Geographical Study of Growth of Population and Various Landuse Densities in Kankavali Tahsil in Sindhudurg District

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Abstract

Demography is the study of the growth, change and structure of human population changes in a population size and structure are caused by changes in the birth rate, death rate and net migration rates. In this research paper focus on population growth and various land use densities. The study area is Kankavli Tahsil in Sindhudurg district. Kankavli Tahsil lies between 16 degree 9' to 16 degree 31' North latitude and 73 degree 38' to 73 degree 55' East longitude. The study of of population growth and density is important and useful for future planning of Kankavli Tahsil. Arithmetic, Physiological and Agricultural density are calculated.

The growth rate of of population -2.07 in in Kankavli Tahsil in 2011. In the decade 1961 the Tahsil population recorded growth rate of 8.15 % which is the highest rate of growth of population. Arithmetic density of population in Kankavli Tahsil was 172 persons per sq. km. Agricultural density was 73.64 person per sq. km. and Physiological density was 420 person per sq. km.The agricultural and physiological density are also calculated for the year 2011. Within the Tahsil among 105 villages and 2 towns, there are considerable variations in various types of population density.

Keywords: Population Density, Arithmetic Density, Physiological density

Introduction:

Demography is the scientific study of characteristics and dynamics pertaining to the human population. The characteristics encompassed buy this study include size, growth rate, density, vital statistics and distribution of specified population. Demography is widely used for various purposes and can encompass small targeted population for mass population. Government use demography for political

observations, scientist use demography for research purpose, and business use demography for the purpose of advertising. In real estate, demography is employed to give clients an overview of specific neighborhoods.

The study of population growth is very important because the population change is important indicator of economic development, social development and political ideal of any region. Population growth is centre of dynamic demography of any region. Understanding of population growth is key of understanding of population structure of any region.

May methods are available for analysis of special distribution of population, geographer, population statistics, sociologist and statisticians contribution of explore the methods. Concept of population density is important for the analysis of spatial distribution pattern of man. In the field, man and land is important element, so the discovery of ratio of man and land is very useful for analysis of population. The concept of population density is three types- Arithmetic, Physiological, Agricultural.

In this paper an attempt has been made to explain the rate of growth of population and spatial distribution of various types of density in Kankavli Tahsil.

Objectives:

- To study the growth rate of population in Kankavli tehsil
- To study the spatial distribution of various land-use densities which helps in futuristic planning of the tahsil

Database and methodology:

The data required for study have been taken from district census handbook 2011 of Sindhudurga district. The actual rate of growth of population calculated by

$$Ar = Pn-Po*100$$

Ar= denotes actual growth rate of population
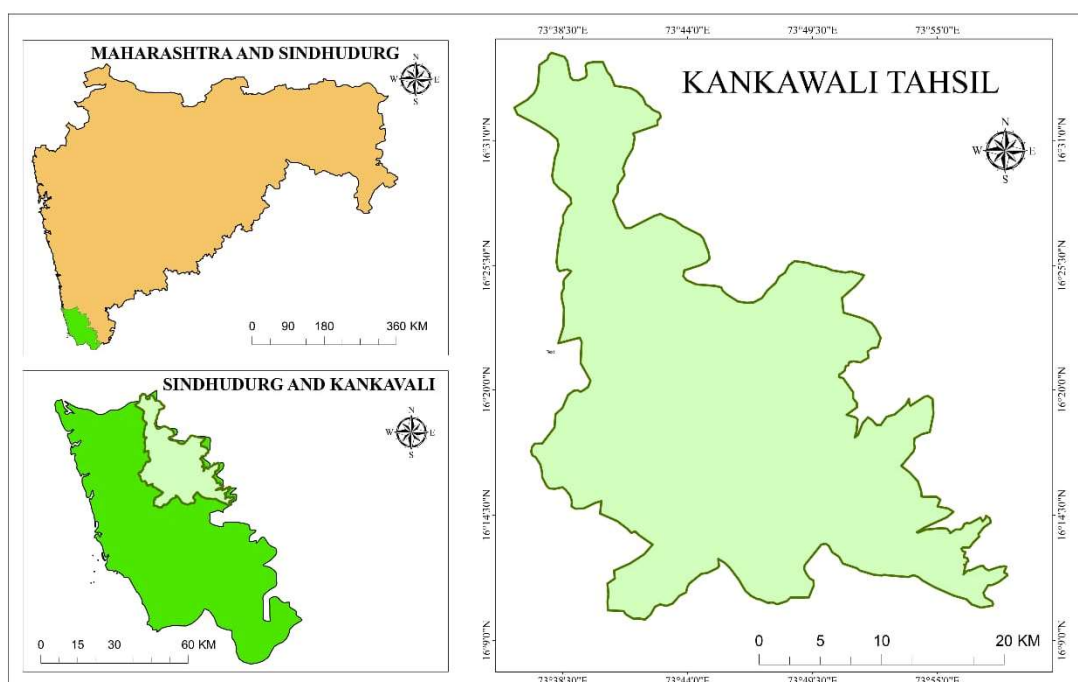
Pn= denotes current year population

Pc= denotes base year population

The various types of densities are calculated by the following formula:

- Arithmetic density =Total population/Total geographical area (Measured in sq.km.)

- Physiological density= Total population/ Total cultivated area
- Agricultural density= Total agricultural population/ total cultivated area

Study area:

Kankavli Tahsil is situated in Konkan region of Sindhudurg District in Maharashtra. The Kankavli Tahsil is located 16 degree 31' North latitude and 73 degree 38' to 73 degree 55' East longitude. The total area of Kankavli is 784 sq.km. The Kankavli Tahsil is surrounded by the Sahyadri Hill ranges to the east, Malvan and Devgad tahsil on the west , the Vaibhavawadi tahsil on the north, Kudal tahsil on the south. There are 105 villages and 2 towns in Kankavli Tahsil. As per 2011 census, the total population of tahsil is 135,295. The male population is 66,241 and female population is 69,054. Kankavli's climate is a blend of coastal and inland climate of Maharashtra. The temperature has a relatively narrow range between 20 C to 40 C. The predominant soil in the tahsil are laterite and extensive spreads of laterites throughout the tahsil.(District census handbook ,2011)

Result Analysis:

The most important aspect in demography is the study of structure, composition and characteristics of the population. The analysis of some important elements of population in the study region is given below.

1) Population Growth:

Population growth is the change in population over time and can be quantified as the change in the number of individuals in a population using 'per unit time' for measurement. Population size can only be changed by birth rate, death rate, immigration and emigration.

Table No. 1.1 Population growth in Kankavli Tahsil		
Year	Total Population	Population Growth (%)
1951	103101	-
1961	111513	8.16
1971	117662	5.51
1981	121459	3.23
1991	130181	7.18
2001	138167	6.13
2011	135295	-2.07
Source: computed by author		

The population of Kankavli tahsil was 103101 as per 1951 census and has gone up to 135295 in 2011. In the decade 1971 the growth rate registered or record increased from 8.16 % to 5.51 % by 2.65 %, but in the decade 2011 growth rate registered or record decrease from 6.13 % to -2.07 %. (Table 1.1)
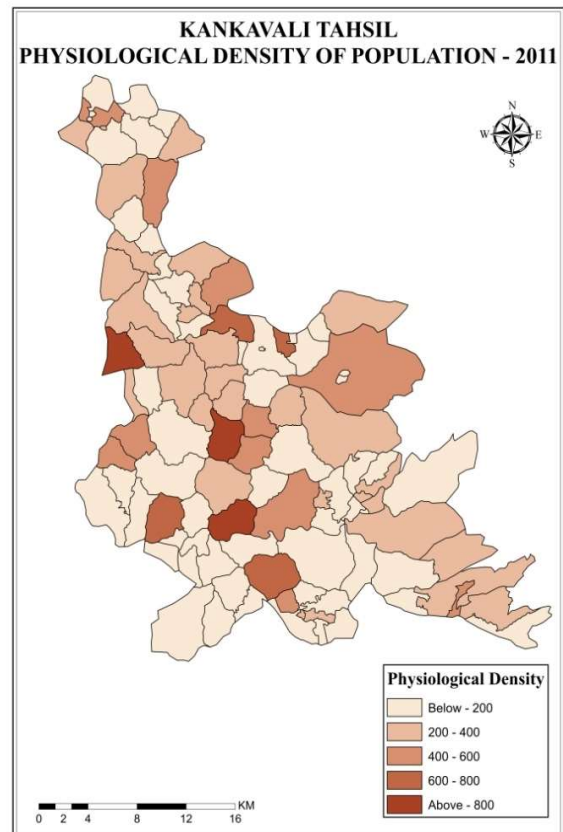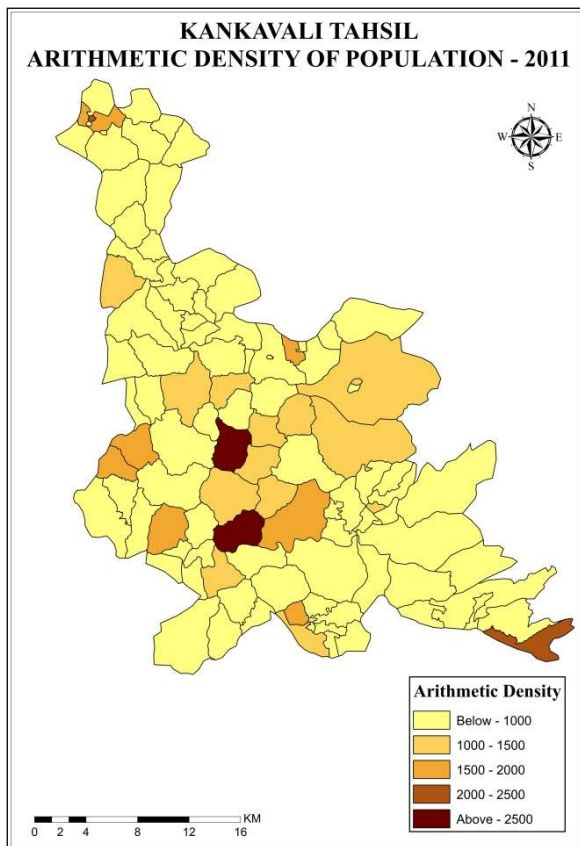
2)   Population Density:

Population density is measurement of population per unit area or unit volume. It is a frequently applied to living organism and particularly to humans. It is a key geographic term. It also indicates man-land ratio. While arithmetic density is the most common way to measuring population density, several other methods have been developed which aim to provide a more accurate measure of population density over a specific area.

Arithmetic Density:

The Arithmetic density of population in Kankavli Tahsil was 172 persons per sq.km. in 2011. Within the tahsil among the 105 villages and 2 towns. There are considerable variations Dakshin bazar peth village has the highest density of population while Bramhnagari (N.V.) has the lowest density of 3.21 persons per sq.km. in 2011. (Map No.)
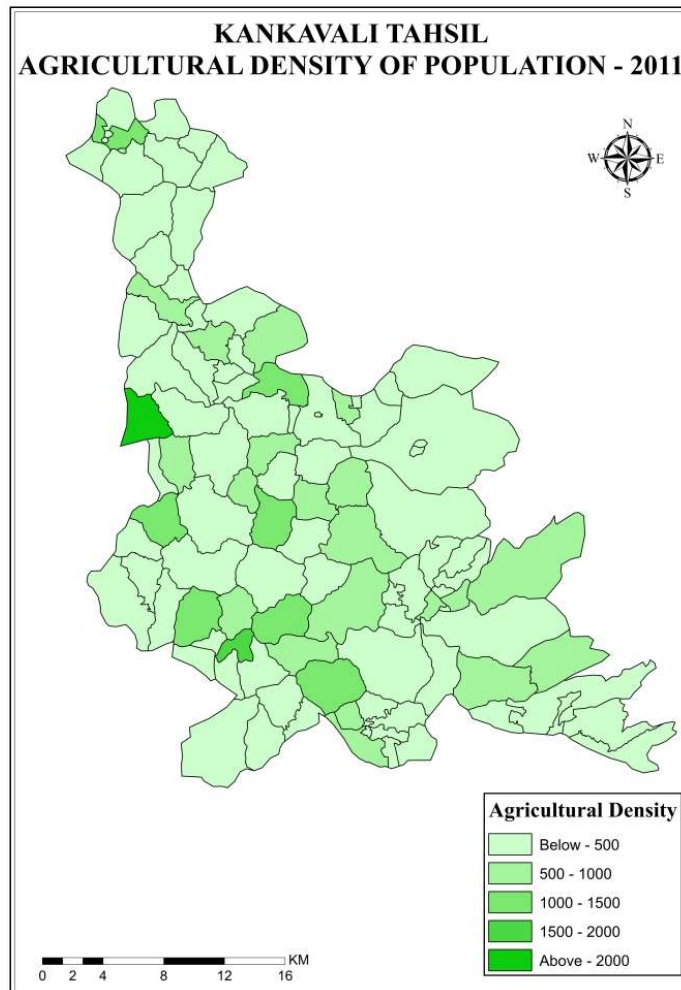
Physiological Density:

Physiological density is one of the truest indices of population concentration because it omits non agricultural land. In 2011, the physiological density in Kankavli Tahsil was 420 persons per sq. km. Nardave village had the highest physiological density of population i.e. 72 214 persons per sq.km. While Bramhanagar (N.V.) has the lowest density of 13.23 persons per sq.km. in 2011. (Map No.)

Agricultural Density:

Agricultural density gives a real picture of pressure of Agricultural population

on per unit of cultivated land. Agricultural density of the population in Kankavli tahsil was 73.64 people per sq.km. in 2011. Within the district among the villages, there are variations the highest agricultural density was found in Navanagar village 6972.72 persons per sq.km. While the lowest 0 persons per sq.km. agricultural density was observed in Jambhalnagar village. Some villages do not have cultivated area i.e.Belne kh., Ghonsari, Kalmath(CT), Kankavali (NP), Lingeshwar and Lingeshwar Nagar.(Map No.)

Conclusions:

1. For the 1981 to 1991 the highest growth rate of population in Kankavli Tahsil.

2. Brahmanagari (N.V.) has the lowest density of 3.21 persons per sq.km. in 2011 in Kankavli Tahsil. The reasons for this are hilly area, transportation problem, under development and low literacy rate etc.

3. Some villages having similarity in Arithmetic density, Physiological density and Agricultural density. e.g.Nandgaon, Bavshi, Humrat, Karul, Karanje, Kankavali, Harkul Bk,etc.

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