



Urbanization in Arunachal Pradesh: Trends and Patterns 1961-2000

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Introduction

An overview of the process of urbanization in the State of Arunachal Pradesh during the last two decades brings out the inadequacy of the existing institutional structure in managing urban centers in the “borderless” world of today (Ohmae, 1991, in Kundu, 2006). These institutions are noted to have least capacity to deal with the demands and pressures that are being generated as a result of the present focus of globalization. Managing these processes was considered to be an exclusive responsibility of the government and state owned and state led institutions, just a few decades back.

Now, under a decentralized system of planning, it is viewed as a joint responsibility of stakeholders like industrial and business enterprises, public and private organizations and resident associations, etc. These tasks include providing the infrastructural services and other civic amenities etc. for the urban dwellers. Cities and towns are a product of complex forces that include market dynamics, over which town and city managers have only a limited control. Consequently the extent to which an individual city or town can accelerate or retard its economic, social, or for that matter, demographic growth, depend largely on internal dynamics and external factors boosting the dynamics.

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The new perspective, thus, urges the government at different levels in the hierarchy to function in collaboration with the other stakeholders, if they want to make an impact on the pace, pattern and trend of urbanization.

Urbanization, in demographic sense, is an increase in the proportion of the urban population to the total population over a period of time. Rapid urbanization has been a worldwide phenomenon in the 21st century. In developing countries like India, the challenge of urbanization becomes more serious in the context of unplanned urbanization and growing urban poverty, which is largely an extension of rural poverty. Urbanization generally indicates technological, institutional, educational, communicational, industrial and organizational development from time to time and is being brought about by development, modernization, and migration. It is also closely related with economic development and social transformation of a state or a region and stimulates each other with structural changes on a large scale. Economic development in this regard is generally associated and follows in the company of the growth of urbanization.

The census definition of urban area takes into account the following criteria: (i) all places with a municipality corporation, cantonment board or notified town area committee, (ii) all other places which satisfy these minimum criteria: (a) a minimum population of 5,000, (b) at least 75% of male working population engaged in non-agricultural pursuits, and (c) a density of population of at least 400 persons per Sq. Km.

This research paper attempts to assess the nature of urbanization, urbanism and migration in Arunachal Pradesh in the context of the recent socio-cultural and economic changes in the globalized era.

The trend and pattern of urban growth and pattern of state level migration in the context of growing spatial and economic inequality have also been analyzed in the proceeding sections explaining the increasing pace of mobility of population across the State and from rural to urban areas leading to the emergence of a new urban culture.

This research article is organized logically into ten sections as follows. Section I focuses on Regional Characteristics and Physical Setting of Arunachal Pradesh. Section II reviews Generalities and Conception of Urbanization. Section III shows the Genesis of Urbanism and Urbanization in Arunachal Pradesh. Section IV analyses Pattern and Level of Urbanization in Arunachal Pradesh. Section V discusses the Trend and Features of Urbanization in Arunachal Pradesh. Section VI examines

the Population Mobility i.e., migration in Arunachal Pradesh. Section VII searches the Problems for Urbanization in Arunachal Pradesh. Section VIII detects the Consequences of Urbanization in Arunachal Pradesh. The section IX summarizes the basic findings and puts forward a perspective for future growth and finally Section X highlights the concluding notes.

Section I

Regional Characteristics and Physical Setting of Arunachal Pradesh:

Arunachal Pradesh situated in the North Eastern part of India has 83,743 Sq. km. area and has a long international border with Bhutan to the West (160 km.), China to the North and North-East (1,030 km) and Myanmar to the East (440 km.). It also stretches from snow-capped mountains in the North to the plains of Brahmaputra Valley (Assam) in the South. Out of the total area of 83, 743 Sq. Km., the state has forest cover of about 51,540 Sq. Km. forming 62% of her total geographical area.

The proportion of arable plain land is very low. This topographical situation has direct influence on the economy of the state. From the economic point of view the whole state may be divided into three lateral belts each having a distinct pattern of economic opportunities and choice of economic development. The upper belt bordering international frontiers has very little economic opportunities as well as constrained with negligible or no facilities of modern civilization. The lower belt consisting mainly of the foot hills has intimate economic ties with the adjoining plains of Assam. The people of lower belt enjoy almost all facilities of modern life. The middle belt acted as a bridge between the upper and the lower belt.

The people inhabiting the three belts are at different stages of economic development. The level of population mobility are also distinct and varies between and within the belts due to the regional and territorial disparity in terms of amenities and facilities available based on the levels of economic development in the State of Arunachal Pradesh. The State has one of the highest per capita availability of natural resources, yet it is one of the most economically backward regions in India.

Section II

Generalities and Conception of Urbanization

The process of urbanization and economic development in many respects are interlinked with each other. It is generally accepted that the average urban dweller

have greater access to modern amenities of life as compared to the rural counterpart. This, therefore, provides a contrasting picture with regard to overall opportunities and choices available to the people at large (rural and urban dwellers) and for that reason a contrasting level of quality of life.

The variation in terms of quality of life may be attributed to historical and geographical factors that led to differential rate of growth and pattern with regard to urbanization over space and time. Thus the pattern and process of urbanization as well as the nature and extent of urban problems vary from place to place. The challenges of proper management of civic amenities in the urban centers are also not uniform.

Pattern of urbanization in the North-East region presents a paradoxical situation; while the hilly areas, with their quasi- subsistent tribal economies have been experiencing a phase of urban explosion in recent years, the valley areas having surplus producing peasant economy are experiencing stagnation in terms of the growth of urban areas (Mitra, 1997).

Urbanization as we all know is a socio economic phenomenon. It plays a significant and dynamic role in changing the overall quality of life. It transforms or enhances as well as modernizes the human societies, and serves as a significant agent in the patterning and organizing the social process in *spatio-temporal* context. This is considered to be an essential component of development which every society at one point of time must go through if it is to move from one stage of development to another. Urbanization is also considered as a necessary structural adjustment in the process of forward mobility of human society as a whole. This does not mean that one has to like many of the social transformations which follow.

Urbanization vis-à-vis social transformation is also very sensitive to public policy. The transformation is indeed inevitable but the form varies to a great degree from one situation to another. Some urban forms are more conducive to harmonious and sustainable development than other.

The general reasons for urbanization thus can be attributed to: (1) the natural increase of the urban population over a period of time. (2) The large scale migration of population from the rural areas of the state itself and immigration from other states to its urban areas (the administrative headquarters). Thus, both the push and pull factors have played their role in the migration of population from the rural to urban areas or from other states to this region on a large scale in the post

liberalization period due to educational and employment opportunities as well as expansion of service sectors.

Urbanization in this regard may also be defined as a process that is characterized by transition or take off in which a region/nation can jump out of the transition from total agrarian base to industrial society (Rao et. al, 2004). In other words, it is delimited as a process of massive shifts of labour and capital from predominantly rural to urban areas.

In fact, it is in general, have been very helpful in contributing positively to poverty reduction in the rural areas. Different levels of urbanization, however, reflect different degrees of modernization and development in the economy (Prasad, 1995). It is a multi-dimensional process and largely, it depends upon the incentives for industrial and service sector development. The opinion of Mills Becker (1986), holds that "Urbanization is an inevitable process that is experienced by all nations in their transition from agrarian to industrial and service societies and is a necessary factor behind the economic growth". What is more is that, capital accumulation, technological change and the growth of socio-economic infrastructure seem to be the most important determinants of this shift (Kundu, 2004). They are positively associated with industrial and service sector development in contrast to agriculture.

It is also true that in a growing economy, there is mounting demand of industrial and service sector products. Consequently, there is spontaneous increase in industrial and service sector production and thus, employment generation in the economy. This also follows increase of service facilities for various purposes like the distribution of increased output, financial management through banking and financial institutes as well as civic services for the population experiencing increase in income levels (GOI, 2003). Economic development, therefore, foretells industrialization and that itself promotes the concentration of people in the urban areas, where maximum attempt is made to economize the land inputs (i.e., the land requirement per unit of output being less than the agricultural sector). On the whole, growth of industrialization necessitates urbanization in particular and economic development in general. The growth of urbanization can also enlarge through availability of socio-economic infrastructure in the economy. In the modern world, problem of large urban concentrations not only affects the advanced countries but also all the areas with dense population.

In India, the trend towards concentration of urban population in a small number of large urban centers has been taking shape over a century. While the number of urban centers doubled between 1901 and 1991, urbanization increased eight-fold, resulting in a top heavy urban hierarchy. Future demographic and economic growth is likely to concentrate in and around the large cities in the country having a population of a million people or more. The demographic trends towards urbanization are accompanied by a change in the management and financing of urban development as a result of liberalization. Decentralization of municipal governance has led to a substantial reduction in budgetary allocations for infrastructural development. Greater reliance is now placed on institutional financing and capital markets for resource mobilization and on private companies for service delivery.

Many researchers and governments in the developing countries considered that the rapid growth of urban population and high primacy (concentration of population and activities in the leading cities) have a major impediment in realizing their development goals of equitable development. Several explicit and implicit policies were adopted by governments of many developing countries for slowing down the urban growth particularly the population growth in large cities, by focusing on reducing the migration to these cities from rural areas. The latest data on world urbanization, however, show that at the beginning of the twenty first century, a number of developing countries do not have even one third of their population in urban areas. There is also a considerable slowing down in the rate of urbanization as well as rate of urban population growth in most of the developing countries in the last two decades. In India, the latest census data also confirms the same.

The rural to urban migration is an important component of urbanization in most of the countries and regions. Both urbanization and migration are regarded as one of the most important indicators of economic development and social transformation of a region. Economic growth is accompanied by a gradual reduction in the relative share of agriculture and an increase in the relative share of industry and services in total output and labour force. This indicates a movement of population from agricultural areas to the industrial centers.

As a result, migration from rural areas to urban areas takes place with the growth of industrial and service sectors. So, migration and urbanization is an integral part of economic development. S. Kuznets emphasized that there is a relationship between migration and economic development that takes place in terms of the selectivity of people. He opines that migrants are dynamic, risk-bearing persons who

respond favourably to economic stimuli and have high capacity to detach themselves from traditional surroundings and adapt themselves to unfamiliar environments. Thus, the migrant people are most productive from the viewpoint of economic development in the sense that they are risk bearing section of population (Mitra, 1997, p. 1).

Section III

Genesis of Urbanism and Urbanization in Arunachal Pradesh

Any study on urbanization is constrained by definitional and conceptual problems across the countries in the world. In the Indian context, the definition of “Urban” remained same for the period up to 1957. Nevertheless in 1961 census, several modifications were made and definition of town was adopted. Subsequently 1991 census (series I, Vol. II, p.34) reviewed and adopted a definition for urban place. According to this definition urban place is defined on the basis of administrative and population criteria as:

1. All statutory towns, i.e., all places with a municipality, corporation, cantonment board or notified town area committee etc. (Administrative criterion).
2. All other places which satisfy the following criterion
 - a) A minimum population of 5000
 - b) At least 75% of male population engaged in non- agricultural activities
 - c) A density of population of at least 400 persons /sq km.
 - d) Important tourist centers and
 - e) Outgrowth of urban centers

According to the above mentioned criteria, Indian census has classified the Indian towns into six categories, such as:

Class I	Towns having more than 1,00,000 population
Class II	Towns having 50,000 – 99,999 population
Class III	Towns having 20,000 – 49,999 population
Class IV	Towns having 10,000 – 19,999 population
Class V	Towns having 5,000 – 9,999
Class VI	Towns having less than 5,000 population

Similarly, different classification of towns have been suggested by different scholars from time to time which include categorization based on density (Wilcox in Sharma, 2008), occupation (Dickinson 1964, in Sharma, 2008), technological characteristics (Mumford, 1966 in Sharma, 2008), and migration characteristics (Ray Chaudhury, 1993 in Sharma, 2008).

As far as Arunachal Pradesh is concerned all the urban centers are declared urban due to two different criteria viz: 1. based on the transformation of the urban centers from 'EOPOLIS' to 'POLIS' stage growing out of the existing villages having a market outlet or a link with a market outlet beyond the state boundary. The second criterion is based on population characteristics along with prospective and important tourist centers. The following paragraphs outline the genesis of urbanism and urbanization in the state and the region.

Urbanism and Urbanization: A Distinct Case

During the colonial period, large parts of the region of the North-Eastern States were "Excluded Areas" or "Partially Excluded Areas". Further, under the Inner Line Regulation Act, the tribal state like Arunachal remained secluded and restricted to outsiders. The entries as such were permitted based on administrative necessity otherwise outsiders were strictly prohibited entry in the tribal territorial area beyond the inner line. The British, through such measures, sought to protect the tribal culture from so called exploitation by others (the non-tribal). Tribes were thus left to themselves to pursue their traditional methods of livelihood and manage their affairs in accordance with their traditional/ancestral customs.

Consequently, the pace of urbanization in the region was negligible or very low. But after independence and particularly since the planning era began, along with the thrust of statehood in 1987, a substantial amount of investments have been made in expanding the basic infrastructure in the region and setting up of a large number of administrative headquarters and circle- administrative centers at the different levels. Such development interventions have resulted in the growth of 17 urban centers in the region at a rapid pace.

The process of urbanization and economic development are interrelated in many respects. Urbanization leads to greater access to modern amenities of life, education, health and other civic amenities/services as compared to their rural counterpart. Nevertheless, urbanization may also give rise to host of other problems like over crowding, water and sanitation problems, environmental pollution, social evils like crimes etc. On account of historical and geographical factors, the rates of

urban growth and pattern of urbanization as well as nature and extent of urban problems vary from state to state in the North East region.

The process of urbanization in Arunachal Pradesh may be attributed to the setting up of administrative headquarters at different levels and mainly administrative set up of district headquarters, and circles. Spatial variation in the level of urbanization in this hilly state gets highly accentuated due to local differences in topography and altitude as well as accessibility and nearest neighbour factors. The pattern is remarkably clear showing higher level of urbanization restricted to the river valleys of varying width. The small river valleys of Lohit, Dibang, Siang and Subansiri river in Arunachal Pradesh are experiencing urban growth at a very fast pace while the neighbouring highland areas continue to be entirely inaccessible and rural.

Thus, urbanization and development in Arunachal Pradesh is confined to the low altitude foothill zone. The process of urbanization is yet to take off in areas with a strong concentration of indigenous (tribal) population. In developing countries like India, and the economically backward states like Arunachal the challenges of urbanization becomes more serious in the context of urban poverty, and growing urban hazards due to negligence of topographical characteristics in urban planning. The table-1 below shows district wise status of urbanization in the state of Arunachal Pradesh in 2001.

Table-1: District wise Urbanization Status in the State of Arunachal Pradesh, 2001.

Sl. No	District	Total Population	Town	Urban Population		Town Class
				Total	%age	
1	Tawang	38924	Tawang	8376	21.52	V
2	West Kameng	74599	Bomdila	6693	08.97	V
3	East Kameng	57179	Seppa	15002	26.24	IV
4	Papum Pare	122003	Itanagar,	35022	28.27	III

			Naharlagun	27020	22.15	III
5	Lower Subansiri	98244	Ziro	12384	12.61	IV
6	Upper Subansiri	55346	Daporijo	15756	28.57	IV
7	West Siang	103918	Aalo,	17033	16.39	IV
			Basar	4079	3.93	VI
8	East Siang	87397	Pasighat	21965	25.13	III
9	Upper Siang	33363	-	-	-	-
10	Dibang Valley	57720	Roing	10107	17.57	IV
11	Lohit	143527	Tezu,	15015	10.46	IV
			Namsai	11747	8.18	IV
12	Changlang	125422	Changlang,	6469	05.16	V
			Jairampur	5919	04.72	V
13	Tirap	100326	Khonsa,	9233	09.20	V
			Deomali	6061	06.64	V
14	Arunachal Pradesh	1096702		227881		

Section IV

Pattern and Level of Urbanization in India, North East region and Arunachal Pradesh:

The information about total population as well as urban population in India from 1961 to 2001 is depicted in Table-2. India's population was just above 439 million in the year 1961,(17.97%), which increased to about 548 million in 1971(19.90%), about 686 million in 1981(23.31%), about 846 million in 1991(25.71%) and about 1027 million in 2001(27.78%). During the year 2005, the total population of India was about 1099 million. It is estimated that about 17 per cent of the world's population live in India with just 2.4 per cent of the geographical area of the world.

Table-2: Growth of urban population in India, 1961-2001(Million) And Arunachal Pradesh 1971-2001:

India *	Arunachal Pradesh**
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Year	Total Population	Urban Population	%age share of Urban population	%age share of Urban population
1961	439.23	78.94	17.97	NA
1971	548.16	109.11	19.90	3.70
1981	686.18	159.73	23.31	6.32
1991	846.30	217.61	25.71	12.91
2001	1027.02	285.35	27.78	20.41

Source:*Population Census, Paper II, 1981, 1991,2001.

** Statistical abstract of Arunachal Pradesh, various issues

The pattern and level of urbanization along with the growth of urban population in the entire region of North Eastern States is shown in table-3 below. The annual exponential growth rate of entire region as compared to all India scenarios is quite misleading. This can be attributed to fast growth of small towns in the region due to influx of internal and international migrants especially in the states of Arunachal, Assam, Mizoram, Meghalaya, Nagaland and Sikkim.

Table-3: Pattern and Level of Urbanization and Growth of Urban Population across N.E. States

State	% Of Urban Population					Annual Exponential Growth Rate		
Year $\Rightarrow$	1971	1981	1991	2001	RANK	71-81	81-91	91-01
Arunachal	3.70	6.32	12.21	20.41	3	8.32	9.28	7.00
Assam	8.82	9.88	11.09	12.72	7	3.29	3.29	3.09
Manipur	13.19	26.44	27.69	23.88	2	9.70	2.98	1.21
Meghalaya	14.55	18.03	18.69	19.63	4	4.87	3.10	3.16
Mizoram	11.36	25.17	46.20	49.50	1	11.79	9.57	3.27
Nagaland	9.95	15.54	17.28	17.74	5	8.49	5.58	5.27
Sikkim	9.37	16.23	9.12	11.11	8	9.55	- 3.23	4.83
Tripura	10.43	10.98	15.26	17.02	6	3.26	6.19	2.53
All India	20.22	23.73	25.72	27.78		3.79	3.09	2.73

Source: Population Census, Paper 2, 1971,1981,1991,2001.

For understanding the dynamics of urbanization and development, it would be important to analyze the spatial pattern of urban growth in different size classes of towns. During the first four census decades since independence, urban growth has generally been high in relatively backward and less urbanized states. (Kundu, 1994). This is primarily due to the fast growth of small and medium towns and emergence of new towns.

In the instant case of state like Arunachal Pradesh, a sizable proportion of these fast growing and new towns are circle or block or district headquarters where implementation of government sponsored development schemes are in full swing including the new central scheme popularly known as **JNURM** (Jawaharlal Nehru Urban Renewal Mission).

The relationship between urban growth and development, in this case, works out to be negative. This can be attributed to government investment in district headquarters and transfer of funds from center to state and from state to local bodies through a need based or what is popularly known as “**a gap filling**” approach. (Kundu, 2006) A large part of rural -urban migration into smaller towns from their rural hinterland in backward states like Arunachal can, however, be explained in terms of push factors, owing to lack of diversification of agrarian economy and pull factors, owing to demand of high skill, semi skilled, and unskilled workforce required for the all round development of the state.

Table- 4: Trend, Natures and Extent of Urbanization in the State 1961-2001

Year	Total No. of Towns	Total Population	Total Urban Population	% of Urban Population	Decennial Growth (%)	Annual Exponential Growth
1961	-	336558	-	-	-	-
1971	4	467511	17288	3.70	-	-
1981	6	631839	41428	6.56	139.63	8.74
1991	10	864558	110628	12.80	167.04	9.82
2001	17	1096702	222688	20.34	101.64	7.01

Source: Calculation based on Census Data, 1961-2001.

As observed in the table-4 above, the urban population of the state in the year 2001 was 20.34% against 27.78% for all India. In terms of absolute numbers, the

urban population of Arunachal Pradesh in 2001 was 2, 22688 against 285 million of that of India. Since 1961, the urban population has steadily increased and it has shown a considerable rise from negligible share to 20.34% of the total population in 2001.

However it is also to be taken in view that while the pace of urbanization is growing at faster rate, this considerable rise in urban population and their livelihood strategies are at different levels of economic development spread over the three different belts which are territorially different and varies in terms of economic opportunities that the terrain provides. Additionally, the pace of urbanization in the region has never attracted any external investment. The municipal Act of the state is in the pipeline and this will usher a new era attracting attention of the urban local bodies to provide for the basic amenities that generally follows in other parts of the country. The following table-5 gives the details of classification of urban towns based on its demographic characteristics and table-6 depicts the GINI coefficient ratio for the year 2001.

Table-5: Classification of Urban Centers in Arunachal Pradesh 2001

Size of Urban Place	Class	No of Units	Name of Towns	Class wise Urban Total Population
100000	I	-	-	-
50,000-99,999	II	-	-	-
20,000-49,999	III	3	Itanagar, Naharlagun, Pasighat	83855
10,000-19,999	IV	7	Seppa, Ziro, Roing, Daporijo, Aalo, Tezu, Namsai	96257
5,000-9,999	V	5	Bomdila, Changlang, Jairampur, Khonsa, Deomali	34286
<5,000	VI	2	Tawang, Basar	8290
Total		17	17	222688

Source: Calculation based on 2001 Census.

Table-6: Computation of GINI Concentration Ratio, 2001

Size of Urban	No of Units	Population	Proportion of	Cumulative of	Proportion	$X_i Y_{i+1}$	$Y_i X_{i+1}$
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Place			Unit	Population	Units X_i	Popu. Y_i		
100000	-	-	-	-	-	-	-	-
50,000-99,999	-	-	-	-	-	-	-	-
20,000-49,999	3	83855	0.1765	0.3766	0.1765	0.3766	-	-
10,000-19,999	7	96257	0.4118	0.4322	0.5883	0.8088	0.14275	0.22155
5,000-9,999	5	34286	0.2941	0.1540	0.8824	0.9628	0.56641	0.71368
<5,000	2	8290	0.1176	0.0372	1.0000	1.0000	0.8824	0.9628
Total	17	222688	1.0000	1.0000			1.59156	1.89803

GINI Concentration Ratio (GCR) = $1.89803 - 1.59156 = 0.30647$.

From the table above, the computed value of GINI concentration ratio for urban population living in various size categories of urban centers in the state of Arunachal Pradesh is 0.30647. It is a very low coefficient of urban concentration, implying that only three urban centers (as shown in Table-5) have a disproportionately somewhat large share of state's total urban population that ranges between 20,000-49,999, categorized as III Class towns. The remaining 14 small urban centers account for only an insignificant proportion of state's total urban population.

Growth of urban centers: Till 1961 census, the State of Arunachal Pradesh was entirely rural having no urban centers. Census wise trend in urbanization is shown in the following table-7.

Table-7: Census wise List of Urban Centers since 1961

Census	No. of Census Town	Name of Census Town
1961	Nil	None
1971	4	Along, Bomdila, Pasighat and Tezu.
1981	6	Along, Bomdila, Pasighat, Tezu, Naharlagun and Itanagar.
1991	10	Along, Bomdila, Pasighat, Tezu, Naharlagun, Itanagar, Ziro, Roing, Namsai and Khonsa.
2001	17	Along, Bomdila, Pasighat, Tezu, Naharlagun, Itanagar, Ziro, Roing, Namsai, Khonsa, Tawang, Seppa, Daporijo, Basar, Changlang, Jairampur and Deomali.

Source: Census Report of various years.

All these towns are administrative centers. In most cases, these places were full of forest before the establishment of administrative centers. Growth of Urban Population in Arunachal Pradesh after 1971 is shown in table-8.

Table-8: Growth of Urban Population in Arunachal Pradesh

Year	Decennial Growth Rate of Urban Population
1971-1981	139.63
1981-1991	167.04
1991-2001	101.64

Calculation based on Census Data 1971-2001.

According to 1991 census 12.80% people lived in ten urban areas while as per 2001 census 20.41 people live in seventeen urban areas. The decennial urban growth rate in the State has been recorded as 139.63 in 1971-81, 167.04 in 1981-91 and 101.24 in 1991-2001.

Section V

Trend and Features of Urbanization in Arunachal Pradesh

To find out the trend and features of urbanization in Arunachal Pradesh we need to observe what are the (a) degree of urbanization, (b) rate of urbanization, (c) growth of urban centers and (d) estimation of internal migrants to urban areas?

Degree of Urbanization: As shown in table-9, the degree of urbanization of Arunachal Pradesh in 1971, 1981, 1991 and 2001 was 3.70%, 6.65%, 12.79% and 20.30 respectively as against all Indian average 23.3% in 1981 and 25.72% in 1991. It was declared that Arunachal Pradesh was poorly urbanized state of India (calculated from population census).

Rate of Urbanization: The rate of urbanization in 1971-81 and 1981-91 was 79.73% and 83.6% respectively (calculated from population census)

Where Degree of Urbanization = $(\text{Urban population} \div \text{Total Population}) \times 100$

and Rate of urbanization = $\{(\text{Degree of urbanization in second census} - \text{Degree of urbanization in first census}) \div \text{Degree of urbanization in second census}\} \times 100$

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Regarding urbanization in Arunachal Pradesh, it should be noted that there was no urban centre in 1961 census.

Table-9: Degree and Rate of Urbanization of Towns in Arunachal Pradesh

Towns	Degree of Urbanization/Classification				Rate of Urbanization		
	1971	1981	1991	2001	1981	1991	2001
Bomdila	0.6785(VI)	0.6109 (VI)	0.6540 (V)	0.6095 (V)	-9.96	7.05	-6.80
Along	1.0305 (VI)	1.2778 (V)	1.5313 (IV)	1.5349 (IV)	23.99	19.83	0.23
Pasighat	1.0943 (V)	1.4464 (V)	1.6932 (IV)	2.0035 (III)	32.17	17.06	18.32
Tezu	0.8945 (VI)	0.9874 (V)	1.4673 (IV)	1.3690 (IV)	10.38	48.60	-6.69
Itanagar	-	1.0138 (V)	1.9136 (IV)	3.1886 (III)	-	88.75	66.62
Naharlagun	-	1.2202 (V)	1.6620 (IV)	2.4539 (III)	-	36.19	47.64
Ziro			1.0250 (V)	1.1205 (IV)			9.31
Roing			0.8069 (V)	0.9215 (IV)			14.20
Namsai			0.9224 (V)	1.0560 (IV)			14.48
Khonsa			0.8209 (V)	0.8415 (V)			2.51
Tawang				0.4063 (VI)			
Seppa				1.3645 (IV)			
Daporijo				1.4382 (IV)			
Changlang				0.5830 (V)			
Deomali				0.5525 (V)			
Basar				0.3495 (VI)			
Jairampur				0.5396 (V)			

Thus, to understand the dynamics of urban growth there is fundamental and pertinent question about migration which holds a place of prominence in a geographical analysis of population change in an area. (Trewartha, 1969, p.137). Migration is most fundamental to the understanding of continuously changing space

content and space relationship of an area. The trends in migration have also been considered as a sensitive index of changing pattern of economic opportunities in an area. The section below highlights the population mobility, reasons and causes of migration in the state of Arunachal Pradesh.

Section VI

Population Mobility in Arunachal Pradesh

The patterns of urbanization of Arunachal Pradesh in particular have been accelerated by migration and natural increase to a remarkable extent. Naturally, the impacts of migration have been heavier on urban areas as these are more accessible and attractive to migrants. Thus, our main concern is to estimate and analyze the internal migration in the urban centers of the districts of Arunachal Pradesh classified by direction of movement and distance covered on the basis of 'place of birth.'

The average annual growth rate of population of north eastern state is much higher than the all India average during 1961-71 and 1971-81 period. This is due to only in-migration in north-eastern states.

Internal migration is a very important component in the population structure of Arunachal Pradesh. The share of mobile population to total population is the highest among the states of North-Eastern India. According to 1971 census, the percentage of internal migrant population was 31.83% of the total population of the state and it has increased to 35.58% of the total population of the state in 1981 census. This can perhaps be attributed to the following reasons:

- (i) The policy of NEFA administration which was formulated to develop the territory with the politico-administrative 'main stream' without disturbing the tribal ethos and sentiments and bringing all types of workers from outside of the state.
- (ii) Large number of military personnel in the border districts of the state after Indo-China war in 1962 is deputed.
- (iii) The fast development of the state and the implementation of various development projects are considered after emerging as a union territory in 1972.
- (iv) Government housing facilities are given to the people from other states serving in this state.

In the state of Arunachal Pradesh, the share of total internal migrants varies between 26.41% in Tirap District to 47.87% in Dibang valley district while the share of male migrants to total migrants varies between 33.50% in Upper Subansiri to 58.95% in East Siang District.

Observing the share of migrants to total population, Dibang Valley, Lower Subansiri and Lohit District records the highest share followed by East Kameng, West Siang, Upper Subansiri and East Siang in the moderate category and West Kameng and Tirap in low category. Reasons for urbanization: (1) The first reason is obviously the natural growth of the urban population over a period of time. (2) The second being the large scale migration of population from the rural areas of the state itself and from outside the states to its urban areas. Both the push and pull factors had played their role in the **migration** of population from the rural to urban areas or from other states to the states on a large scale in the post liberalization period due to employment opportunities and expansion of the service sectors along with opening of technical institutions of higher learning.

Reasons and Causes of Migrations

There are some categorical as well as general factors which force the people to move from their birth place to another place. These factors are (i) political issues, (ii) better facilities and amenities of life, (iii) growth of industries, (iv) development of cities, (v) the expansion of irrigation system, (vi) employment opportunities, (vii) education facilities, (viii) medical facilities and (ix) expansion of other services etc.

There may be more than one or several reasons for increasing urban population in a country or a state. In the instant case, natural growth rate of urban population is of course, one reason. Secondly, re-classification of previously rural population centers as urban and net migration from rural to urban areas is the other major reasons. In this context, a net gain of migrants from other countries like Bangladesh, Tibet and Myanmar could also be important. Apart from the continuous migration of people from rural to urban areas, a major reason for this shift is the rapid growth in the small number of towns reclassified as census towns in recent years adding to 22 urban centers by the end of the year 2008.

There is a consensus among researchers concerning the determinants of migration. Migrants tend to move from areas of lower economic opportunity to those of higher economic opportunity. Migrants tend to find jobs quickly after moving. Yap (1977) and others have shown conclusively that migrants improve their income over their rural options immediately upon finding an urban job. Urbanization and a great

deal of rural-urban migration are inevitable consequences of economic development (Bhattacharya, 2002).

In the instant case for Arunachal Pradesh urban centers are economically dynamic places not only because of the agglomeration effects commonly considered, but also because they are places where ideas spread and people learn about new goods or new ways of doing things. Majority of the urban centers in the state are functionally administrative and military in nature as the state has a strategic location bounded by International border.

Internal Migration: The development indicators which are likely to exert influence on the total migration in Arunachal Pradesh can be grouped into three categories as given below:

- (i) Economic Indicators
- (ii) Socio-Demographic Indicators and
- (iii) Indicators of Infrastructural Development
- (iv) Changing nature of religious composition of population

Migration is now recognized as an important factor in determining plans for social and economic development, especially in an under developed states like Arunachal. The economists and demographers alike are interested in the relation of migration to regional economic growth, business cycle, the supply of skilled and unskilled labour, the growth of industry, outflow and inflow of money income, wage difference between the place of origin and the place of destination of migrants etc. Similarly, the socialist is interested in the social and cultural amalgamation of the migrants as well as the general population in the place of destination.

Migration in Arunachal Pradesh: The patterns of urbanization of Arunachal Pradesh in particular have been accelerated by internal as well as inter state and international migration to a remarkable extent. Naturally, the impacts of migration have been heavier on urban areas as these are more accessible and attractive to migrants. Thus, our main concern is to estimate and analyze of the internal migrants in the urban centres of the districts of Arunachal Pradesh. The average annual growth rate of population of north eastern states is much higher than the all India average during 1961-71 and 1971-81 period. This is due to only in-migration in north-eastern states.

Internal migration is a very important component in the population structure of Arunachal Pradesh. The share of mobile population to total population in this state

is the highest among the states of North-Eastern India. According to 1971 census, the percentage of internal migrant population was 31.83% of the total population of the state and it has increased to 35.58% of the total population of the state in 1981 census. We can consider some reasons behind this.

(v) The policy of NEFA administration which was formulated to develop the territory with the politico-administrative 'main stream' without disturbing the tribal ethos and sentiments and bringing all types of workers from outside of the state mainly for administrative purpose constitute the major chunk of floating population in the state.

(vi) Large number of military personnel in the border districts of the state after Indo-China war in 1962 is deputed mainly for military purpose as the state has a strategic location.

(vii) The fast development of the state and the implementation of various development projects are considered after evolution of the then union territory in 1972 to statehood in 1987.

(viii) The housing facilities are provided to the people from other states serving in this state.

Section VII

Problems for Urbanization in Arunachal Pradesh

"Urbanization is still at a nascent stage in the Eastern Himalayan region of Bhutan, Arunachal Pradesh, Sikkim and the hills of Darjeeling in West Bengal. In the Indian portion of the Eastern Himalayas, the history of the growth of towns does not go back beyond the late 19 century-while urban centers emerged in Bhutan only in the 1960s. Most of the hill urban centers that have subsequently emerged are small with population even less than a 1000 in some cases.

The problem of urban development is a complicated process in the Himalayas as the entire human habitation is largely controlled by the natural environment. The unstable nature of terrain, heavy rain, soil erosion and mass wasting create many problems in the physical distribution of the towns and sometimes further complicates the situation in the long run.

Problems are accentuated by the uneven distribution, unbalanced growth and disparity in the size of these small towns. Unplanned developmental activities,

particularly concrete modern construction are increasing day by day without consideration of the risks and vulnerabilities due to earthquakes. Population pressure is forcing people to construct their houses on hill tops and slopes, and thus disturbing the natural slope and making them prone to landslide hazards. The point of concern is not only of the increasing population, but also of the urban character in the delicate eco-system which is prone to natural hazards.

In fact, everyone contain a desire to settle down in urban towns which have developed and mushroomed over the years. However, the land resources for urban settlement are limited and, thus, almost all the capital, urban and business towns in these region have reached the critical level of their load bearing capacity. Due to paucity of land in the plain areas and valleys the local inhabitants have started encroachment of land on hill tops and slopes for construction of residential and commercial complexes. In this process of unregulated constructions, people have even started occupying natural drain areas for construction of buildings, misusing the modern construction technology by creating tunnel passage to the natural drain without due consideration to the volume of rainfall water in the catchment's area. Slope cutting and blocking of the natural drains in an unscientific manner are causing serious threat to the hill slopes and settlements.

Section VIII

Consequences of Urbanization in Arunachal Pradesh

1. Rapid mushrooming of squatter settlements on land pockets may be observed as usual fallout of urbanization. The factors identified for the formation and growth of squatter settlements are poverty, absence and inadequacy of urban planning, migration, economic development of urban centres, shortfall in existing housing stock, political reasons, refugee influx especially Bangladeshis, Tibetans and other miscellaneous spatio-demographic reasons.

2. As the demographic trends unfold, the contours of urban life in almost all urban centers in the State must be in a flux. The world is in the midst of an epochal change characterized by an ongoing fundamental economic restructuring towards ever escalating pace of urbanization, driven by globalization and the revolution in information and communication technology which in turn, impinge upon practically all spheres off human life. The trend of the increase in urban population since 1971

(census year) will be more in the next decades, which will lie crux of the problems seen in different cities in India.

1. As urban centers grow and evolve, certain other paramount challenges come up like ensuring adequate urban infrastructure, its improvisation and up gradation, infrastructure investment, management. Appropriate macro economic policies which are in tune with the rising urban demands must alone remain relevant and useful. In view of the huge challenges facing urbanizing the State, its urban demand appropriate shifts in the national macro economic policies to ensure raising of infrastructure investment as well as facilitating fresh approach to modern planning and professional management of urban centers including development of effective mechanisms for disaster management.

2. Rapid rate of urbanization brings in its wake the increasing number of environmental, economic and social problems that adversely affect health and well-being of urban dwellers. These are already seen in the urban centres due to rapid unscientific deforestation. Urbanization up to a certain level seems to have associated with good health. But most densely developed artificial urban environment seems to be associated with negative health outcomes. Unplanned urban growth is often associated with poverty, environmental degradation and population demands that outstrip service capacity. These conditions place human health at risk (Judd, 2002). Patterns of immigration, migration, change in the global economy and sharpening the income inequalities are identified as having a direct bearing upon urban health.

Section IX

Findings

As highlighted in the foregoing sections it is in these terms of the spatial character due to special emphasis on the investment on infrastructure and economic development, guided by the national interventions and policies that is consequential in the emergence of 17 administrative urban centers of Arunachal Pradesh by the year 2001 and 22 urban centers at the end of 2008.

Arunachal Pradesh is one of the poorest states in Indian economy. It is not only poor in economic development but also in human development. In fact, its

performance in human development is worst among the major non-special category states in India. In terms of urbanization, Arunachal Pradesh is one of the least urbanized states in India. In spite of substantial growth of urban population in the State, the proportion of urban population to total population is about 20.41 only as per 2001 census. This is comparatively very low in contrast to most of the states of the country. In addition, the level of urbanization in the State also varies substantially from district to district. Briefly, urbanization in Arunachal Pradesh reveals one important feature: First, the low level of urbanization and its inter-districts variations. It is expected that slowing down of urbanization not only puts pressure on already crowded agriculture but also widens disparities in the rural development across the districts of Arunachal Pradesh as well as rural-urban disparities within the less urbanized districts. This is a matter of serious concern and requires attention from national policy makers and planners. This also provides the planners and administrators an opportunity to take corrective actions in order to make the towns more conducive for economic and social development and improve upon the quality of life with respect to physical and social environment. Since there is migration of unskilled labour from villages to urban centers for their livelihood and that is leading to poverty alleviation in the rural areas, it is creating disturbance and high pressure of population in the towns which need more investment in social amenities. The government has to create some facilities in the form of vocational training and extension centers to upgrade the skills and technical competency of rural labour so that they can be easily absorbed in the industrial and service sector. There is also need to improve the urban infrastructure, as it is very supportive to employment generation and making the towns as an engine of economic growth.

Urbanization in Arunachal Pradesh is mainly due to administrative expansion and not due to industrialization as it is seen in developed states like Gujarat, rather than the growth centers. These urban centres can be termed as 'induced' urban centers as opposed to the 'sequent occupancy' of urbanization process of plain areas. It can also be safely said that the growth of urban settlements in Arunachal Pradesh is not an outcome of social process; rather, it is the result of conscious politico-administrative efforts (Mitra, p.159). Again migration has played an important role in the urbanization process of Arunachal Pradesh.

Therefore, sustainable development in urban areas in Arunachal Pradesh may not be expected as the resources of government are shrinking. Moreover, there are no statutory bodies in urban areas that can look after the development of towns. The urbanization in Arunachal Pradesh is going on in the way of unplanned growth of

buildings, residential houses and complexes, commercial buildings. Thus, the impact of urbanization is destructing the scope of social forestry and leading to ribbon development in all urban areas of the State especially in the capital complex. The unplanned construction is leading towards land slides, soil erosion, water logging especially during rainy season and loss of fertility of nearby land. Again, it is creating sewage problems and traffic congestion.

Conclusion: The level of disparity in the rate of urbanization can be minimized by giving importance to socio-economic development between rural and urban areas. There is need of broad based policy to urbanize the poor State like Arunachal Pradesh in the interest of overall economic development of the country. The author can be reached through rkm_1966@yahoo.co.in

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