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**SPATIAL PATTERN AND VARIATION OF RURAL POPULATION
DENSITIES IN SOUTH KONKAN REGION OF MAHARASHTRA:
A GEOGRAPHICAL PERSPECTIVE**



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ABSTRACT

In the present research paper an attempt has been made to highlight rural population scene of the South Konkan Region of Maharashtra from the view point of spatial perspective. Tehsil is selected as basic unit of investigation. The period selected for analysis of data is 1981-2011. For the analysis of rural population data is converted into density that is population density persons per Sq.Km of rural area which is calculate by dividing total rural area to the total rural population .



KEYWORDS : *population Density, Spatial Pattern, Variation.*

1.0 INTRODUCTION

The analysis of the population distribution and density is fundamental for understanding the population geography of any area. The population distribution means the spatial arrangement of people in a region, which mainly based on the aggregate of investigations about the people within small areal units of a region. Population density is another significant measure of population studies. This is a ratio between population and land. It denotes degree of population concentration and is generally expressed in terms of persons per unit area. There are various types of densities. All these densities help in the diversity of man's distribution in space. The regional variation in the distribution and density of population is largely affected by physical environment, economic condition, cultural patterns and past history of area.

Human settlement has until recently been mostly rural. In the developing regions of the world, a clear majority of the population resides in rural areas. So far south Konkan is concerned it is clearly dominated by rural population. Hence in the present research paper an attempt has been made to highlight rural population scene from view point spatial perspective.

2.0 THE STUDY REGION

The South Konkan region is a part of the Konkan division of the Maharashtra state. The study region includes Ratnagiri and Sindhudurg districts of South Konkan only. It extends from 150 36' north to 180 04' north latitude and 730 02' east to 740 36' east longitude. Geographically the South Konkan region has considerable variation in relief. Administratively it is divided in to 17 tahsils. The study region covers an area of 13415 Km² with 2464720 populations according to 2011 Census. The study region is industrially backward. About 32.93 per cent of the geographical area of the study region is under cultivation. Forest covered 3.38 per cent area in 2011, while uncultivable land accounted for 29.33 per cent (2011) of the total area. 12.83 per cent land remains as follows. The study region's economy is predominantly agrarian. Nearly 43.05 per cent of working population is directly engaged in agricultural activities.

3.0 OBJECTIVES

The main objectives of the research paper are :

- 1.To find out spatial pattern of rural population in the study region.
- 2.To analyse variation of rural population densities during the period of 1981-2011.

4.0 RESEARCH METHODOLOGY EMPLOYED

The entire study is based on secondary data which is collected from Census handbooks of 1981,1991,2001 and 2011. Beside above few data and information are taken from the certain dissertations. Books and journals that are mentioned under the heading of 'Reference'. In the present research paper period selected for study is 30 years. Tehsil is taken as basic unit of investigation. Rural population density is calculated by using the following equation:

$$\text{Density of Rural Population (Persons per Sq. Km.)} = \frac{\text{Rural Population}}{\text{Rural Area in Sq.Km}}$$

Rural population density is calculated for each tehsil of the study region. Computed data is tabulated and presented in the form choropleth map. Anaysis is done with the help map and empirical Knowledge.

5.0 RURAL POPULATION IN SOUTH KONKAN REGION

5.1 DITRIBUTION OF RURAL POPULATION

. So far south Konkan is concerned it is clearly domineered by rural population. Table 1 clearly revealed that in 1981 out of the total population 92.08 Per Cent population was rural. While according to 2011 Census 84.96 per cent of the total population is rural living in 2286 villages of different sizes. Table 1 also depicts that percentage of rural population is continuously declining during the period of 1981- 2011 in the South Konkan of Maharashtra.

5.2 RURAL POPULATION DENSITY

Rural population density assessed in relation to rural population and rural area of the study region. The rural population of density of South Konkan region has been noted 149 persons per Km² in 1981, 163 in 1991, 172 in 2001 and 17 in 2011.

1981

In the 1981 Census , the rural density at the tahsil level was not uniform. High rural population density (above 160 persons per Km²) was among five tahsils viz. Dapoli (171), Guhagar (173), Chiplun (165), Ratnagiri (179) and Vengurla (233) due to development in agro based industries and fruit processing ,well transport network, availability of medical facilities etc.

Table 1
Rural Population of the South Konkan Region of Maharashtra (1981-2011)

Year	Percentage of Rural Population to Total Population	Increase in Rural Population (in %)
1981	92.08	6.42
1991	91.53	9.40
2001	91.22	5.34
2011	84.96	- 8.60

Source : i) District Census Handbook of Ratnagiri & Sindhudurg 1981, 1991
 ii) District Census C. D. of Ratnagiri & Sindhudurg 2001, 2011.
 iii) Compiled by Authors (2015).

Moderate rural population density (140-160) was found among 8 tahsils viz Mandangad, (149), Khed (156), Sangameshwar (148), Devgad (149), Kankavli (157), Malwan 9153), Kudal (158) and Sawantwadi (150) . While low rural population density (below 140 persons per Km²) was found in. Lanja (131), Rajapur (125) and Vaibhavwadi (115) tahsils due to hilly region, undulating land forms, steep slope, unfertile soil, less development in agriculture and agro based industries, high rainfall in rainy season scarcity of water in summer season, less development in transportation.

1991

High rural population density (above 170 persons per Km²) was found in Guhagar (184), Chiplun (182), Ratnagiri (209), Vengurla (272) and Dapoli (185) tahsils. Moderate rural population density (150-170 persons per Km²) has been found in Mandangad (154), Khed (167), Sangameshwar (165), Kankavli (168), Kudal (162), Sawantwadi (166), Devgad (153) and Malwan (161) tahsils. Low rural population density (Below 150 persons per Km²) has been found in Lanja (140), Rajapur (143), Vaibhavwadi (117) and Dodamarg (98) tahsils.

2001

High rural population density (above 180 persons per Km²) is found in five tahsils viz. Dapoli (207), Guhagar (217), Chiplun (204), Ratnagiri (239) and Vengurla (274) . Moderate rural population density (160-180 persons per Km²) is found in seven tahsils viz Mandangad (165), Khed (176), Sangameshwar (172), Devgad (161), Malwan (161), Kankavli (160) and Kudal (172).

2011

High rural population density (above 170 persons per Km²) is found in Guhagar (189), Chiplun (193), Ratnagiri (229), Kudal (173) and Vengurla (265) tahsils. Moderate rural population density (150-170 persons per Km²) is found in Dapoli (168), Khed (161), Sangameshwar (148), Devgad (155) and Malwan tahsils. Low rural population density (below 150 persons per Km²) is found in Lanja (130), Rajapur (131), Vaibhavwadi (103), Kankavali (144), Sawantwadi (135) and Dodamarg (99) tahsils.

5.3 DECENNIAL VARIATION OF RURAL POPULATION DENSITY**1981-1991**

The decade 1981-1991 has registered an increase of 14 persons in the average rural population density in the study region. In this decade the variation of rural population density has been ranging from 2 to 39 persons in the study region. Ratnagiri (30) and Vengurla (39) tahsils were huge increase in their densities. Moderate (10-20 persons) variation of rural population density was recorded in Dapoli (14), Khed (11), Guhagar (11), Chiplun (17), Sangameshwar (17), Rajapur (18), Kankavli (11), Sawantwadi (16) and Dodamarg (11) tahsils. Low (Below 10 persons) variation of rural population density was registered in Mandangad (5), Lanja (9), Devgad (4), Vaibhavwadi (2), Malwan (8) and Kudal (4) tahsils in the study region.

1991-2001

The decade 1991-2001 has registered an increase of 9 persons in the average of rural population density in the study region. In this decade the variation of rural population density has been ranging from -14 to 33 persons in the study region. High (above 15 persons) variation of rural population density was recorded in Guhagar (33), Dapoli (22), Chiplun (22) and Ratnagiri (30) tahsils. Moderate (5 to 15 persons) variation of rural population density was registered in Mandangad (11), Khed (9),

Table 2
Rural Population Density in South Konkan Region (1981 – 2011)

Sr. No.	Tahsil	Rural Population Density (Person per Km ²)			
		1981	1991	2001	2011
1	Mandangad	149	154	165	145
2	Dapoli	171	185	207	168
3	Khed	156	167	176	161
4	Chiplun	165	182	204	193
5	Guhagar	173	184	217	189
6	Ratnagiri	179	209	239	229
7	Sangameshwar	148	165	172	148
8	Lanja	131	140	141	130
9	Rajapur	125	143	146	131
10	Devgad	149	153	161	155
11	Vaibhavwadi	115	117	113	103
12	Kankavli	157	168	160	144
13	Malwan	153	161	161	153
14	Vengurla	233	272	274	265
15	Kudal	158	162	172	173
16	Sawantwadi	150	166	152	135
17	Dodamarg	87	98	101	99
	South Konkan	149	163	172	157

Source : i) District Census Handbook of Ratnagiri & Sindhudurg 1981, 1991
ii) District Census C. D. of Ratnagiri & Sindhudurg 2001, 2011.
iii) Compiled by Author (2015)

Sangameshwar (7), Devgad (8) and Kudal (10). Low (0 to 5 persons) variation of rural population density was recorded in Lanja (1), Rajapur (3), Malwan (0), Vengurla (2) and Dodamarg (3) tahsils, while very low (below 0 persons) variation of rural population density was recorded in Vaibhavwadi (-4), Kankavli (-8) and Sawantwadi (-14) tahsils.

2001-2011

The decade 2001-2011 has registered decrease of 15 persons in the average of rural population density in the study region. In this decade the variation of rural population density has been ranging from -39 to 1 person in the study region. Except Kudal (1) tahsil remaining all tahsil has been registered negative growth of variation of rural population density in the study region. Overall population of South Konkan region is constantly changing. Thus population changes represent people's adjustment to economic development of education facilities and outmigration occurs (Table 3).

1981-2011

The three decades 1981-2011 has registered an increase of 8 persons in the average rural population density in the study region. In these three decades the variation of rural population density has been ranging from -15 to 50 persons in the study region. Chiplun (28), Ratnagiri (50) and Vengurla (32) tahsils were huge increase in their densities.

Moderate (0-20 persons) variation of rural population density has been recorded in Khed (5), Guhagar (16), Rajapur (6), Devgad (6), Malwan (0) and Kudal (15) tahsils and low (Below 0 persons) variation of rural population density was registered in Mandangad (-4), Dapoli (-3), Lanja (-1), Vaibhavwadi (-12), Kankavli (-13) and Sawantwadi (-15) tahsils in the study region. (Table 3)

Table 3
The South Konkan Region
Decennial Variation of Rural Population Density (1981 – 2011)

Sr. No.	Tahsil	1981-1991	1991-2001	2001-2011	1981-2011
1	Mandangad	5	11	- 20	- 4
2	Dapoli	14	22	- 39	- 3
3	Khed	11	9	- 15	5
4	Chiplun	17	22	- 11	28
5	Guhagar	11	33	- 28	16
6	Ratnagiri	30	30	- 10	50
7	Sangameshwar	17	7	- 24	0
8	Lanja	9	1	- 11	- 1
9	Rajapur	180	3	- 15	6
10	Devgad	4	8	- 6	6
11	Vaibhavwadi	2	- 4	- 10	- 12
12	Kankavli	11	- 8	- 16	- 13
13	Malwan	8	0	- 8	0
14	Vengurla	39	2	- 18	32
15	Kudal	4	10	1	15
16	Sawantwadi	16	- 14	- 17	- 15
17	Dodamarg	11	3	- 2	12
	South Konkan	14	9	- 15	8

Source : i) District Census Handbook of Ratnagiri & Sindhudurg 1981, 1991
ii) District Census C. D. of Ratnagiri & Sindhudurg 2001, 2011.
iii) Compiled by Author (2015).

6.0 CONCLUDING REMARKS

South Konkan is dominated by rural population (84.96% as per Census 2011). High proportion of rural population (i.e. more than 90 per cent) was found in Mandangad, Devgad, Vaibhavwadi, Dodamarg, Khed, Guhagar, Sangameshwar and Rajapur, tahsils. While low proportion of rural population was (below 80 per cent) was found in Chiplun, Sawantwadi tahsils.

During the whole span 1981-2011 only marginal decrease in the ratio of rural population was recorded. i.e. from 92.08% in 1981 to 84.96% in 2011. Study clearly reveals the continuous persistence of a rural agrarian economy in the region.

REFERENCES

- 1.Chandana, R.C. and Sindhu, M.S. (1980), 'Introduction to Population Geography', Kalyani Publishers, New Delhi, P.17
- 2.Clarke, J. I. (1973), 'Population Geography', Pergamon Press, Oxford, Second Edition, PP.14-29.
- 3.Zelinsky, W. (1966), 'A Prologue to Population Geography', Englewood Cliff, Prentice Hall, P.1.
- 4.United Nations (1953), 'The Determinants and Consequences of Population Trends', Population Study No.17, New York, PP– 163-177.
- 5.Demko, G. J. etc. (1970), 'Population Geography : A Reader', McGraw Hill Book Company, New York, P.22.
- 6.Trewartha, G. T. (1953), 'A Case for Population Geography', A.A.A.G. Vol.43.2 PP 71-97.
- 7.Trewartha, G. T. (1969), 'A Geography of Population World Pattern', John Wiley and Sons, INC., P.72.

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