



Population Growth and Its Impact on the Land Use Pattern of Assam

SURJYA CHUTIA

Assistance Professor, Economics dept. Tinsukia College, Tinsukia Assam, India

KEYWORDS : Population Growth, Land Use Pattern, Area, Diversification, Assam

0.0 Introduction:

The population in an area and its growth over time maintains a direct relation with the resource base of the area. In fact formulation of plans and policies connected with economic development have always been based on long term perspective of population growth. Population growth may be an imperative factor for economic development of the area. The right size of population and its quality are important factors for social and economic development. It can go a long way in helping capital formation process and supplying manpower for economic development and also creating demand for goods and commodities produced in the country. On the other hand, under certain circumstances, it can be a great obstacle to economic development. This is particularly so in a capital poor and a technologically backward states like Assam. The high population growth has led to an adverse situation on man-land ratio in such states. As a result of immobility of people, both in space and occupation, the economy is over burdened, particularly agriculture is over crowded.

Assam is the pioneer state of the North- Eastern Region of India and situated in the far, North-East corner of the country. The total geographical area of the state is 78,438 sq. km, which accounts for about 2.4 percent of the country's total geographical area. Assam shares her border with Arunachal Pradesh in East, West Bengal, Meghalaya, Bangladesh in West, Arunachal Pradesh, Bhutan in North, Nagaland, Manipur, Mizoram, Meghalaya and Tripura in South. Longitude: 88.25°E to 96.0°E Latitude: 24.5°N to 28.0°N. The entire area of Assam can be broadly divided into three well-defined geographical units --- the Brahmaputra Valley covering the main body of the state in the north, the Barak Valley in the narrow protruding south and the state's hilly region that separates the two valleys. For administrative and revenue purposes, the 27 districts of the state are divided into 53 Sub-divisions and 149 Revenue circles.

Assam is maintaining a diversified pattern of utilization of land. As per the pattern of utilization of land, total land area of the state may be divided into the categories as - Forest land, Land not available for cultivation, other uncultivated land excluding fallow land, Fallow land and cropped land.

The economy of Assam is mainly depending on agriculture. More than 70 percent of the total population of the state is getting their means of livelihood from agricultural sector. In an agriculturally dominated state like Assam, with the concentration of the masses in rural areas, an uncontrolled increase in population growth can adversely affect the land-man ratio. The per capita availability of land for cultivation may decline, there by retarding the development of the economy. However, if the productivity of land is increased, the per capita availability of food grains may increase. The experience of most agriculture based economies with the tremendous growth of population reveals that a fall in the average land holding reduces the income of the farmers, who are not in a position to introduce any kind of modern technology for the purpose of agricultural development. Over population, further, changes the land use pattern of the region and gives rise to the problems of congestion, lack of space for house and other constructional works.

Growth of population in Assam has experienced a very high trajectory since the mid-decades of the 20th century. Assam rank is 14th in size of population among all the states of India. The growth of population in the state after Independence (1951-2001) is 232 percent against the national growth rate of 184 per-

cent. According to the Census of India, 2001, the population of Assam stands at 2,66,55,528 of which 13777037 are males and 12878491 females. The decadal growth of the state's population works out to 18.92 percent during the decade 1991-2001 as against 21.54 percent for the country as a whole. Assam has been a victim of large scale illegal migration. In most of the decades during the last century the growth rate of population in Assam has been well above the national growth rate. The difference can be attributed only to large scale illegal immigrations particularly after 1947 and 1971. Such immigration to Assam has been continuing from the neighboring Countries and states even normal time.

0.2 Trend of population growth and density:

The high growth rate of population is sure to create pressure on the limited land area in the state. The real pressure of population on land in any area is better understood by man-land ratio. these ratios become more meaningful in a state like Assam, where majority of people depend directly on land to eke their living. The man-land ratio or the density of population of Assam has gone up to 340 in 2001, against the national level density of 325 per sq km. The trend of high density of population in the state than national density of population continues since 1971. The following table-1.0 depicts the population growth trend and density in Assam and India.

Table-1.0
Trend of population growth & density in Assam and India

Year	Population (in lakh)		percentage decadal variation		Density (person per sq km.)	
	Assam	India	Assam	India	Assam	India
1901	33	2384	-	-	42	77
1911	38	2521	17.0	5.8	49	82
1921	46	2513	20.5	0.3	59	81
1931	56	2789	19.9	11.0	71	90
1941	67	3186	20.4	14.2	85	103
1951	80	3611	19.9	13.3	102	117
1961	108	4392	35.0	21.5	138	142
1971	146	5481	35.0	24.8	186	177
1981	180*	6833	23.4*	24.7	230*	230
1991	224	8463	24.2	23.9	286	267
2001	266	10270	18.9	21.5	340	325

Source: Census of India, 2001

* Interpolated (there was no census in Assam in 1981)

0.3 Population growth and Land use pattern:

Total land area under cultivation in Assam has increased from 23.01 lakh hectares in 1950-51 to 27.04 lakh hectares in 1970-71 and then to 27.74 lakh hectares in 2001-02. Accordingly, the land under cultivation has increased from 26.0 per cent of the total geographical area in 1950-51 to 34.4 per cent in 1970-71 and then to 35.33 per cent in 2001-02. Simultaneously, total uncultivated area which constitutes 74.0 per cent of the total area in 1950-51 gradually declined to 65.6 per cent in 1970-71 and then to 64.66 per cent in 2001-02. Similarly the total fallow land has also declined from 4.65 lakh hectares in 1950-51 to 1.64 lakh hectares in 2001-02 and the total cultivable waste land has also declined from 3.80 lakh hectares in 1950-51 to 0.76 lakh in 2001-02. Finally total cropped area of the state has also increased from 18.13 lakh hectares (i.e. 23.1% of the total area) in 1960-61 to 39.8 lakh hectares (50.73 per cent) in 2001-02. Thus due

to huge amount land not available for cultivation, the net sown area in the State constitutes only 34.4 per cent as compared to that of all India average of 46.6 per cent. **2**

The impact of population growth on land is assessed from point of view of land- man ratio, which has particularly affected density and distribution pattern on one hand and the coverage of forest on the other. The area under forest has declined from 28.20 lakh hectares in 1950-51 to 21.15 lakh hectares in 1970-71 and then to 19.32 lakh hectares in 2001-02. Such decline in forest area will not only disturb the ecological balance of the region severely, but also bring down the resource potential of the state to a great extent, often at the cost of environmental welfare of the society.

Total land areas occupied by roads, lakes, rivers, railways, dwellings etc. and known as land not available for cultivation has declined from 30.85 lakhs hectares in 1950-51 to 21.81 lakh hectares in 1970-71 and then to 25.33 lakh hectares in 2001-02. In the same way, the land not available for cultivation as in percentage of total geographical area has declined from 35.0 per cent in 1950-51 to 27.81 per cent in 1970-71 and then to 32.2 per cent in 2001-02 as compared to that of only 13.1 per cent all India. This is mostly due to huge land surface lying barren and uncultivable, accounting for nearly one-fifth (18.5 per cent) of the total geographical area of the State.

As per the land utilization statistics of the state for the year 2004-05, Assam has an estimated 38.96 lakh hectares of gross cropped Area of which Net Area Sown is about 27.53 lakh hectares and area Sown more than once stands at 11.43 lakh hectares during the year. Thus the ratio of area sown more than once to the net area sown was 41.52 percentage during 2004-05 as against 43.75 percentage in 2003-04. During the years 2001-02 and 2002-03 the ratio of area sown more than once to the net area sown was 43.60 percent and 43.77 percentage respectively. The following table shows the percentage distribution of land utilization of Assam in the year 2004-05.

Table-1.2
Area and percentage distribution of land utilization of Assam. 2004-05

Category of land use	Area (in sq kms)	% to the total area
Area under forest	19610	25%
Land NA for cultivation	25100	32%
Other un-cultivated land	4706	6%
Fallow land	1569	2%
Net Area sown	27453	35%
Total land area	78438	100%

Source: *Economic Survey, Assam, 2008-09, p-27*

An important feature revealed by the Agricultural Census is that the average size of operational holding in the state recorded a declining trend over the successive censuses. This indicates the impact of population growth on land use pattern and the growing problem of fragmentation and sub-divided in land holding. The average size of operational holdings in Assam declined from 1.47 hectares in 1971 to 1.30 hectares in 1985-86 and then to 1.15 hectares in 2000-01, in spite of increase in operated area. At all India level, the trend of average size of holding too shows gradual decline from 1.69 hectares to 1.57 hectares over the period 1985-86 to 1990-91. As the agricultural land holdings decline, it is bound to have its effect on the per capita availability of food grains, highlighting a very disturbing reality that the consumption of rice actually declines which may adversely affect the health and nutritional levels of the population.

In 1981-82 total cropped area of the state stood at 34.60 lakh hectares which constitute roughly 44 percent of the total geographical area of the state as against the all India coverage of 50 percent. As per the Agricultural census, 2000-01, the marginal holdings with less than one hectare of land accounted for 62.6 percentage of the total holding and 21.3 percent of the total operated area of the state in the year. The small holding with size class between 1-2 hectares, shared 20.7 percent of the total holding and 23.5 percent of the total operational area. On the other hand, the large holding holdings (10 hectares and above) constituted only

0.18 percent of the total number of holdings and 8.4 percent of the total operated area in the state. The following Table 1.3 shows the trend of agricultural holdings and operated area in the state from 1070-71 to 2000-01.

Table- 1.3
Agricultural holdings and operated area in Assam (As per Agricultural Censuses)

Agricultural Census Year	Number of holdings	Total operated area (in thousand hectares)	Average size of holdings (in hectare)
1970-71	1964376	2882	1.47
1975-76	2253654	3079	1.37
1980-81	2297588	3121	1.36
1985-86	2419156	3161	1.31
1990-91	2523379	3205	1.27
1995-96	2862997	3138	1.17
2000-01	2712137	3114	1.15

Source: Directorate of Economics and Statistics, Assam.

Accordingly, the cultivators in the state has also increased from 22.83 lakh to 37.30 lakh, including 10.5 lakh marginal cultivators which indicates more pressure on cultivable land leading to rise in the number of small and marginal farmers that reduced the average size of land holding. The number of agricultural labor has also increased from 4.05 lakh to 12.62 lakh , including 6.27 lakh marginal agricultural labor during 1071-2001. The growth of landless labor force by about 21.2 percent is leading a large scale underemployment and unemployment among rural population.

Aquite spectacular aspect of population growth in Assam is its wide variation from rural to urban areas; though maintain a considerable rate of increase, the growth rates do not deviate much from that of the population as a whole. The percentage of urban population in Assam as per 2001 census is 12.72%, the all India figure being 27.78%. It was 11.1% in Assam against the all India figure of 26.13% as per 1991 census. However, the decadal growth rate of urbanization in the state during the decade 1991-2001 was 36.24%, the all India rate was 31.13%. The urban growth of the state was the highest during the decade 1951-61 (126.57%). Thus the growth rate of urban population is much higher as compared to that of all India level.

North East India, comprising of eight states has a unique distribution of having more than a hundred tribal communities who are at the various stages of development. The Schedule caste also contributes a considerable part of the population of this region. The backwardness of these two categories of this part of the country is totally different from other parts of India. A common economic backwardness makes the general standard of life in all the states of the region. The region is richly endowed with natural resources, plain and forest land but lack of proper utilization has deprived the common people of its benefits.

Out of the total population of Assam 6.9 percent are SC people and 12.4 percent are ST people as per the 2001 census. This segment of people are found to be lying in perpetual darkness for years together in respect of availability of land holding, food security and all sort of facilities although govt. has initiated various schemes for the upliftment of their society. The average size of holding in respect of the SC and ST people is 1.06 1.39 hectares respectively as compared to the total average of 1.17 hectares of the state which shows that the SC people are still in low profile in this respect. Moreover the share of operational holding of SC and ST in the state as per 2001 census was 4.69 percent and 12.60 percent respectively against 4.79 percent and 12.94 percent in 1990-91. This shows that the SC and ST people are gradually being deprived of the facilities so far as land holding is concerned.

The decrease in availability of land per person due to the tremendous pressure of population, leads to an immediate fall in food grains availability per person. This fall in food grains has to be met by bringing food grains from other states, there by not only increasing the dependence of the state, but also results in wasted of the scarce resources for feeding the unnecessary increase in the population scarifying the development of the state to that extent.

It is also true that though per capita availability of agricultural land and food grains is decreasing every year, the total area under cultivation is actually increasing in terms of absolute area, focusing attention to the fact that every year the pressure of population compels additional land being brought under cultivation. The rich natural resources of the state instead of being utilized for the development of the state, is wasted away in feeding of her growing population. Thus the uncontrolled increase of population is actually acting as a big hindrance for the development of the economy.

0.4 Conclusion:

Since, the rural areas of the state are most affected by any increase in population, some strategies of economic development should be chalked out, which will more effectively reduce or divert the pressure of population on land. It may be suggested that, all agricultural practices in the state should have a cropping pattern with maximum possible diversification. At the same time, living conditions in villages of the state should be improved by providing basic urban amenities as like electricity, medical & health facilities, education facilities, drinking water facilities etc. It is also imperative to create larger employment opportunities in villages and rural areas by setting up ancillary, agro based processing, and other small & cottage industries in the areas. Besides, a good network of transport and communication system should be laid for the movement of labor, firm produce and industrial raw materials from rural to urban centers.

REFERENCES

- [1] Dhar P. K. : The Economy of Assam including Economy of NE India, | Kalyani Publishers, New Delhi-110002, 2007 | [2] Huda, Boruah and Goswami : Bharatiya Arthaniti (Uttar- Purbanchalar ArthanitiSaha), Bonalata, | New Market, Dibrugarh, Assam, 5th edition, 2004. | [3] Datta Ray, B, Hazarika, | H.K, Passah. P. M, Pandey M.C. : Population Poverty and Environment in North East India, Concept | Publishing Company, a/ 15-16, Commercial Block, Mohan Garden, New | Delhi, India, 1st publication, 2000, pp 147-150. | [4] Daimary Dr. Prasen : Five Year Plans and Industrialization in Assam, Eastern Book House, M.L.N. Road, | Panbazer, Guwahati, India, 1st edition, 2008, pp 21-26. | [5] M.L. Jhingan, B.K. Bhatta & | J.N. Desai : Demography, Vrinda Publication (p) Ltd., Mayur Vihar, | Delhi -91. 2003. pp 195-196. | [6] Economic Survey Assam 2008-09, Directorate of Economies and Statistics Assam: Guwahati, India, March 2009. | [7] NEDFi Databank Quarterly, NEDFi, Basundhara Enclave, B.K. Kakati Road, Ulubari, Guwahati, India, vol-3 Issue iv, October | 2004, vol-4, Issue iv, October, 2005 and vol-5 Issue ii, April 2006. | [8] Basic Statistics of North East Region, North Eastern Council Secretariate, Shillong, 1982, 1990. | [9] Census of India, various issues. | [10] Statistical Hand Book, Assam, 1999, 2003, p-55. |