



## **Population Density: A Case Study of Jalna District:**

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### **INTRODUCTION:**

Population is one of the important phenomenon for all round development of human being as well as use of natural resources in word. The term density of population refers to a ratio between population and land area. Thus, it is a measure of the degree of population concentration. Generally, it is expressed in terms of number of persons per unit of area. However, the density of population is expressed in different ways to understand the population resource relationship. These ratios have been designated as arithmetic density, physiological density, nutrition density, agricultural density and economic density. However, most of these ratios suffer from certain, handicaps, particularly when an international comparison is sought for.

Land and people constitute two vital elements of an area. Hence, the ratio between the two is of fundamental importance in all population studies. Arithmetic density is a ratio between total population and total area and is expressed in terms of persons per square mile or kilometer of the area. The data for such a calculation are readily available for most parts of the world. Hence, such a ratio is frequently employed by geographers and other social scientists. It reveals simple man-land relationships. However, it cannot be used as a measure of population pressure on land.

The pattern of population density is influenced by the physical conditions, such as, nature and degree of fertility of the soil, the nature of surface, climatic conditions and spatial relations. Changes in the density of population are influenced by variations in birth and death rates in different areas and variations in volume and nature of migrations between the areas.



## STUDY AREA:

For the study Jalna district has been selected. It is located between  $19^{\circ}15'$  and  $20^{\circ}32'$  North latitudes and  $75^{\circ}36'$  to  $76^{\circ}45'$  east longitudes. The north-south extension of Jalna district is 150 Kms and east-west stretch of the district is 110 kilometers. Jalna district has a significant location on Deccan plateau. Except Ajanta and Satamala range and river basins, majority part of the district comes under plateau region. The region has major portion under flat topography, hence it supports high concentration of population.

Jalna district comprising 8 tahsils, 4 sub-divisions and eight panchayat samities. The geographical area of Jalna district is 7727 Sq. KM. According to Census-2011, there are 4 cities, 970 villages and 781 grampanchayats Jalna district. According to 2011 census, the total population of Jalna district has 19,59,046. Out of this total population, the men population were 10,11,473, whereas women population were 9,47,573. Sex ratio in district is 937.

According to 2011 census, it has been observed that there is a considerable difference between rural and urban population. Out of total population about 80.73% population lives in rural area on the other hand only 19.26% population lives in urban area. The 2011 census shows about 71.09% literacy rate in the district Out of this, male literacy was 83.93% and for women it was 57.50%. Out of the total rural population only 71.09% population was found literate whereas it was 84.04% in urban area.

## OBJECTIVES:

- 1) To examine the population density in Jalna district.
- 2) To Study the tahsilwise variation in population density in Jalna district.
- 3) To compare the total and SC population density.

## DATABASE & METHODOLOGY:

For the present study only secondary data has been considered. The census data of 1981 and 2011 was used. The information regarding district has been collected from the website of Jalna district. Population relevant statistics of Jalna district was collected from Government Gazetteer of the district. The help of District Statistical Office was taken in order to collect the data. To include the tahsilwise data regarding literacy, occupational structure, population growth, Annual District Statistic Book has been used.

**ANALYSIS:**

Population density of the Jalna district has been calculated for the general and SC population and has been depicted in table 1. For this purpose geographical area, total population, SC population has been considered. Population density formula has been applied to calculated population. The results is given in table1.

Table 1  
**Population Density in Jalna District  
(Census 1981 to 2011)**

| Sr. No. | Census | Geographical Area in Sq. Km. | Population |        | Density Persons /Sq. Km. |    |
|---------|--------|------------------------------|------------|--------|--------------------------|----|
|         |        |                              | Total      | SC     | Total                    | SC |
| 1       | 1981   | 7726                         | 1030178    | 67634  | 133                      | 9  |
| 2       | 1991   | 7726                         | 1364425    | 176452 | 177                      | 23 |
| 3       | 2001   | 7726                         | 1612980    | 181017 | 209                      | 23 |
| 4       | 2011   | 7726                         | 1959046    | 272266 | 254                      | 35 |

Source: District Census Handbook 1991, 2001 & 2011.

In the decade 1981, SC population density was 9 persons per sq. Km. and it increased by 3.4 times upto 2011 census. The density of the SC population was 23 persons per sq. km. in 1991, 23 persons per sq.km. in 2001 and recently means year 2011 recorded density of 35 persons per sq. km.

Total population density of the district reveals that, it has lower growth rate regarding density. The difference between 1981 to 1991 is higher in compare to other decades. During this decade, new castes were added to SC category and the separation of district also took place. It clearly indicates that, SC population density has increased to great extent in comparison to total population.

**Tahsil-wise Density of Scheduled Caste Population in Jalna District: (Census 2011)**

Table 2 shows the tahsil-wise geographical area, total population, general density and scheduled caste density in Jalna district based on the census of 2011.

Table 2

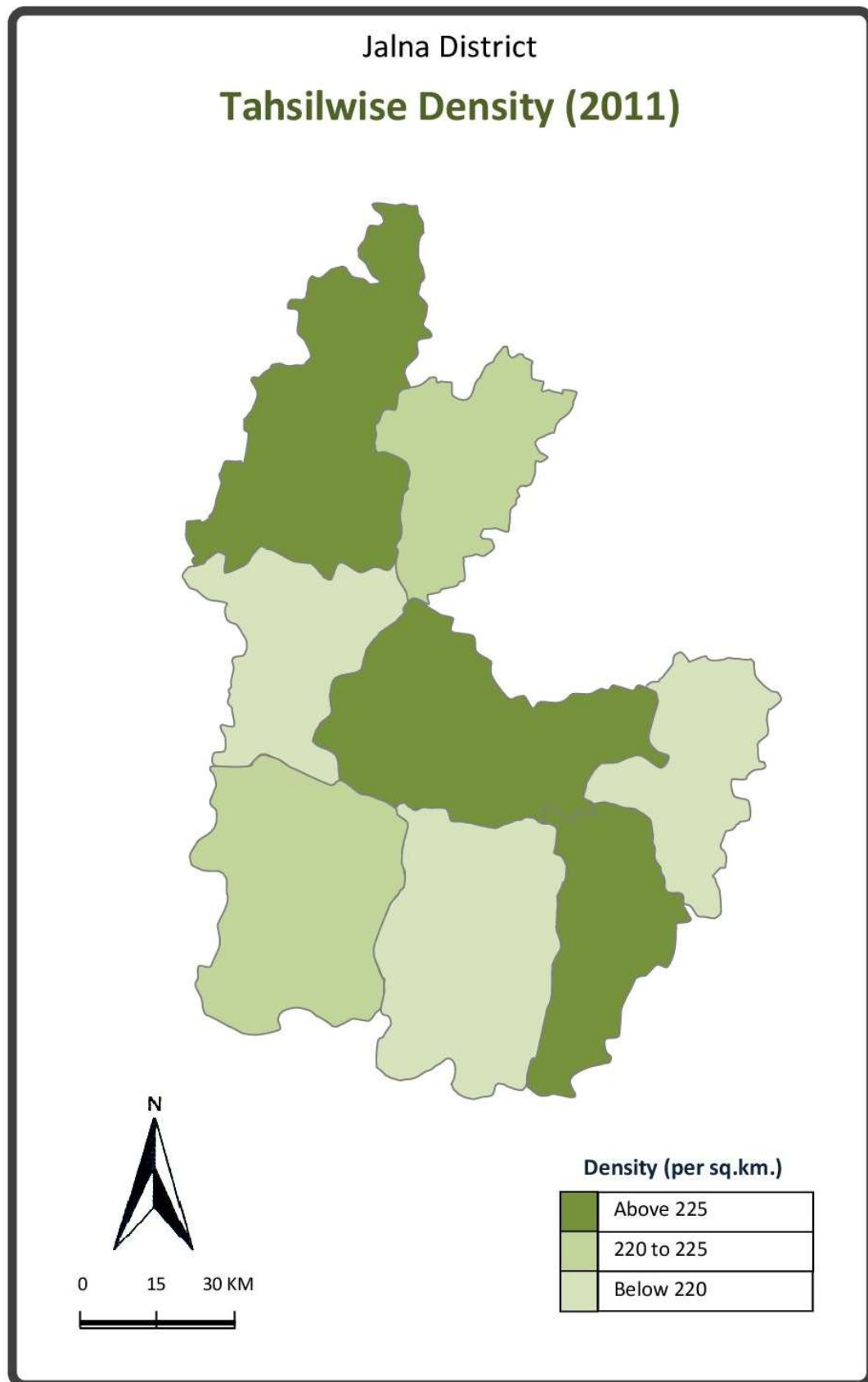
**Tahsilwise Density of Scheduled Caste Population in Jalna District  
(Census 2011)**

| Tahsil         | Area in Sq. Km. | Density per Sq. Km. |               |
|----------------|-----------------|---------------------|---------------|
|                |                 | Total Population    | SC Population |
| Ambad          | 1157            | 221                 | 27            |
| Bhokardan      | 1307            | 238                 | 31            |
| Jalna          | 1147            | 453                 | 64            |
| Partur         | 754             | 236                 | 30            |
| Jafrabad       | 727             | 224                 | 39            |
| Badnapur       | 768             | 200                 | 30            |
| Mantha         | 777             | 215                 | 34            |
| Ghansawangi    | 1088            | 194                 | 26            |
| Jalna District | 7726            | 254                 | 35            |

Source: Jalna District Socio-Economic Abstract, 2011.

Table 2 reveals that, notable density variation has been observed in the district. The district has total geographical area of 7726 sq.km. Highest total population density and SC population density is observed for Jalna tahsil, i.e. 453 & 64 persons per sq. km. respectively. Lowest total population density and SC population density has been observed in Ghansawangi tahsil, i.e. 194 and 26 persons per sq. km. respectively. Below 220 density of total population was observed from Badnapur, Ghansawangi and Mantha tahsil whereas 220 to 250 density of SC population was observed from, Ambad, Bhokardan, Partur and Jafrabad tahsil.

Above 250 density of total population was observed from Jalna tahsil. Regarding SC population density, below 30 population density was observed from Ambad (27), Partur (30), Badnapur (30) and Ghansawangi (26) tahsil whereas 30 to 40 density of SC population was observed from, Bhokardan (31), Jafrabad (39) and Mantha (34) tahsil. Above 40 density of SC population was observed from Jalna (64) tahsil of the district.





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