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POPULATION GROWTH AND CHANGING LAND USE PROFILE IN BAGLAN TAHSIL, NASHIK DISTRICT (MAHARASHTRA)



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ABSTRACT

Baglan is the second largest tahsil in Nashik district of Maharashtra state having a geographical area of 1475.3 sq. km. In this paper an attempt has been made to highlight the population growth and changing land use profile for the year 1990-91 and 2000-2001. Growing population is one of the main factors for changing land use pattern and is the main threat to the land. The dynamics of land use and land cover changes differ in different part of the world. In much of Europe land is being released from agriculture, and is reverting to scrub and to forest. In many parts of Africa, Asia and Latin America the agricultural area continues to expand. Land use reflects a complex correlation between natural, historical and socio-economic factor. The use of land changes according to the changing needs of man. The distributional pattern of land use and the change therein are brought out from 1990-91 to 2000-2001.

INTRODUCTION

Land is one of the most important resource which plays an eminent role in determining mans economic, social and cultural progress. Land use is the surface utilization of all developed and vacant lands on a specific space, at a given time. Lands are used for crops, forest, pasture, mining, transportation, garden and recreational, industrial and commercial and residential. Land use is also related to conservation of land from one major use to another general use. The use of land changes according to the changing needs of man. Stamp,

L. D. (1948) has classified the needs of man into six major categories, viz., agriculture, home, food, transportation, communication, defense and recreation.

Increasing population and changing needs of the time, requires revision of land utilization. The revision of land is done by trial and error method which leaves its trace of success and failure. The success of National planning is dependent upon the proper utilization of land. Some day in our country a planned programme will determine the pattern of land use and there not only crops and tamed animals but indirectly

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A GEOGRAPHICAL STUDY OF LAND USE PROFILE IN MALEGAON TAHSIL (M.S.)

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ABSTRACT

Malegaon is the largest tahsil in Nashik district of Maharashtra state having a geographical area of 1938 sq. km. In this paper an attempt has been made to highlight the population growth and changing land use profile for the year 1990-91 and 2000-2001. Growing population is one of the main factors for changing land use pattern and is the main threat to the land. The dynamics of land use and land cover changes differ in different part of the world. In much of Europe land is being released from agriculture, and is reverting to scrub and to forest. In many parts of Africa, Asia and Latin America the agricultural area continues to expand. Land use reflects a complex correlation between natural, historical and socio-economic factor. The use of land changes according to the changing needs of man. The distributional pattern of land use and the change therein are brought out from 1990-91 to 2000-2001.

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The criticality of land in National development is cleared from a statement of the late Smt. Indira Gandhi in 1972 who said, " we can no longer afford to neglect our most important natural resources. This is not simply an environmental problem but one which is basic to the future of our country. The stark question before us is whether our soil will be productively enough to sustain the population of more than one billion, at higher standards of living than now-prevail. We must have long term plants to meet this contingency." One

POPULATION GROWTH AND CHANGING LAND USE PROFILE IN GIRNA RIVER BASIN IN NASHIK DISTRICT (MS)



Research Article

* Mr. Pralhad Y. Vyalij ** Dr. R. S. Deore

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We must have long term plants to meet this contingency." One basic fact that, cannot be ignored i.e. land is a finite resource and it is very essential that, land use is properly planned. We therefore, need a national policy on land (soil) with short and long range objectives. River Girna Basin is one of the most important river basin in Nashik district in Maharashtra and most prosperous in agriculture and land use aspect. In this paper an attempt has been made to highlight land use changes based on secondary data collected from District planning unit and Dy. Directorate of economic and statistics office, Nashik for the year 1990-91 and 2000-2001. Growing population is one of the main factors for changing land use scenario and is main threat to the land in the district. To overcome this problem, we must plan for the proper use of the available land resources and our living depends on successful agricultural self-sufficiency.

STUDY AREA: River Girna is the Major tributary of River Tapi. This is one of the most important river basin in Nashik district in Maharashtra and most prosperous in agriculture and land use aspect. Growing population is one of the main factors for changing land use scenario and is main threat to the land in the basin. Girna-Mosam Basin in Nashik district of Maharashtra having a total geographical area of 5829.43 square Km. It lies between 20^o 15' 43" to 20^o 53' 07" North latitude and 73^o 40' 12" to 74^o 56' 22" East longitudes. Physiographically, This region comprises of a part of a Deccan Plateau. This basin may be broadly divided in to four tahsils namely, Malegaon, Nandgaon, Satana, Kalwan and Deola. Deola is new tahsil from 26th June 1999. The soils of the Girna and Mosam valleys are quite deep and fertile.

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A Study of Population Distribution and Various Densities in Malegaon Tahsil Compared to Nashik District (M.S.)

Malegaon is the largest tahsil in Nashik district of Maharashtra state having a geographical area of 1938 sq. km. In this paper an attempt has been made to highlight the population distribution and various densities for the year 1990-91 and 2000-2001. Growing population is one of the main factors for changing land use pattern and is the main threat to the land. The dynamics of land use and land cover changes differ in different part of the world. The use of land changes according to the changing needs of man. Population distribution is a dynamic process, which is ever changing. Its cause and effect vary in the spatio-temporal frame. The economic characteristics of an area directly influence the population pattern through the resource and economic interchange. Study of relationship between man and environment helps to analyse the distribution of population. With intensive utilization of the natural resources, a region tends to increase in population. Natural resource and its relationship with man determine the degree of population density. It is apparent that the study region occupying 12.48 percent area of Nashik district in the Maharashtra state.

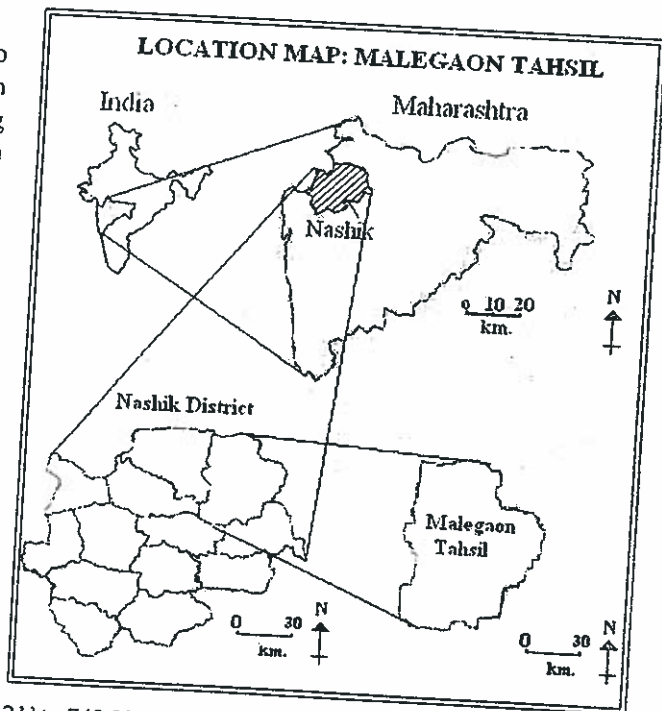
PROF. PRALHAD Y. VYALIJ

Introduction :

Regional population studies are significantly meant to the capability of the environment. Population distribution in the Nashik district reveals some unique characteristics showing major human concentrations near urban centers. An examination of the statistics and the environment shows that population density is typically arranged as environmental types. Land surface in different area varies in quality and kind, and consequently its utilization pattern too shows variations. Essentially, it is difference in the distribution of land patterns which matters in the distribution of population. Natural resource and its relationship with man determine the degree of population density. The factors that affect the spatial aspects of population are as complex and varied as are the pattern of distribution. Three main classes of factors may be recognized: (a) physical or natural factors including climate, terrain, water, soil, mineral as well as space relationships, (b) cultural factors embracing social attitude and institutions, stage of economic development and political organization; and (c) demographic factors involving differential birth and death rates and the currents of migration. It is apparent that the study region occupying 12.48 percent area of Nashik district in the Maharashtra state.

Study Area :

Malegaon ranking first largest Tahsil in Nashik district of Maharashtra having a total geographical area of 193800 hectares. It lies between 20° 22' to 20° 53' North latitude and 74°



21' to 74° 50' East longitudes. Physiographically, Malegaon comprises of a part of a Deccan Plateau. The Tahsil may be broadly divided into three geographical regions, viz, a) The Girna basin b) The Mosam basin and c) The Eastern Dry area (locally known as Mal-Mathha).

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ASSESSMENT AND DISTRIBUTION OF-SLOPE OF MOSAM RIVER BASIN IN NASHIK-DISTRICT



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In geomorphological study slope is very important part and contributes a significant role in the landform development. Slope is a combined action of many factors viz. lithology, structure, climate, vegetal cover, drainage, relief and denudational processes (weathering and mass wasting). Stratigraphically this basin comes under Salher Formation. This formation has a maximum thickness of 300 m. and is exposed along the river valley. Generally the slope is modified by the denudational processes. The common slope associated problems are soil erosion and mass wasting. The slope assessment methodology is developed by many geographers and some of them are Rich (1916), Wentworth (1930), Raisz and Henry (1937), Strahler (1950), Clark (1932) etc. In this work, observation is made as indicated by using Wentworth's method.

OBJECTIVES The main aim of the study is: a) To assess average slope. b) To correlate spatial distribution of average slope with litho-structural set-up of the area and c) to identify slope type of the study region.

DATABASE AND METHODOLOGY The study is based on 1: 50000 scale topographical maps have been utilized to identify basin demarcation. C.K. Wentworth's method used for identified slope types.

STUDY AREA The study area which is a sub basin of Girna River Basin is located in the north part of Nashik district in Maharashtra. Mosam River lies in the Tapi drainage system. Mosam is the tributary of river Girna and Girna is the tributary of River Tapi. Northern divide of the basin is the district boundary between Nasik and Dhulia, Nandurbar district. Western divide is the boundary between Nasik and Dang district (Gujarat State). From the hill fort (Salher) of western divide overlooking the Konkan. There are five branches of the Sahyadri tending eastwards along the Mosam river basin i.e. Satmala ranges. Small streams of Mosam descend from the hills, most of them containing water. Narrow belts of level land bearing good soil are found on both the banks of Mosam and its tributaries. It is

extend from 20° 32' to 20° 52' North latitude and 73° 56' to 74° 32' 20" East longitude. It covers an area of 501 sq. km. and its total length is 85 km. The average annual rainfall of the basin varies between 899 mm. to 508 mm. Mosam basin entirely lies on the Deccan Trap. The existing rock of trap is basalt. With regards to soil, little needs to be said from geological point of view. The valley is filled disintegrated basalt of various shades from gray to black, washed by rain. It is an argillaceous nature and its color depends greatly upon the organic matter and length of time, it has been exposed to the air.

SLOPE ASSESSMENT AND DISTRIBUTION

Slope assessment has been done according to the method suggested by C. K. Wentworth (1930). The original formula is converted into the metric system which is as follows:

$$\text{Average Slope: } \tan Q = N \times CI / 636.6$$

Where Q = Average angle slope, CI = Contour Interval

N = Average Number of contours crossing, 636.6 = constant

The total range of the slope is 13 degree and divided into following slope categories;

1) VERY GENTLE SLOPE:

This slope zone is found in between 0° to 3° group. The total area covered by this category is 46.84 square km. which is 9.35 percent of the area. Generally this zone is found between the front of lower and middle reaches of this basin as well as it is found to the northern part and southern part of upper reaches of the region. Maximum part of this category is being under undulating hills.

2) GENTLE SLOPE: This zone includes the area where average slope angle ranges in between 3° to 5°. The total area covered by this category is 135.77 square km. which is 27.10 percent of the area. The maximum area of this category is found low-lying part as well as it is found between the front of lower and middle reaches of this basin and the some part of the

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