

Geographical Analysis of Intensity of Rural Settlements in Aurangabad District of Maharashtra State

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Abstract

The origin of human habitation is from rural areas. According to Paul (2022), “Rural settlements are the spatial carriers of rural multifunctionality and various problems related to living conditions are the main manifestations and causes of unbalanced and inadequate rural development”.

The intensity of rural settlements is higher in areas where infrastructure is developed. Also, in the rural areas where the intensity is high, agriculture and ancillary businesses are carried out on a large scale.

In the present research paper intensity of rural settlements in Aurangabad district has been studied.

Keywords

Intensity, Rural Settlement, Household, Tehsil

Introduction

Rural settlement density is the ratio of rural settlements in any given area to the number of households in that settlement. It helps to understand whether the houses are dense or sparse and how they are distributed compared to the buildings in that area. Intensification of rural settlements is more visible in areas with infrastructure development.

Aurangabad District is a major district of Marathwada Division. More than 60% of the settlements in the district are rural and in recent years the settlements in the rural areas are migrating to the urban areas. In the present research paper, the density of rural settlements in Aurangabad district has been studied tehsil wise.

Objectives

Main Objectives of present research paper as follows

- 1) To study the distribution of rural settlement in Aurangabad district
- 2) To study the intensity of rural settlement in Aurangabad district

Data Source & Methodology

Present discussion is based on the secondary data. Data collected from Census Report Aurangabad District (2001 and 2011) and Socioeconomic Review of Aurangabad District (2020).

Intensity of rural settlement is calculated by using following formula suggested by Debouverie's (1943)

$$X = I \times \frac{H}{L}$$

X- Intensity of Rural Settlement

I – Constant Value (0.25)

H – Number of Households in Tehsil

L – Number of Rural Settlements in Tehsil

Distribution of rural settlements and intensity is shown in map of the district. Present discussion is based on the census year data 2001 and 2011.

Study Area

Aurangabad district is lies in between 19⁰23'43" N to 20⁰39'36" N latitude and 74⁰36'46" E to 75⁰57'03" E longitudes. District consists total 9 tehsils with total population of the district is 3701282, where as 1924469 are male and 1776813 are female according to the year 2011 census.

District is abounded with Jalgaon district on north, Jalana district towards east, Beed district on southeast, Ahmadnagar district on south and Nashik district is located towards west of the study region.

Distribution of Rural Settlements in Aurangabad District

There are total 1344 rural settlements observed in the year 2001 and 28 rural settlements growth found in 2011 and this year total rural settlement is found 1372. But this growth is not uniform in all tehsil.

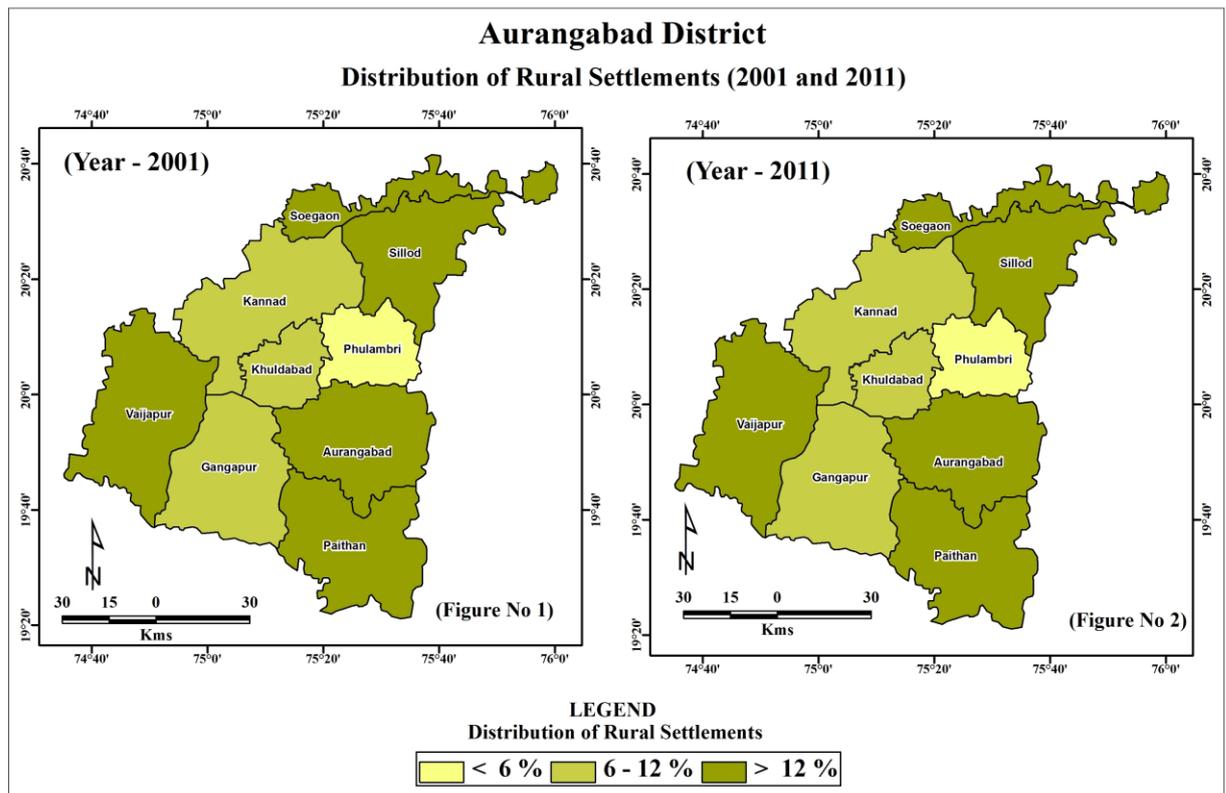
Tehsil wise distribution of rural settlements in the year 2001 and 2011 is shown in table no. 1

Table No. 1

Aurangabad District – Distribution of Rural Settlements (2001 – 2011)

Tehsils	Number of Rural Settlements (2001)	%	Number of Rural Settlements (2011)	%
Kannad	201	14.96	212	15.45
Soygaon	83	6.18	85	6.20
Sillod	131	9.75	132	9.62
Phulambri	88	6.55	92	6.71
Aurangabad	187	13.91	190	13.85
Khultabad	76	5.65	77	5.61
Vaijapur	165	12.28	167	12.17
Gangapur	225	16.74	226	16.47
Paithan	188	13.99	191	13.92
Total	1344	100%	1372	100%

Source – District Census Handbook, Aurangabad District (2001 and 2011)



Gangapur tehsil has found 225 rural settlements in 2001 and 226 in 2011. One rural settlement is increased during decade. Out of total rural settlement more than 16% are concentrated in Gangapur tehsil. The industrial sector is developing in this taluk and the number of rural settlements in this tehsil has increased for the purpose of employment.

In the year 2001, Gangapur (16.74%), Kannad (14.96%), Paithan (13.99%), Aurangabad (13.91%) and Vaijapur (12.28%) tehsils distributed more than 10% of the total population in the district. Whereas in other tehsils this distribution was between 5 to 10%. Khultabad (5.65%) taluk had practically few rural settlements.

In the year 2011, the distribution of rural settlements in the district was almost the same as in 2001. During this period also highest distribution is found in Gangapur (16.47%) tehsil. Then followed by Kannad (15.45%), Paithan (13.92%), Aurangabad (13.85%), and Vaijaur (12.17%) tehsils with more than 10% distribution. In each of these tehsils, the number of rural settlements has increased in 2011 as compared to 2001. In other tehsils of the district, the distribution of rural population in the year 2011 is 5 to 10% and during this period also Khultabad (5.61%) tehsil has the lowest distribution. In Khultabad tehsil, only one settlement has increased in a decade.

Intensity of Rural Settlements

Tehsil wise Intensity index of rural population in the year 2001 and 2011 is presented in table no. 2

Table No 2
Aurangabad District – Intensity of Rural Settlements (2001-2011)

Tehsils	Intensity Index by Debouverie's (1943)		
	2001	2011	Change
Kannad	59.58	70.38	10.79
Soygaon	53.05	69.31	16.26
Sillod	85.95	112.77	26.82
Phulambri	67.64	85.73	18.09
Aurangabad	68.67	73.86	5.19
Khultabad	52.87	65.47	12.60
Vaijapur	64.75	84.09	19.35
Gangapur	56.26	58.63	2.37
Paithan	65.91	80.02	14.11
Total District	64.12	76.70	12.58

Source: - Calculated by Author

Intensity of rural settlements is divided into three categories, index below 60 is considered as low intensity, index in between 60 to 80 as moderate and index above 80 as high intensity of rural settlements.

Intensity index of total district in 2001 is 64.12 and in the year 2011 it is 76.70. It means the overall intensity of rural settlements in the district is moderate and the index is increased in 2011 but no major change is occurred during 2001 to 2011.

High Intensity of Rural Settlements

In the year 2001 only Sillod (85.95) tehsil recorded highest index more than 80. Intensity of rural settlements is higher because numbers of households are higher compare to the number of total villages. The structure of the houses in this tehsil is close and most of the houses in the village are dense.

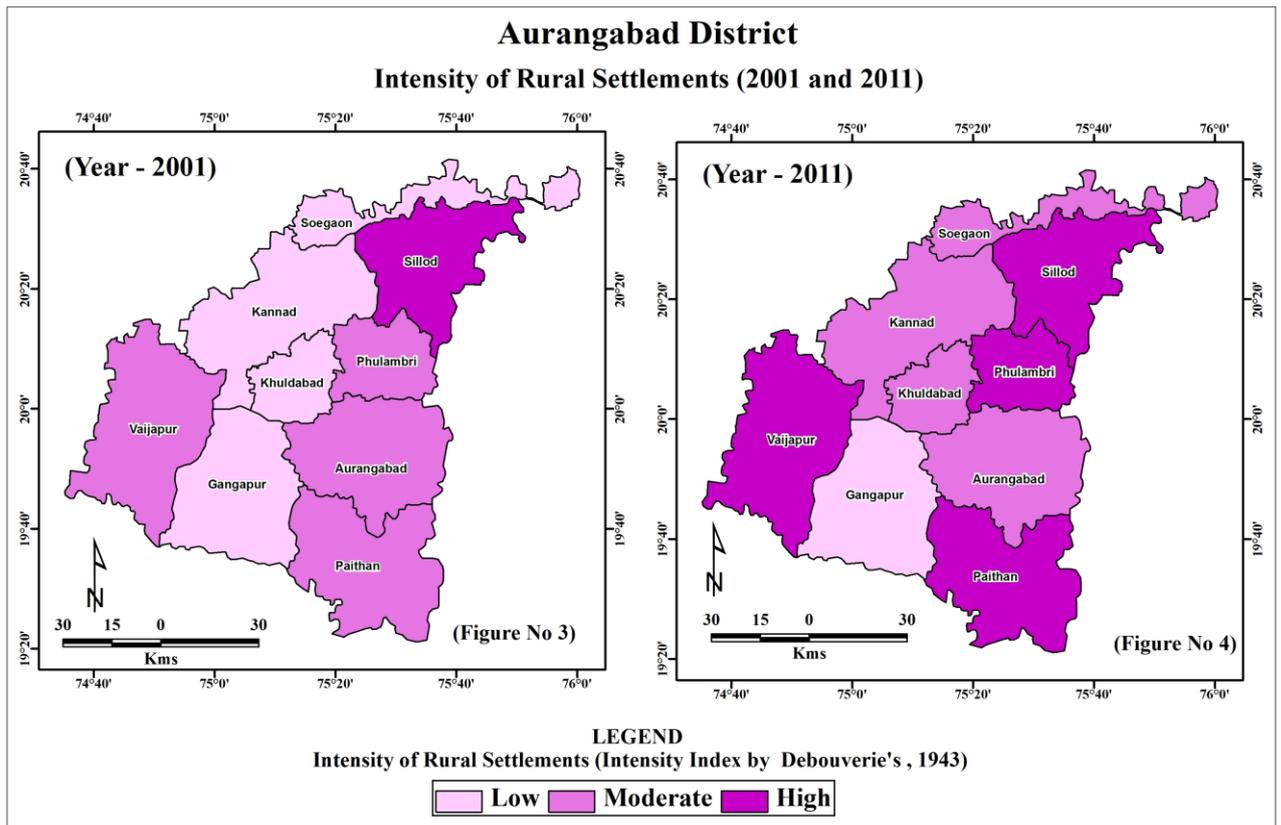
In the year 2011, this index is more than 80 in Sillod (112.77), Phulambri (85.73), Vaijapur (84.09) and Paithan (80.02) tehsils. Phulambri tehsil has an entirely rural population with less rural settlements and higher housing density. Therefore, rural settlements are concentrated in this tehsil. Paithan tehsil has the highest number of houses

in the rural areas of the district. As per year 2011 there are about 61136 houses in Paithan tehsil in rural settlement. So the population is also more. The same situation is to some extent in Vaijapur tehsil and therefore the density of settlements in this area is more. Agricultural businesses in rural areas are more in this tehsil.

Moderate Intensity of Rural Settlements

In the year 2001 Aurangabad (68.67), Phulambri (67.64), Paithan (65.91) and Vaijapur (64.75) tehsil found the index in between 60 to 80. The intensity of rural settlements in these tehsils is moderate.

In 2011 Aurangabad (73.86), Kannad (70.38), Soygaon (69.31) and Khultabad (65.47) tehsil recorded moderate intensity. Kannad, Soyagaon and Khultabad tehsil was low in 2001 and little development is found in 2011 Soygaon tehsil has more forests in the district and the natural structure is hilly. In this tehsil, the population is concentrated in a specific area. Also, although some settlements are at a distance, the houses in them are densely and close together. Therefore, the density of settlements in the year 2011 is found to be moderate.



Low Intensity of Rural Settlements

In the year 2001 Kannad (59.58), Gangapur (56.26), Soygaon (53.05) and Khultabad (52.87) tehsil found low intensity. In Khultabad tehsil, both the number of rural settlements and the number of households decreased in 2001. Also the settlements and thattel houses are scattered. Hence the intensity is found to be lowest.

In the year 2011 only Gangapur tehsil recorded lowest intensity of rural settlement. The index of this tehsil is 58.63 and it is increased than 2001 but still having lowest intensity. Gangapur tehsil has the highest number of rural settlements but in almost every settlement the houses are far apart and the structure of the houses is irregular. Also in this tehsil there are very few agricultural businesses. Primary occupation is low as industrial development is more in this area. Therefore, despite the fact that there are more settlements in this taluk, their intensity is the lowest in the district.

Change in Intensity

There have been positive changes in the density of rural settlements in Aurangabad district in all the tehsils. Vaihapur, Phulambri, Soygaon and Paithan tehsils had moderate

rural settlement intensity in 2001. So in 2011 it appeared high. The change in this tehsil was the biggest in the district.

In Gangapur Tehsil, the density of rural settlements is low in both periods. Although the rural settlements are the highest in this area, the intensity is low because the settlements are far apart and the density of houses in each settlement is low.

In Soygaon Tehsil, the population was low in 2001, but in 2011 it has become moderate. In other tehsils the intensity index has increased but there has been no significant development.

Conclusions and Suggestions

Aurangabad is known as the industrial district of Maharashtra. Raw materials are supplied to industries from the rural areas of the district. Therefore, it is important to study the rural settlements in this district. In the district, the number of rural settlements has increased in 2011 compared to the year 2001, so the intensity has also increased.

The increase in the intensity of rural settlements is satisfactory, but the increase is uneven. Also, this increase has increased only in certain areas of the district. Khultabad Tehsil of the district has the lowest number of rural settlements and houses. Also the density of settlements is also less. Khultabad tehsil is an underdeveloped tehsil in the district and this has affected the density of settlements. Gangapur tehsil has the highest number of rural

settlements in both decades, but the intensity is the lowest. Industrialization has increased in Gangapur Tehsil in the past few years. Rural settlements in this tehsil are more but far apart. Also, the income of agriculture has decreased. Therefore, the density of rural settlements is low.

As Aurangabad district falls in the rain shadow region, most of the agriculture is dry land. Therefore, agricultural production is relatively low. Lakes, lakes and other reservoirs in the district need to be widened and deepened. It is also necessary to irrigate the land by eradicating the fields, as it will increase the agricultural production and develop the rural settlements. It is necessary to develop infrastructure services in Gangapur, Khultabad tehsil. Also, it is necessary to promote and encourage the additional agricultural businesses. Therefore, there will be equal development in the district and the density of settlements will not be seen less and less. For the development of the rural areas in the district, the rural settlements must be united. If there are group-wise houses in every settlement, settlement density will increase and the settlements will develop.

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