

Population Pressure On Natural Resources Of Morigaon District, Assam

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Abstract: Morigaon district is marked by very high growth of its population. It is estimated that the explosion of population affect the natural resources, mainly the land use pattern of the district. The decadal growth of the population is always higher in comparison to Assam as a whole. This rapid increase of population is exerting tremendous pressure on the land use (LU) pattern of the district. As a result, areas under different land use category increase or decrease with the passing of time. For example, area under forest has been declining day by day whereas it is quite opposite in the case of area not available for cultivation. The purpose of this research work is to determine the trend population explosion and its influence on the resources of the district. Data and information so required in this study have been collected from different secondary sources.

Index Terms- Population pressure, resource utilization, changing LU pattern

1. INTRODUCTION

Growth of population is the change in the number of people living in a particular area between two given points of time (Khullar, 2000). Today one of the greatest challenges facing the world community is the population explosion (Maurya, 2018). Due to day-to-day population growth the natural resources of the earth surface has been decreasing day by day. Over population is one of the menace and serious problem, which creates a great obstacle in the way of development. The fast growing population is placing extraordinary pressure on our natural resources such as land, water etc. Therefore, it is essential to study about the trend of population growth because it shows present as well past status of the natural resources use. Therefore, an attempt has been made in this paper to analyze the trend of population pressure and its consequent impact on natural resources in Morigaon district. Among all the natural resources, forest resources and land resources have been considered in this study.

2. STUDY AREA

Morigaon district is situated in the middle of the state of Assam between 26°9'0" and 26°30'0" North latitude and between 92°0'0" and 95°30'0" East longitude. Mighty Brahmaputra River in the North, Karbi Anglong district in the South, Nagaon district in the East and Kamrup district in the West bound the district. The district occupies a total area of 1551 sq. km. representing about 1.98 % of the total geographical area of Assam. The study is primarily based on data acquired from different secondary sources. Secondary data and information regarding the existing problem have been collected from the Circle office, Morigaon, Census of India 1951,1961 and 1971 (District Census Handbook Nowgong), Census of India 1991 (District Census Handbook, Morigaon), Census of India 2001 and 2011, Statistical Handbook Assam, 2007 ,2013 and 2018, Economic Survey of Assam, 2017-18.

The data so acquired have been systematically arranged and in order to analyze them qualitative/quantitative and cartographic techniques have been employed and for the preparation of the map in the paper Arc GIS 10.2 and Google earth pro software are used.

3. OBJECTIVES

The main objectives of the study are: (i) to study the trend of population growth and (ii) to examine the impact of population growth on the resources of the district.

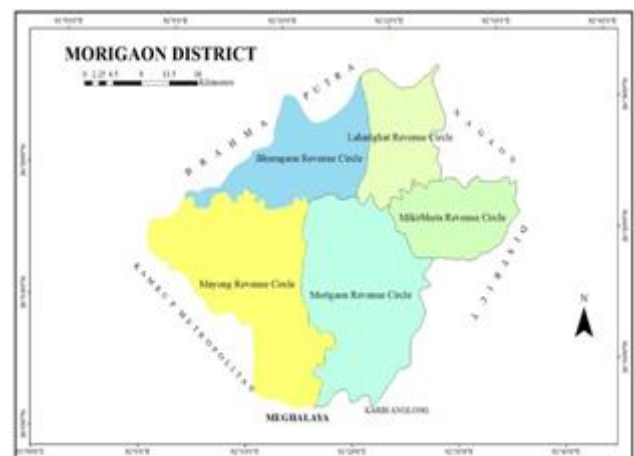


Fig 1: Locational map of Morigaon

4. METHODOLOGY

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5. RESULTS AND DISCUSSION

Population is defined as the total individuals of a species in a given geographical area (Singh, Singh and Srivastava, 2017). Morigaon district is recorded very rapid growth of its population. In 1901, the total population of Morigaon was 65,638 (1901), which increased to 223,561 in 1951 and 957,423 in 2011. The growth rates between the period 1901-1951 was recorded as 240.59% as against 144.06 % for the State as whole. During the period 1951-2001, the growth rate in the district was 247.22 %, whereas the growth rate for the state in that period was 232 %. On the other hand, during 2001-2011, the growth rate in the district was recorded as a growth rate of 23 % while the corresponding figure for the State as a whole was 17.07 %.

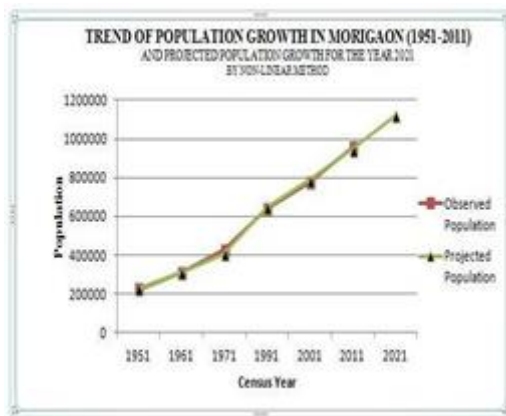


Fig 2: Trend of Population Growth in Morigaon

Table 1: Decadal Percentage Variation in Population in Morigaon (1901-2011)

Census Year	Morigaon	Assam
1901-1911	15.84	16.99
1911-1921	31.94	20.48
1921-1931	41.35	19.91
1931-1941	15.37	20.40
1941-1951	36.65	19.93
1951-1961	37.89	34.98
1961-1971	37.51	34.95
1971-1991	50.90	53.26
1991-2001	21.35	18.92
2001-2011	23.34	17.07

Source: Statistical Handbook Assam, 2018

The number of people living in the region is increasing at an alarming rate. If the population continues to grow alarmingly at the present rate, there will be 11, 19,728 population by 2021 occupying the same space sharing the same natural resources. There is also spatio-temporal variation in the distribution of population. Highest population density is found in Laharighat Revenue Circle followed by Mikirbheta and Mayang Revenue Circle.

5.1.IMPACT OF POPULATION GROWTH ON RESOURCES

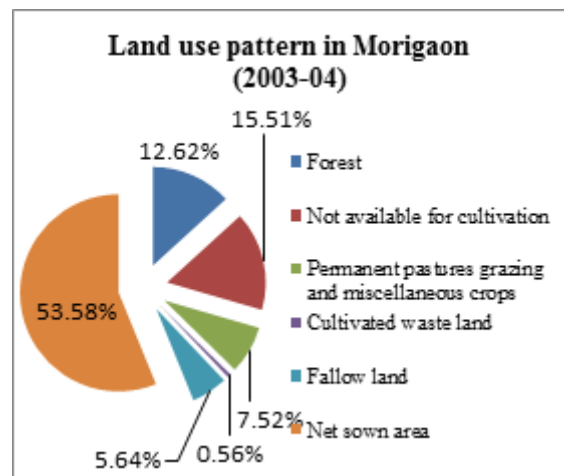
The growing population of the district is directly affected on the resources, mainly on the forest and land resource. It varies from area to area according to the spatio-temporal variation in natural and cultural conditions.

5.1.1. IMPACT ON FORESTS

Though there are various reasons for the loss of forest cover, the major cause attributed to this problem is the rapid growth of population. Additionally, expansion of agricultural activities and other developmental activities by clearing forestland are the other reason responsible for the loss of forestland. Hence, because of which different environmental problems have been taken place such as fragmentation of forestland, loss of wildlife habitat, deforestation, human-animal conflict etc. It is significant to note that the forest area has decreased from 12.62% in 2003-04 to 4.26% in 2016-17. The main reason for such a decline in the area under forest is that there has been tremendous pressure on forestland for agriculture and settlement during the present time. Whereas it is found that land put to non-agricultural uses such as building, road urban areas etc. increased from 15.51% (2003-04) to 34.92% (2016-17).

5.1.2. IMPACT ON LAND RESOURCES

Net sown area is the cropped area in the year under consideration (Khullar, 2000). The area under this category has been decreasing with the passing of time. Net-sown area accounted for about 47.42% (in 2016-17) of the total area of Morigaon, which was about 53.58% in 2003-04. This is because of the contraction of agricultural land for the settlement and other economic purposes. Hence, there is a urgent to increase the area under this category to meet the food requirements of the fast growing population. Again, area under fallow land has been decreased from 5.64% (2003-04) to 3.21 (2016-17). It is because such lands are gradually being taken up for cultivation. Thus, there is a little prospect for the expansion of agricultural area under from this category.



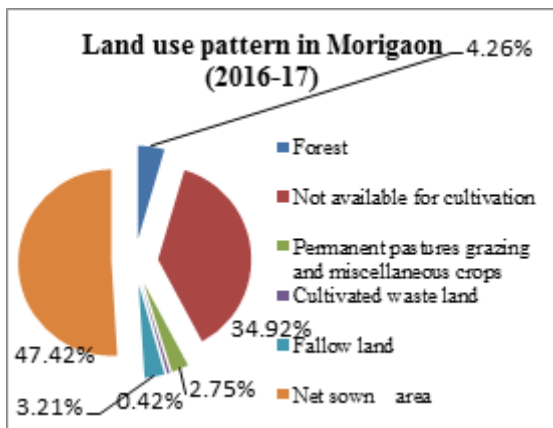


Fig 3: Land use pattern in 2003-04 and 2016-17



Fig 4: Land use and land cover map of Morigaon

On the other hand, it has been observed that land not available for cultivation, which consists of land put to non-agricultural uses, and barren land is being increased every year. Land under this category was 34.92% in 2016-17, which was only 15.51% before a decade ago. The main reasons for such an increase area under this category are expansion of human settlement, rising economic activities etc.

Conclusion

The preceding discussion reveals that the growth of population is wielding tremendous pressure on the natural resource of the district. This day-to-day increasing population causes various environmental problems like loss of cropland, forestland, wetland, loss of wild habitat, deforestation. Therefore, considering the high growth of population, which halts the developmental process, it is very necessary to take step in order check population growth. Measure need to be taken now to correct the present scenario. In this case, two-child population policy of the state would be helpful to an extent. Besides this, educating people, awareness to youngster is desirable to minimize problem of population growth and its pressure on the natural resource.

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