



POPULATION DENSITY OF SOUTH KONKAN REGION OF MAHARASHTRA: A GEOGRAPHICAL ANALYSIS

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INTRODUCTION:

Land and people constitute two vital elements of an area so that the ratio between the two is of fundamental consideration in all population studies⁶. The concept of density is the ratio between the number of people and the area of the region they live in⁷. In other words the relationship between people and land is usually expressed as a simple arithmetic ratio which divides total population by total area⁸. Such crude density ratio suffer from the obvious disadvantage of not taking into consideration variations in the quality of lands arises from different in climate, topography, minerals wealth, fertility of the soil and the like, nor do they take any account of differences in urbanization and industrialization⁹. Even so such a study of density always shows the direct relationship between man and area. In fact arithmetic density is essential in studying the pattern of population in an area, scholars like Trewartha, have strongly advocated arithmetic density¹⁰. Such ratio is frequently employed by geographers and other social scientists because of the easy availability of data and also because it is extremely useful in revealing simple man-land relationship.

ARITHMETIC DENSITY:

The most common type of population density is arithmetic density assessed in relation to total population and total area. ¹¹

The arithmetic density of South Konkan region has been noted 160 persons per Km² in 1981, 177 in 1991, 191 in 2001 and 184 in 2011.

Fig.1 and 2 shows that the arithmetic density at the tahsil level is not uniform. Vengurla tahsil recorded high density 261, 302, 274 persons/Km² in 1981, 1991 and 2001 respectively. Ratnagiri tahsil has recorded 341 persons/Km² in 2011 census period. Dapoli, Chiplun, Ratnagiri and Vengurla tahsils have recorded high population density in the study region. Guhagar tahsil also recorded high population density during 2001 census. In short, throughout the investigation period Chiplun and Ratnagiri tahsil was at leading position in population density. Marine fishery is important non agricultural economic activity, development of alphonso mango crop and processing

industries, development of agro based industries, considerable agriculture availability of market facility, transport network these factors are influence on the high density of the study region.

Table 1
Tahsilwise Population (Arithmetic) Density in South Konkan Region
(1981 – 2011)

Tahsil	Arithmetic Density (Persons per Km ²)			
	1981	1991	2001	2011
Mandangad	149	154	165	145
Dapoli	189	206	223	206
Khed	166	178	176	177
Chiplun	190	211	212	252
Guhagar	173	184	220	191
Ratnagiri	228	267	248	341
Sangameshwar	148	165	172	158
Lanja	131	140	155	146
Rajapur	132	150	146	139
Devgad	149	153	161	155
Vaibhavwadi	115	117	113	102
Kankavli	157	168	177	174
Malwan	178	188	161	184
Vengurla	261	302	274	310
Kudal	158	175	188	192
Sawantwadi	150	166	152	177
Dodamarg	87	98	101	99
South Konkan	160	177	191	184

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)

Mandangad, Khed, Guhagar, Sangameshwar, Devgad, Kankavali, Malwan, Kudal and Sawantwadi tahsils have recorded moderate arithmetic

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population density in 1981, 1991, 2001 and 2011 censuses. The economy of these tahsils were mainly depend on cultivation these tahsils are famous for cashew and mango crops and processing industries.

Dodamarg tahsil has recorded very low population density 87, 98, 101, 99 persons per Sq.Km. in 1981, 1991, 2001 and 2011 respectively. Lanja, Vaibhavwadi, Rajapur and Dodamarg tahsils have recorded very low population density in the study region. These tehsil located in the hill ranges of Western Ghats or Sahyadris having rigid topography, thick forest area, non availability of agricultural land, less irrigation development, negligible industrial development, unfavorable climate and heavy rainfall in rainy season but scarcity of water in summer season, lack of educational and medical facilities. All these factors were responsible for low population density in the study region.

According to 2011 census, population density of India was 382 persons/Km² and of that Maharashtra was 365 persons/Km² and the same time population density of Ratnagiri district was 196 and Sindhudurg district was 163 persons/Km² and population density of South Konkan region was 184 persons/Km² which was lower than those of national and state averages.

DECENNIAL VARIATION IN ARITHMETIC DENSITY:

1981-1991

As pointed out, the decade 1981-1991 has registered an increase of 17 persons in the average density of population in the study region. In this decade the variation in arithmetic density has been ranging from 2 to 41 persons in the study region. Ratnagiri (39) and Vengurla (41) tahsils were huge increase in their densities signifying that change in density was the product of growth of population which in itself was the function of both the population base and the growth rate since there was very little to difference in growth rate of population from tahsil to tahsil.

Moderate (12 to 22 persons) variation has been recorded in Dapoli (17), Khed (12), Chiplun (21), Sangameshwar (17), Rajapur (18), Kudal (17) and Sawantwadi (16) tahsils in the study region while low (below 12 persons) was recroded in Mandangad (5), Guhagar (11), Lanja (9), Devgad (4), Kankavli (11), Vaibhavwadi (2), Malwan(10) and Dodamarg (11) tahsils.

1991-2001

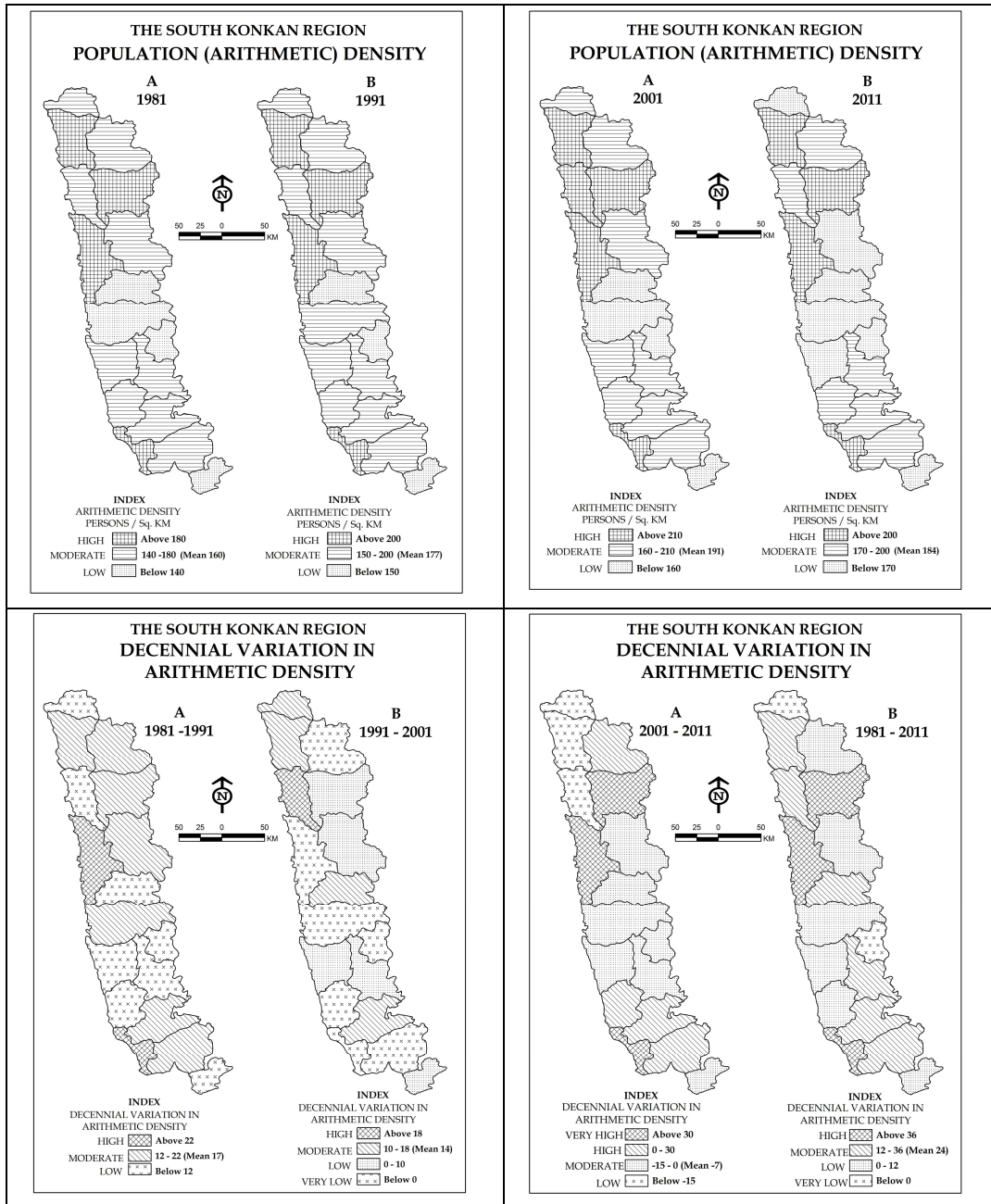
The decade 1991-2001 has registered an increase of 14 persons in the average density of population in the study region. Table 2 and Fig.3 B shows that high (36) variation of arithmetic density was recorded in Guhagar tahsil, while moderate (10-18 persons) variation of arithmetic density was registered in Mandangad (11), Dapoli (17), Lanja (15) and Kudal (13) tahsils in the study region.

Table 2
THE SOUTH KONKAN REGION
DECENNIAL VARIATION IN ARITHMETIC DENSITY
1981 – 2011

Tahsil	1981-1991	1991-2001	2001-2011	1981-2011
Mandangad	5	11	- 20	- 4
Dapoli	17	17	- 17	17
Khed	12	- 2	1	11
Chiplun	21	1	40	62
Guhagar	11	36	- 29	18
Ratnagiri	39	- 19	93	113
Sangameshwar	17	7	- 14	10
Lanja	9	15	- 9	15
Rajapur	18	- 4	- 7	7
Devgad	4	8	- 6	6
Vaibhavwadi	2	- 4	- 11	- 13
Kankavli	11	9	- 3	17
Malwan	10	- 27	23	6
Vengurla	41	- 28	36	49
Kudal	17	13	4	34
Sawantwadi	16	14	25	27
Dodamarg	11	3	- 2	12
South Konkan	17	14	- 7	24

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).

Low (0-10 persons) variation of arithmetic density was recorded in Chiplun (1), Sangameshwar (7), Devgad (8), Kankavli (9) and Dodamarg tahsils, while very low (below 0 persons) variation of arithmetic density has registered in Khed (-2), Ratnagiri (-19), Rajapur (-4), Vaibhavwadi (-4), Malwan (-27), Vengurla (-28) and Sawantwadi (-14) tahsils in the study region.



2001-2011

The decade 2001-2011 has been registered an increase of -7 persons in average density of population in the study region. Table 2 and Fig.3 A reveals that very high (above 30 persons) variation of arithmetic density was recorded in Chiplun (40), Ratnagiri (93) and Vengurla (36) tahsils; while high (0-30 persons) variation of arithmetic density was recorded in Khed (1), Malwan (23), Kudal (4) and Sawantwadi (25) tahsils comparison to the study region average.

Low (0-15 persons) variation of arithmetic density was registered in Sangameshwar (-14), Lanja (-9), Rajapur (-7), Devgad (-6), Kankavli (-3), Vaibhavwadi (-11) and Dodamarg (-2) tahsils, while very low (below -15 persons) variation of arithmetic density has recorded in Mandangad (-20), Dapoli (-17), Guhagar (-29) tahsils in the study region.

1981-2011

The three decades 1981-2011 has registered an increase of 24 persons in the average density of population in the study region. Table 2 shows that high (above 36 persons) variation of arithmetic density was recorded in Chiplun (62), Ratnagiri (113) and Vengurla (49) tahsils in the study region; while moderate (12 to 36 persons) variation of arithmetic density was registered in Dapoli (17), Guhagar (18), Lanja (15), Kankavli (17), Guhagar (18), Lanja (15), Kankavli (17), Kudal (34) and Sawantwadi (27) tahsils.

Low (0-12 persons) variation of arithmetic density was registered in Khed (11), Sangameshwar (10), Rajapur (7), Devgad (6), Malwan (6) and Dodamarg (12) tahsils; while very low (below 0 persons) variation arithmetic density was recorded in Mandangad (-4) and Vaibhavwadi (-13) tahsils in the study region.

CONCLUSION:

As the census 2011, the density of population in the region was 184 persons per Sq.Km. the range being between 341 persons and 102 persons per Sq.Km. Density of population was high (more than 200 persons per Sq.Km.) in Dapoli, Chiplun, Ratnagiri and Vengurla tahsils and Sangameshwar, Lanja, Rajapur, Devgad, Vaibhavwadi, Dodamarg and Mandangad tahsils, have comparatively low (less than 170 persons/Sq.Km.) and moderate (170 to 200 persons/Sq.Km.) in other parts of the region. During the four census years, in Dapoli, Chiplun, Ratnagiri tahsils of high density the ratio remained almost static. In Khed, Kankavli, Malwan, Kudal and Sawantwadi tahsils of moderate density the ratio remained almost static, while in Lanja, Vaibhavwadi and Dodamarg tahsils of low density the ratio remained almost static. But during four census years in Mandangad, Guhagar, Sangameshwar, Rajapur, Devgad tahsils have great fluctuation in respect of population ratio were seen.

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