

Population and Man-land Ratio in West Bengal

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Abstract

Density of population is a simple concept of relating population size to the land area with a view to assessing crudely the pressure of population upon the resources of the area. The analysis of population density hold's immense significance to the analysis of demographic character of an area. Density of population put pressure on resource base of a region. Land and people are the two vital element of an area. To measure the gravity of situation, which an area is facing, is calculated through various measures of densities (Table 01) which further open the path for the farmers to select which crops should be adopted for cultivation apart from their food crops.

Key-Words: Population, Density, Resource, Crude Density, Economic Density, Agricultural Density, Physiological Density, Net sown area.

Introduction:-

Man is concern with his use of natural resource such a land, water and others. Among resource human resources is the most important man is itself a creator a producer and consumer or destructor of resources. He put his physical and mental labour when he creates a resource and plays a

vital role in the development of the society. The use and misuse of land largely depend on their inhabitants. The prosperity of any region is the outcome of human capacity and capability to Utilize land resources for their advantage. In this light the study of population & man land ratio of West Bengal becomes relevant West Bengal is a agriculturally prosperous and densely populated state of India. Special distribution and density of population bear a close correlation with the capabilities of land resources. To evaluate the land resources of any particular region the study of Demographic of population and man land ratio.



Table No.: 1**DISTRICT – WISE CRUDE, ECONOMIC, AGRICULTURAL AND PHYSIOLOGICAL DENSITY OF WEST BENGAL.**

SL. No	Name of the District & State	Area in Km ²	Total Arable Land 2001	Total Cropped land in 2001	Population		Crude Density		Economic density	Agricultural density	Physiological density	
					1991	2001	1991	2001			2001	2001
1.	Darjeeling	3149	1603969	175453	129919	1605900	413	510	10.01	9.15	10.96	0.09
2.	Jalpaiguri	6227	370758	552962	2800543	3403204	450	547	9.17	6.15	9.27	0.10
3.	Cooch Bihar	3387	279170	496697	2171145	2478280	641	732	9.03	4.98	9.17	0.10
4.	North Dinajpur	3140	277703	512100	1897045	2441824	604	778	8.79	4.76	8.96	0.11
5.	South Dinajpur	2219	193402	300178	1230608	1502647	556	677	7.76	5.00	7.83	0.13
6.	Malda	3733	281528	444394	2637032	3290160	706	881	11.68	7.40	14.74	0.3
7.	Murshidabad	5324	409819	914586	4740149	5863717	890	1101	14.30	6.41	14.42	0.06
8.	Birbhum	4545	342002	533684	2555664	3012546	562	663	8.80	7.91	9.40	0.10
9.	Burdwan	7024	484370	874757	6050605	6919698	861	905	14.28	5.40	15.00	0.06
10.	Nadia	3927	312481	851759	3852097	4603756	981	1172	14.73	5.40	15.00	0.06
11.	North 24	4094	277234	579227	7281881	8930295	1779	2181	32.21	15.41	32.21	0.03

	Parganas											
12.	South 24 Pargans	9960	397805	543016	5715030	6909015	574	69411.36	11.36	12.72	18.09	0.05
13.	Hooghly	3149	229781	518916	4355230	5040047	1383	1601	21.93	9.71	22.31	0.04
14.	Howrah	1467	88552	167408	3729644	4274010	2542	2913	48.26	25.53	53.32	0.01
15.	Kolkata	185	-	-	4399819	4580544	23783	24764	-	-	-	-
16.	Bankura	6882	420849	539233	2805065	3191822	408	464	7.52	5.91	8.32	0.12
17.	Purulia	6259	434363	356235	224577	2535233	355	405	5.83	7.11	7.54	0.13
18.	Medinipur	14081	884328	1418210	8331912	9638473	592	685	18.89	6.79	11.20	0.08
West Bengal		88752	5839514	9778815	68077965	80221171	767	904	13.73	8.20	14.52	0.06

Sources: 1) Census of India (1991 – 2001) West Bengal.

2) Agricultural Census of West Bengal.

There are four types of density are examined:

1) Crude Density:

Crude density is calculated by dividing the total population with total area. In 1991 and 2001 the crude density at state level was 767 and 904 persons per km². Table 02 shows the district wise area, population and density of west engal. The districts of West Bengal have been categorized into five density classes and further they been grouped into three group of high, moderate, and low. The districts which were under high category of density in 1991 were Howrah, Hooghly, Kolkata, North 24 Paraganas & Nadia. In which density varies between 900 to more than 1100 persons per KM². In 2001 apart from these four districts Murshidabad also become the member of this group. Under the moderate group crude density (500-899 persorns / km²) in 1991 the districts of Cooch Behar, North and south Dinajpur, Maldah, Murshidabad, Birbhum, Burdwan, Medinipur and South 24 Parganes were included while in 2001 two districts namely Murshidabad and Burdwan of moderate classes of 1991 entered into high class density group of 2001. Darjeeling and Jalpaiguri of low density class of 1991 became member of moderate class in 2001. The district falling into low class density of 1991 were Darjeeling, Jalpaiguri, Purulia and Bankura but only Purulia and Bankura district remain in this class in 2001.

2) Economic Density:

Economic density is reflective factors to measure th pressure of population per unit area of agricultural land.

It is expressed as –

Economic Density = Total population / total Arable land.

Table 01 shows the different categories of densities.

The economic density at state level is 13.73 persons per km² Fig – 02 shows district wise economic density, which have been classed into four. Since Kolkata is a urban centre hence there is no piece of land is as arable land. There are only two districts namely Howrah and North 24 Parganas whose economic density is 48.26 and 32.21 persons per km² and so have been placed in high category, under moderate class category

of 10 – 30 persons per km² lies the districts of Derjeeling, Maldah, Murshidabad, Nadia, South 24 Parganas, Hooghly, Burdwan and Medinipur under low category of economic density. The district of Jalpaiguri Coochbehar North and South Dinajpur, Birbhum, Bankura and Purulia occupy the Place where density is less than 10 persons per km² in all this districts of low density class the capacity of on km² is to sustain just 10 persons Because of fact that major parts of these district are either plateau or undulating. The districts which are located in the alluvial tracts have comparatively better capacity to support the population.

3) Agricultural Density:

Agricultural density or man crop ratio is another method to measure the pressure of population on land which is calculated by dividing the total rural population with total cropped area (Net sown area plus area sown more than once). At state level agricultural density has been calculated as 8.20 persons per km² but greater variation is found at district level Fig – 03 & table – 01. Again, districts have been divided into there categories. Districts where less than 10 person per km² density is found have been categorised in this categories. All fourteen districts, except North and south 24 Pargonas, Howrah, and Kolkata are included. Under moderate category only North and South 24 Pargonas districts are included where per km² agricultural density is found to be 15.41 and 12.72 respectively. The districts Howrah has more than 25 persons per km² agricultural density. Kolkata is a urban centre where no agricultural density is found.

4) Physiological Density:

Physiological density shows the relationship between net sown area and population. In this density class net sown area and total population is considered. By this, we try to find out whether the share of net sown area is sufficient enough to feed the population dependent upon it this can be calculated in two ways a) population dependent upon per hectare of net sown area and b) Net sown area per head of total population, table 01 & fig – 04 shows that at state level 14.52 people are dependent upon I hectare of net sown area while only 0.06 hectare to I person of the state.

At district level one hectare of net sown area in Howrah supports 53 persons while only 0.01 hectare of NSA is available to one person. The pressure of population on one hectare of NSA is maximum in the district of Howrah followed by North 24 parganas, Hooghly, South 24 Parganas, Nadia, Maldah, Burdwan, Birbhum and Murshidabad. In all these districts pressure of population on one hectare of NSA range from 32 to 14 persons. In remaining district pressure of population on one hectare of NSA range from 32 to 14 persons. In remaining district pressure

of population range from 7 to 14 persons in no district in West Bengal where one persons has even one hectare of net sown area. The per head share of NSA in the districts of Purulia, Bankura, South Dinajpur and North Dinajpur are 0.13, 0.12, 0.12 and 0.11 hectare respectively.

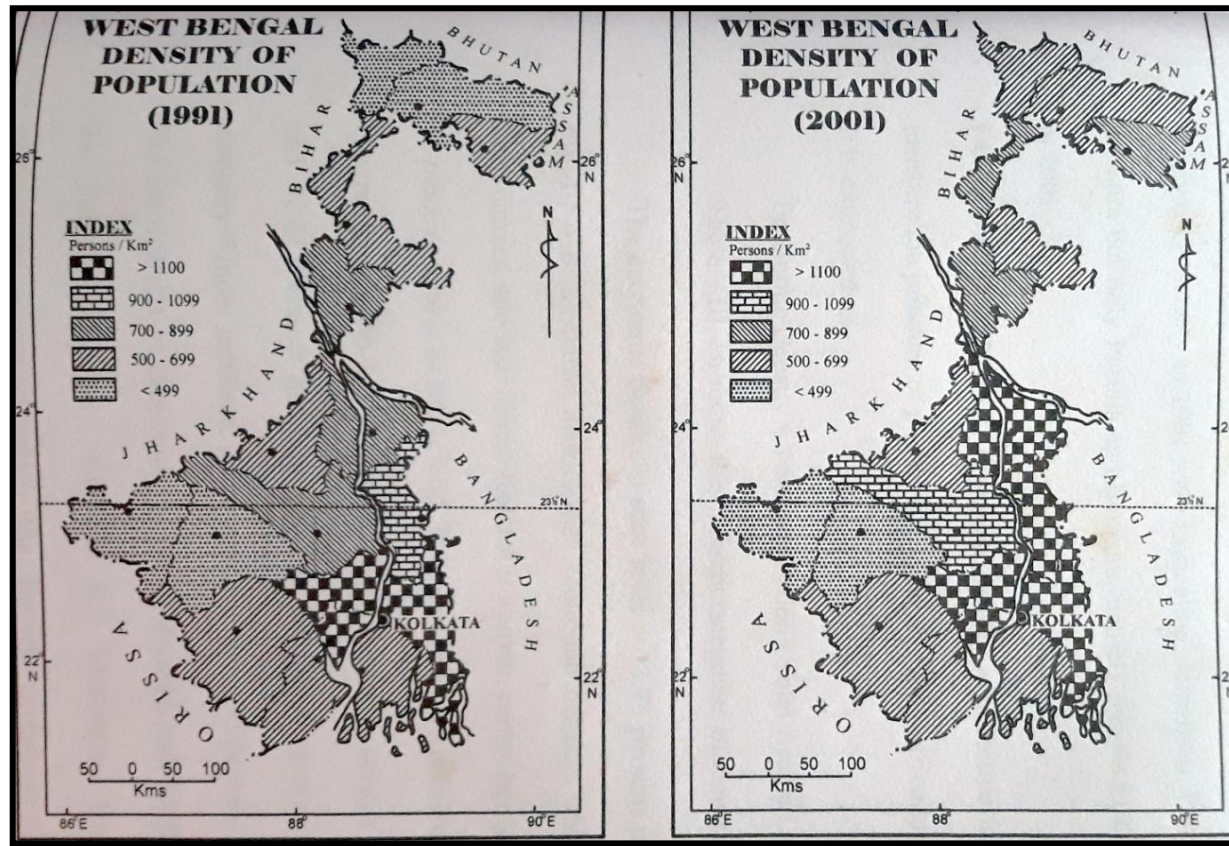


Fig:1

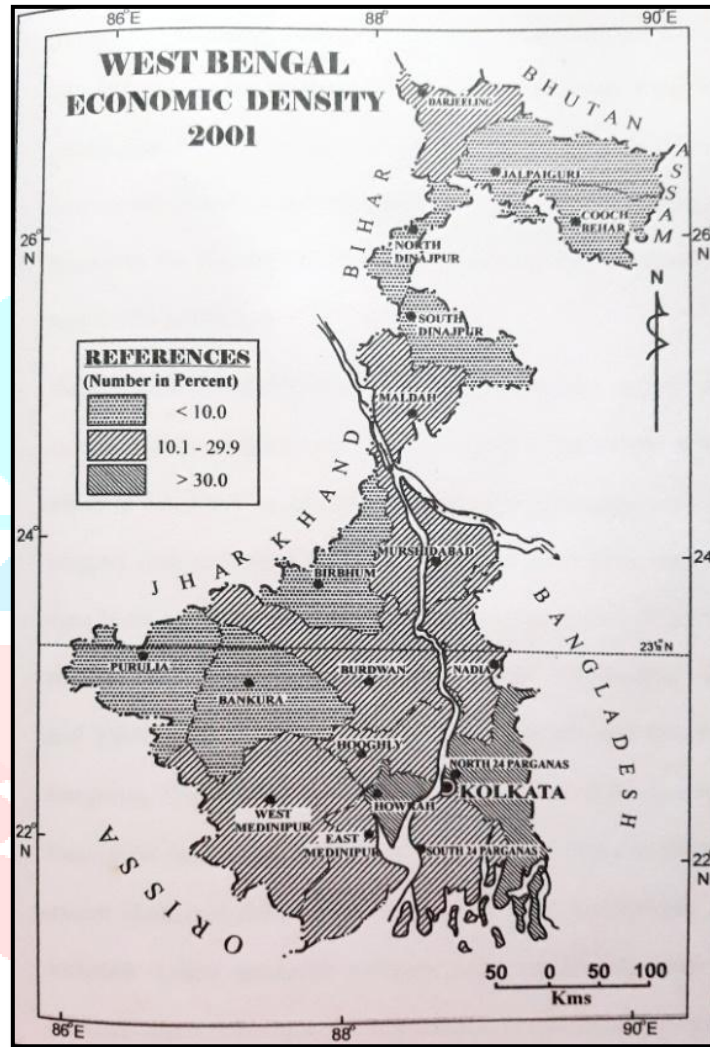


Fig: 2

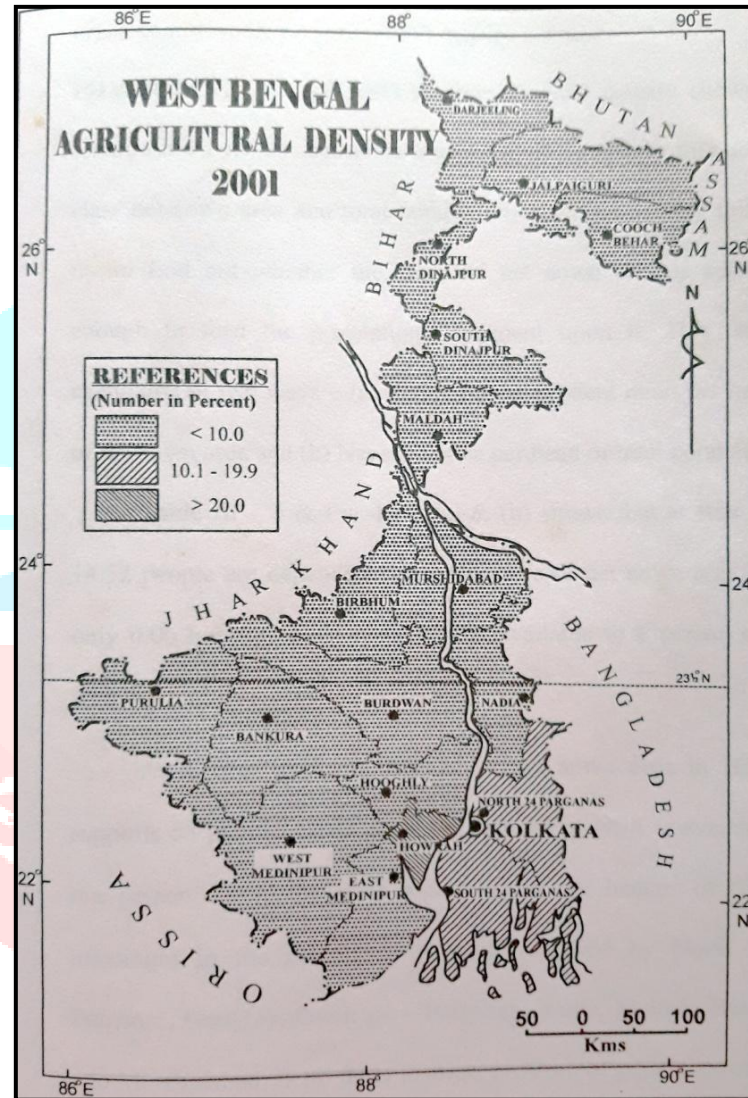


Fig: 3

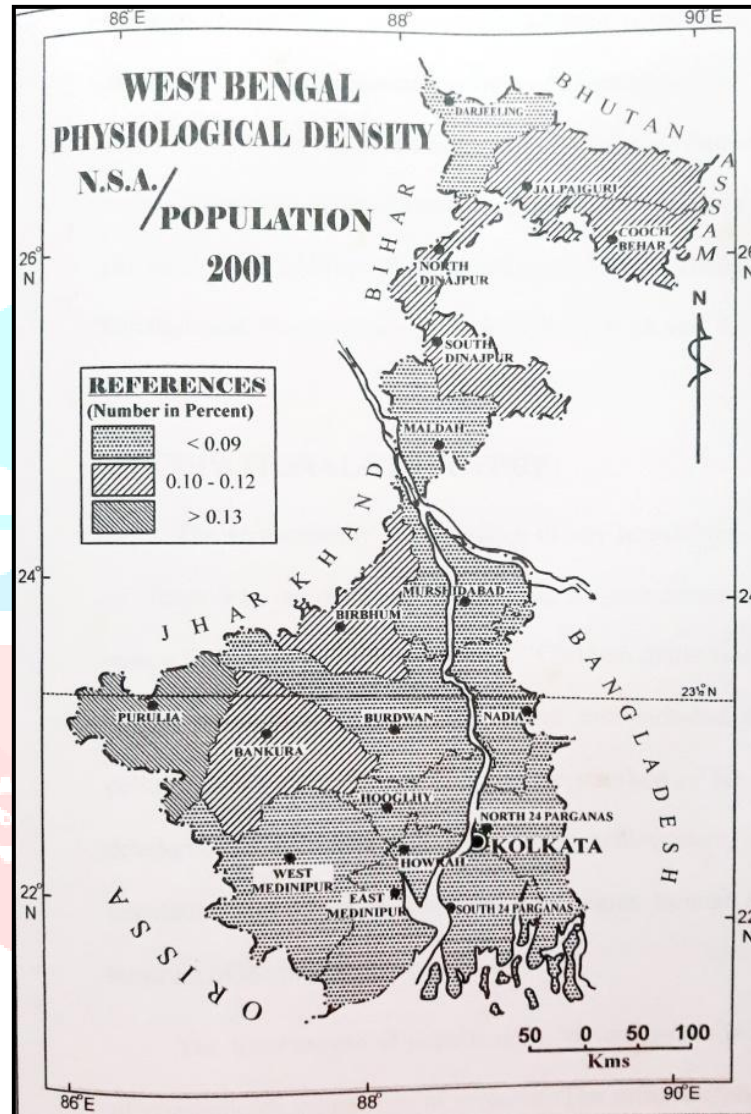


Fig: 4

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