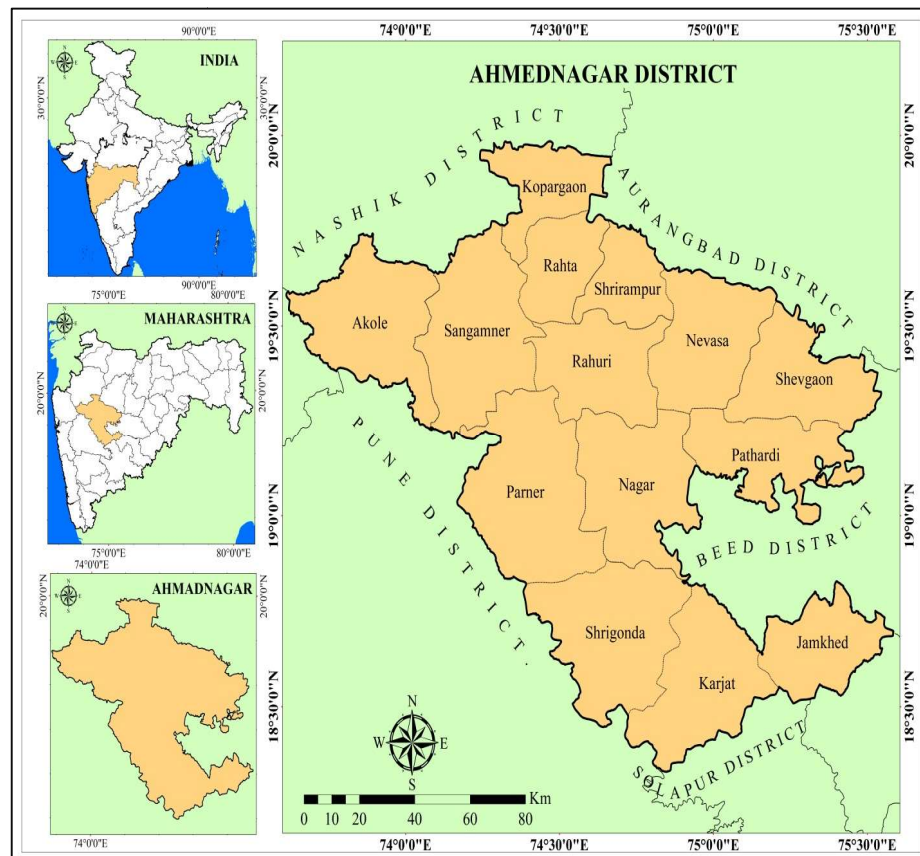
Patterns of population distribution and density help us to understand the demographic characteristics of any area. The term population distribution refers to the way people are spaced over the earth's surface. Broadly, 90 per cent of the world population lives in about 10 per cent of its land area. The 10 most populous countries of the world contribute about 60 per cent of the world's population.<sup>3</sup>

### ➤ Study Area

Ahmednagar district is lying between 18° 2' to 19° 9' north latitudes and 73° -9' to 75° -5' East longitudes. It is situated partly in the upper Godavari basin and partly in the Bhima basin, the inter-fluve in between forming the extensive Ahmednagar plateau. The district is

very irregular but compact in shape and somewhat resembling a slanting crosses with a length of 200 km and breadth of 210 km. It is bounded on the north by Igatpuri, Sinnar and Yeola talukas of Nashik district; on the North-East by Vaijapur, Gangapur and Paithan talukas of Aurangabad district on the East by Georai, Bhir and Ashti talukas of Bhir district; Bhum and Paranda talukas of Osmanabad district; on the south by the Karmala taluka of Solapur district; and on the South-West by Murbad and Shahapur talukas of Thane district. It has the total area 17035 sq.km. Ahmednagar is the largest district of the state in area. It occupies somewhat central position in Maharashtra.

**Map No. 1.1 Location Map of Ahmednagar District**



### Objectives of the study

1. To Study the Geographical Condition of Ahmednagar District.
2. To identify factors responsible for rapid growth of population.
3. To define various demographic terms such as birth rate, death rate sex ratio, density, literacy etc.
4. To analyze causes and consequences of in and out migration in study area.
5. To suggest suitable measures and remedies for population planning.

### Hypothesis

Following hypotheses have been formulated in this study:-

1. Geographical and Socio-economic factors affecting on population density and distribution.
2. Governments play an important role in the population distribution.
3. Population planning Programmes resulted population pattern changes in study Area.
4. Tehsil-wise family planning Programmes not will be Funded similarly everywhere in Ahmednagar District.



## Methodology

Methodology refers to set of principles and processes by which aims and objectives are perceived. It is a technique, which is followed to prove hypotheses. For the present study, the Agriculture Census Data from 1995 to 2015 has been used. The General and Geographical information of Ahmednagar district was collected from Government Gazetteer and Census Handbook of 1991, 2001, 2011 and website of Ahmednagar district.

## Result and Discussion

The results section is a section containing a description about the main findings of a research, whereas the discussion section interprets the results for readers and provides the significance of the findings. This section should not repeat the results section.

### ● Population Distribution-

As per the Census 2011, the total population of the Ahmednagar district was 41.24 lakh with a population density of 232 per square kilometer. It consists of 32.37 lakh of rural population and 80.37 of urban population. The ratio of female population per thousand of male was 941. Out of the total population 12.00 percent belong to SC and 7.51 percent to ST communities (Table 1.1). The district is with high literacy level of 73.30 percent.<sup>4</sup>

The structure of workforce in Ahmednagar district reveals that 69.70 percent of workers are in the agricultural sector. While about 44.34 percent are cultivators, 25.3 percent are agricultural labourers. The total number of persons in the work force in Ahmednagar district was 18.57 lakhs (main plus marginal workers). However the contribution of this sector to District Domestic product is 27 percent. It can thus be observed that agriculture is the dominant activity in Ahmednagar district. The tehsil-wise area, number of villages, Gram Panchayats and population of Ahmednagar district is presented in table 1.1. It can be seen from the table that the population of the district was 41.24 lakhs with 14.71 percent of the population in Ahmednagar taluka which has only 8.99 percent of area of the district.<sup>5</sup>

The next most populous taluka is Sangamner which accounts for 10.70 percent of the population of the district. Thus, one quarter of the district's population is located in these two talukas. The sex ratio of the population is almost equally shared by male and female, consists of 50.42 percent male and 49.58 percent female population. The Akole taluka is having largest number of S.T. population of 45.59 percent. It is the most tribal tehsil in Ahmednagar district. Ahmednagar district has 1 municipal corporations, 8 Nagar Parishad, 1 Nagar Panchayat and 1 cantonment board. As mentioned earlier, the district is extended to over 14 blocks having 1540 villages and 1310 Gram Panchayats.<sup>6</sup>

Population 2011, in 2011 Ahmednagar had population of 4,543,083 of which male and female were 2,348,802 and 2,194,281 respectively. In 2001 census, Ahmednagar had a population of 4,040,642 of which males were 2,083,053 and remaining 1,957,589 were females. Ahmednagar district population constituted 4.04 percent of total Maharashtra population. In 2001 census, this figure for Ahmednagar District was at 4.17 percent. There was change of 12.43 percent in the population compared to population as per 2001. In the previous census of India 2001, Ahmednagar District recorded increase of 19.80 percent to its population compared to 1991 Population Density 2011. The initial provisional data released by census India 2011, shows that density of Ahmednagar district for 2011 is 266 people per sq. km. In 2001, Ahmednagar district density was at 237 people per sq.km. Ahmednagar district administers 17.048 square kilometers of areas. Literacy Rate 2011 Average literacy rate of Ahmednagar in 2011 were 80.22 compared to 754.30 of 2001. If things are looked out at gender wise, male and female literacy were 88.81 and 71.15 respectively. For 2001 census, same figures stood at 85.70 and 64.35 in Ahmednagar District. Total literate in Ahmednagar District were 3,213,330 of which male and female were 1,826,597 in its district.<sup>7</sup>



Sex Ratio 2011 With regards to Sex Ratio in Ahmednagar, it stood at 934 per 1000 male compared to 2001 census figure of 940. The average national sex ratio in India is 940 as per latest reports of Census 2011 directorate. In 2011 census, child sex ratio is 839 girls per 1000 boys compared to figure of 884 girls per 1000 boys of 2001 census data. Child Population 2011 in census enumeration, data regarding child under 0-6 age were also collected for all districts including Ahmednagar. There were total 537,346 children under age of 0-6 against 589,706 of 2001 census. Of total 537,346 male and female were 292,242 and 245,104 respectively. Child Sex Ratio as per census 2011 was 839 compared to 884 of census 2001. In 2011, Children under 0-6 formed 11.83 percent of Ahmednagar District compared to 14.59 percent of 2001. There was net change of -2.746 percent in this compared to previous census of India.<sup>8</sup>

Urban population 2011, out of the total Ahmednagar population for 2011 census, 20.10 percent lives in urban regions of district. In total 913,071 people lives in urban areas of which males are 471,697 and females are 441,374 Sex Ratio in urban region of Ahmednagar district is 936 as per 2011 census data. Similarly child sex ratio in Ahmednagar district was 848 in 2011 census. Child population (0-6) in urban region was 101,484 of which males and females were 54,915 and 46,569. This child population figure of Ahmednagar district is 11.64% of total urban population. Average literacy rate in Ahmednagar district as per census 2011 is 88.79% of which males and females are 93.84% and 83.47% literates respectively. In actual number 720,640 people are literate in urban region of which males and females are 391,097 and 329,543 respectively.

Rural Population 2011 as per 2011 census, 79.90% population of Ahmednagar districts lives in rural areas. The total Ahmednagar district population living in rural areas is 3,630,012 of which males and females are 1,877,105 and 1,752,907 respectively. In rural areas of Ahmednagar district, sex ratio is 934 females per 1000 males. If child sex ratio data of Ahmednagar district is considered, figure is 837 girls per 1000 boys. Child population in the age 0-6 is 435,862 in rural areas of which males were 237,327 and females were 198,535. The child population comprises 12.64% of total rural population of Ahmednagar district. Literacy rate in rural areas of Ahmednagar district is 78.04% as per census data 2011. Gender wise, male and female literacy stood 87.53 and 68.03 percent respectively. In total, 2,492,690 people were literate of which males and females were 1,435,315 and 1,057,375 respectively.<sup>9</sup>

Agricultural and allied census Ahmednagar is the biggest district of Maharashtra in terms of area and population. The total geographical area of the district is 17.41 lakh ha. The net cropped area is 12, 56,500 ha, out of which an area of 3, 30,000 ha. (26.27%) is under canal (84,000 ha) and well irrigation. About 9, 26,500 ha. (73.73%) area is rain fed. The area under Kharif crops is 4, 60,000 ha (36.6 percent) while

7, 58,000 ha (60.32 percent) area is under Rabi crops. A multiple cropping system is followed on 1, 10,500 ha. area. A total of 8.73 percent area of the district is under forest.<sup>10</sup>

**Table 1.1 Ahmednagar District: Tehsil-wise Population Distribution, 2011**

Sr.	Tehsil	1991	2001	2011
1	Ahmednagar	482884	606690	683808
2	Parner	214064	246552	274128
3	Pathardi	185845	214872	288021
4	Karjat	184331	205674	23534
5	Jamkhed	119278	134216	158606
6	Shrigonda	235706	277356	315948
7	Shrirampur	340327	256458	287620
8	Shevgaon	170507	203676	245674
9	Newasa	273075	326698	357368

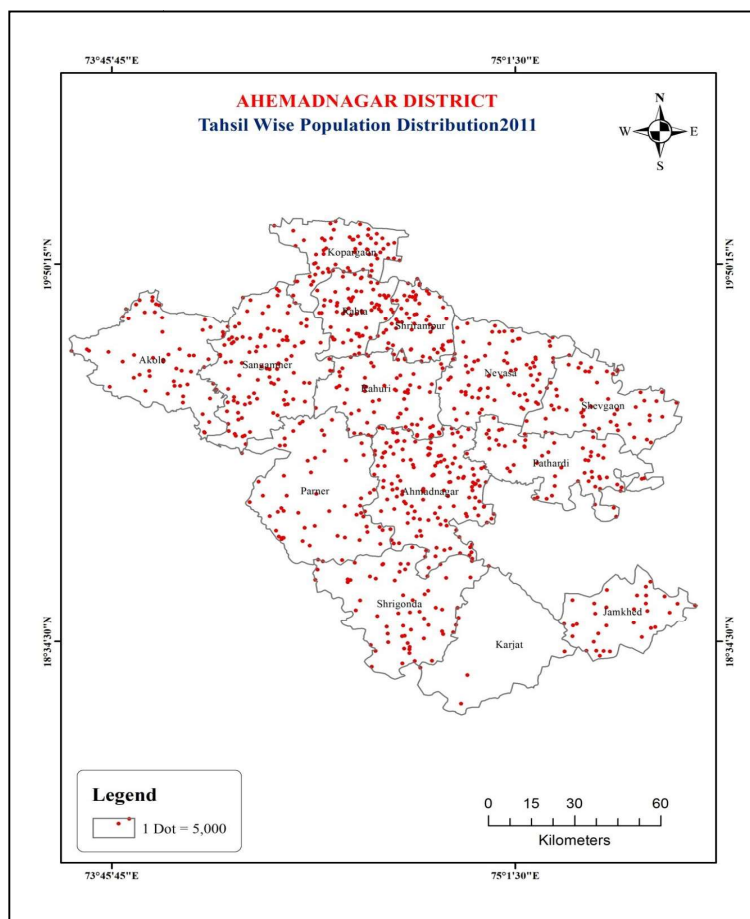




Sr.	Tehsil	1991	2001	2011
10	Rahuri	252570	294924	332579
11	Sangamner	354808	441439	489263
12	Akole	22215	266638	292319
13	Kopergaon	337387	277170	302823
14	Rahata	-----	288279	319622

Source: Census Handbook of Ahmednagar 2011.

**Map 1.2 Tehsil-wise Population Distribution of Ahmednagar District, 2011**



**Table 1.2 Tehsil-wise area, Number of Villages and population in District**

Tehsil	General			Population (2011) (lakh)			% to District total		
	Area (sq.K.M.)	% to total	No. of Villages	Male	Female	Total	Total	S.C. (%)	S.T.(%)
Ahmednagar	1605.74	8.99	104	1.33	1.22	2.55	6.07	13.05	1.68
Parner	1930.28	11.17	131	1.40	1.33	2.74	2.47	6.67	4.90
Pathardi	1214.10	7.04	134	1.20	1.10	2.30	2.15	9.55	1.26
Karjat	1503.61	8.92	121	1.06	0.99	2.23	2.06	3.53	1.12
Jamkhed	878.62	5.24	86	0.65	0.59	1.24	1.34	11.97	1.40
Shrigonda	1603.81	9.60	114	1.48	1.36	2.84	2.77	12.34	2.67
Shrirampur	569.87	3.03	54	1.02	0.96	1.98	2.56	18.99	5.47
Shevgaon	1031.85	6.51	112	1.26	1.19	2.45	2.94	13.75	1.61



Tehsil	General			Population (2011) (lakh)			% to District total		
	Area (sq.K.M.)	% to total	No. of Villages	Male	Female	Total	Total	S.C. (%)	S.T.(%)
Newasa	1343.43	7.73	129	1.85	1.72	3.57	3.27	14.01	4.81
Rahata	759.19	4.11	58	1.34	1.26	2.61	2.88	16.02	5.35
Sangamner	1705.06	10.20	169	2.07	1.94	4.01	4.41	8.08	9.36
Akole	1505.08	9.01	191	2.82	1.43	1.39	2.67	4.21	45.59
Kopargaon	725.16	4.34	79	1.23	1.14	2.37	2.77	12.74	9.91
Rahata	759.19	4.11	58	1.34	1.26	2.61	2.88	16.02	5.35
Total	17410.91	100.00	1540	18.77	17.52	36.30	41.24	12.00	7.51

Source: District Socio- economic Review 2012 – 13

### Population Density

Each unit of land has limited capacity to support people living on it. Hence, it is necessary to understand the ratio between the numbers of people to the size of land. This ratio is the density of population. It is usually measured in persons per sq km

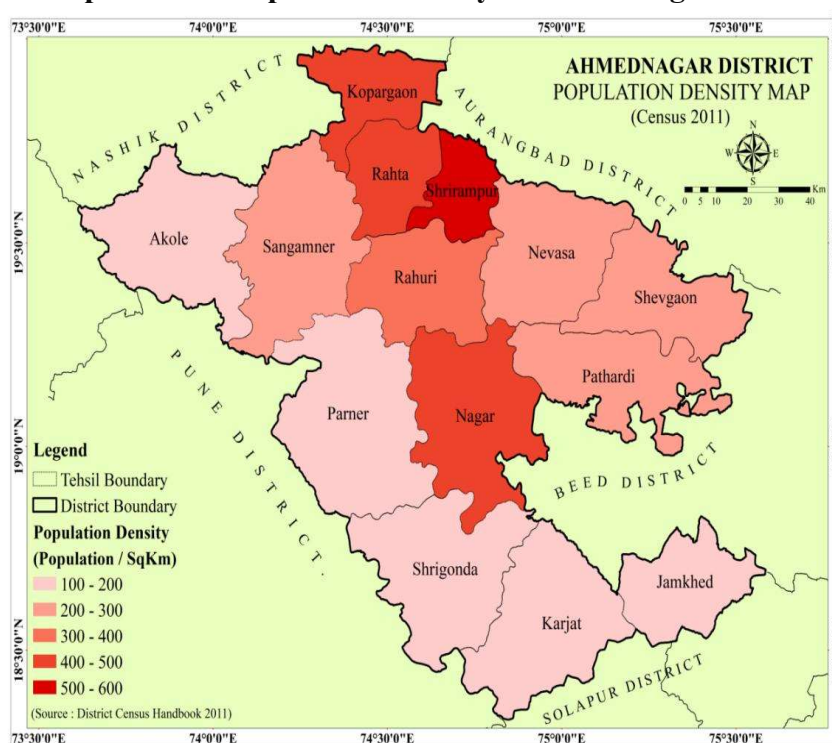
$$\text{Density of Population} = \frac{\text{Population}}{\text{Area}}$$

For example, area of Region X is 100 sq km and the population is 1,50,000 persons. The density of population is calculated as:  $1,50,000 \text{ Density } 100 = 1,500 \text{ person/sq km}$ .<sup>11</sup> The initial provisional data released by census India 2011, shows that density of Ahmednagar district for 2011 is 266 people per sq. km. In 2001, Ahmednagar district density was at 237 people per sq. km. Ahmednagar district administers 17,048 square kilometers of areas. (Refer Table 1.3).

**Table 1.3 - Tehsil -wise Population Density in District**

Sr.	Tehsil	1991	2001	2011
1	Ahmednagar	307	370	426
2	Parner	114	132	142
3	Pathardi	144	162	237
4	Karjat	124	136	156
5	Jamkhed	135	147	181
6	Shrigonda	145	165	197
7	Shrirampur	422	446	505
8	Shevgaon	156	187	238
9	Newasa	212	253	266
10	Rahuri	247	266	321
11	Sangamner	210	265	287
12	Akole	137	170	194
13	Kopargaon	323	362	418
14	Rahata	----	414	421
<b>Total</b>		<b>198</b>	<b>240</b>	<b>266</b>

**Map No. 1.3 - Population Density of Ahmednagar District**



## Conclusions

Family planning is the spacing or preventing the birth of children. Access to family planning services is a significant factor in limiting population growth and improving women's health. Propaganda, free availability of contraceptives and tax disincentives for large families are some of the measures which can help population control. In this paper we see about how population is rapidly increasing, population distribution. In upcoming year population distribution will increase rapidly. In Ahmednagar district where large population are there, If they makes law like china then they will control population and population density. Otherwise in future large population tehsils will face a many problem related to place, economy etc, due to population. We see in figures how population density is increase mostly in district. Population distribution is uneven in the district because of some factors like climate, Soils, altitude and latitude.

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