

2.PROCESS OF URBANISATION

2.1. INTRODUCTION

Ever since 2500 BC, Urban places have played an important role in the evolution of India's political, economic, social and cultural life. Through this long period of 4,500 years the proportion of the country's total population living in urban areas has fluctuated between 5.0 to 27.8 percent in 2001. The overall available statistics, however, hide the more significant events of the rise and fall of individual cities and evolutionary systems of cities, which clearly has made a lasting impression on the country's cultural and social advancement. The past and present impact of cities, on people's lifestyle cannot by any standards be considered as a simple and/or mono-dimensional process. On the other hand, the emergence, spatial spread, growth and decline of cities, have meant different things at different points in reference to time and space. Normally, not one but several processes of urbanisation work at any given point in reference to time and space. All such processes are interdependent and inter-related, yet vary in terms of their underlying causes and the manifestations of their impacts. Indian society has undergone through a process of urbanisation, as a consequence of a variable of time, a concomitant of outside intervention and the locational potential of place like Ahmedabad region with Ahmedabad as an urban settlement and its capacity to absorb and adopt new trends of progress.

Urbanisation in the study region as well as in the country has become an uncontrollable phenomenon inducing changes in the adjoining vast areas including areas where it has not been required. However the history of

urbanisation in India as well as in the study region reveals, broadly, four processes of urbanisation at work throughout the historical period i.e.

- a. The emergence of new social relationships among people in cities and between those people living in the adjoining villages through a process of social change;
- b. The rise and fall of cities with changes in the political order;
- c. The growth of cities based on new productive processes, which alter the economic base of city; and
- d. The physical spread of cities with the inflow of migrants, who come in search of means of livelihood as well as to adopt the new way of life.

2.2. URBANISATION AS A SOCIO-CULTURAL PROCESS

For generations Indian society has worked its best as a rural culture. However, unprecedented urbanisation has created greater imbalances in various sections especially in reference to the influence of migrant population to the urban areas. Not only did the rural economy become the main sufferer but the living environment in the urban territories to had started degenerating. Cities are social artifacts and have originated as a result of the emergence of the ruling classes i.e. the people who have controlled and regulated the distribution of goods and services within the society as a whole. The literate and the educated upper class people supported the rulers for this task even this was backed by the militia, and host of servants and occasionally slaves. Thus, the early tribal or folk societies were transformed into present or feudal societies in which the urban foci played a crucial role. However, the present or the feudal society was formed as a result of invasion by the people representing different

ethnic groups. In these situations most of the urban rulers invariably were outsiders, while the rural people represented the original population. As a result the relations between the country side and city were characterized by servitude of the rural people to urban dwellers.

In the indigenous process, a rural society undergoes transformation as a result of evolutionary changes through a slow, gradual and accumulated change due to the active influence of local factors. It takes a long time to perceive the growth and change however simultaneous growth occurs practically in all aspects specially, physical, economic and social etc., when outsiders invaded the present and/or feudal society. The existing urban places recorded a considerable social change depending on the diversified role played by the outsiders. The outsiders representing various cultures came as merchants, mercenaries, or as rulers. They brought with them their customs, dresses, religion and social values. The pace of change was dependent on the acceptability, accommodatability or resistance of the rural entity against such developmental forces. With such cross-cultural interactions number of new societies emerged in which the outsiders eventually became indistinguishable from the local population.

In recent times, the mobility of people between and within regions, states and countries with the flow of information through the mass media, have contributed towards the change in urban as well as rural society. However, in this process the urban places act as transmitters and interpreters of outside influences. The cities today stand apart from the countryside in terms of the higher degree of its acceptance of outsiders and cross-cultural influence. Over a period of time the cities have become the melting pot of people with diverse ethnic, linguistic and religious backgrounds.

Ahmedabad City Taluka is a typical example of the urban territory which underwent an indigenous urbanisation, and was even affected by colonial and industrial influences. Here the pattern of growth has been concentric in certain areas and sectoral in others. One clearly finds the blend of tradition in certain clusters of settlements, like urbanisation as a socio-cultural process not only has helped in transforming the folk and peasant but also the feudal village societies as has been witnessed in number of sample villages during the field work by the scholar.

2.3. URBANISATION AS A GEOGRAPHICAL PROCESS

The proportion of a country's total population living in urban areas has generally been considered as an indicator used for measuring the levels of urbanisation. Since the industrial revolution, which began in the latter half of the 18th century, most of the western countries have experienced rapid urbanisation, in the sense that the proportion of urban population to total population has increased steadily from around 10.0 per cent to nearly 80.0 per cent. However in India, the proportion of urban population to total population remained static at about 10.0 per cent until 1931. Thereafter it increased to 18.0 per cent in 1951 and was around 24.0 per cent in 1981. Since 1951, there has been a remarkable growth of larger cities. Their share in the total urban population has increased from 44.0 percent in 1951 to 73.83 percent in 2001. Ahmedabad emerged as the largest city of Gujarat state and the seventh largest city of the country. The growth of Ahmedabad and its adjoining territory known as Ahmedabad City Taluka from a major trading centre of Gold, Silk and Cotton since medieval times to become the Manchester of India in 1940s. This clearly reflects the

continued process of its distinctiveness of enterprise and business leadership. Gillion (1968) rightly expressed that certain important cities like Bombay, Calcutta, Madras and Kanpur, Ahmedabad was not created by British. However, Ahmedabad with its adjoining areas remained true to itself, successfully adopting the emerging industrial and commercial skills and withholding its traditional social set up, clearly reflecting the continuity of past and present simultaneously. This means that there has been a major shift of population especially to larger cities, while most of the smaller towns have not shown equal growth rate.

Population growth in urban areas is partly a function of natural increase in population and partly the result of migration from rural areas as well as from the smaller towns. An increase in the level of urbanisation, that is an increase in the proportion of population living in the urban areas, becomes possible only through continued inter and intra regional in migration of people from rural to urban areas. Hence, migration or changes in the location of residence of people clearly refers to a basic mechanism of urbanisation. This is essentially a geographical process that involves the movement of people from one place to another.

The spatial movements can occur in many ways, and not all of these may lead to urbanisation. For example, people in India do migrate from one village to another. Such rural to rural migration is recorded any time and in any season. Such migrations are substantially explained by the permanent and temporary movement of agricultural labourers from densely populated areas to the areas of increased agricultural activity and/or potential areas. This type of migration hardly has any effect in the study region. On the other hand, three major types of spatial movements of people relevant to

the process of urbanisation include (i) the migration of people from rural villages to towns and cities, (ii) the migration of people from smaller towns and cities to larger cities and capitals, and (iii) the spatial overflow or shift of metropolitan population into the adjoining villages located on the peripheral urban fringe areas as has been noticed in the study region. The first type leads to a general process of urbanisation of macro-urbanisation, while the second leads to metropolisation, and the third leads to a process of suburbanisation.

2.3.1. MACRO URBANISATION

The level of urbanisation remarkably remained stable in India from the 6th century BC to AD 1900. Throughout this long period the level of urbanisation was never higher than 12.0 per cent, nor was it ever lower than 5.0 per cent of the total population. Since 1900, however, there has been a slow but steady upward trend in the level of urbanisation. By 1981, India's urban population reached 159 million people. Perhaps the largest in the world, constituted about 24.0 per cent of the total population. The increase in the urban population is substantially high due to rural-urban migration. During 1961-71 about 24 million people migrated from rural areas to urban areas in India. Currently, every year about 3 million rural people migrate to the cities, and the flow certainly shows a steady increase.

Rural people in India migrate to cities in small trickles rather than large flow. An important aspect in rural-urban migration is the push factor that is the increasing pressure of population in rural

areas and the consequent poverty of the people. However, the proportion of people living below the poverty line has been marginally higher in rural, than to urban areas. However, the rural poor are attracted to the cities, where employment opportunities as perceived by them are greater and region under study is not an exception to this. As compared to the slow growth of modern industries and tertiary activities in Indian cities, despite the decline of textile, available evidences suggest a revival of the local economy after 1990-91. The Ahmedabad region could provide adequate jobs for all intra and inter migrants. The result is that the rural poor eventually ended up as the urban poor, however marked reduction in number of households in the lowest income group during 1985-95 was recorded. There has been little attempt to understand the causes of rural-urban migration and also to fully understand its emerging consequences.

It is a known fact that all rural-urban migrants are not poor or illiterate. In fact the rural rich also migrate to cities in greater proportion to their numbers than the rural poor. There is a tendency that the better educated and skilled workers from the rural areas have migrated to the Ahmedabad City Taluka. This drains the rural areas of their human resource and adds to the city's skilled manpower. Such migrants have been contributing significantly to the urban economy and polity. At times some of the rural migrants occupy positions of power and influence. Over

the period of time it has become a common feature where an influential urbanite boasts of his rural background.

Interestingly, rural-urban migration has generated a parallel rural as well as urban society in the urban areas, in which the Varna and caste system too have perpetuated. The lower castes from rural areas continue to dominate the lower status jobs even in cities, while the higher caste tends to obtain higher status jobs. The social status of the scheduled caste shows a little difference between urban and rural areas.

Both the rich and the poor from rural areas migrating to the urban areas use family and social links to establish themselves in the city areas. In the city, people congregate in dwellings, on the basis of family, village and caste relationship and the trend is followed in Ahmedabad City Taluka also. Thus the city instead of contributing to the loosening of family, caste and religion affiliations, often tends to increase as has been noticed in the study region during the field work.

2.4. URBANISATION AS AN ECONOMIC PROCESS

A classical view of urbanisation characterizes an urban settlement as an economic parasite thriving on the agricultural surplus produced in its hinterland. This view, which had, perhaps, some value when considering the emergence of ancient cities from a predominantly present society, is no longer tenable in the period post industrial revolution. Today, the city regions have become the focal point of productive activities. They exist and grow on the strength of their existing economic activities. In addition to

these, they also provide services and goods to its hinterland which becomes their territory to a large extent due to the extension of the city limits and economically remain dependent on the city. Farmers also move to the city to procure the modern inputs i.e. HYV seeds chemical fertilizers, irrigation pumps, tractors and agricultural equipments etc. Similarly they also move to the urban areas to purchase a wide variety of consumer goods i.e. Transistor sets, T.V. sets, Bicycles, Watches, Clothing, Footwear, electrical items and other household items. The city offers a wide variety of goods and services and these are sold and provided both within and outside the city area. The economic relations with its hinterland and other urban areas of the state as well as of the country even the world is important to it. It is the nature and level of the economic activity in the city that generates growth and, further accelerates the pace of urbanisation. Considering this facts, urbanisation in modern times certainly has become an economic process.

The nature and composition of economic activities in simple terms, relates to production at three levels i.e. primary, secondary and tertiary. The character of urbanisation mostly depends up on the type of economic production taking place in the city.

2.4.1. PRIMARY PRODUCTION AND URBANISATION

Primary production includes agriculture, fishing, forestry and mining activities. It is well known, particularly since AD 1850 that a large number of towns have emerged in India with the expansion of mining activities. The entire coal region extending over West Bengal, Bihar and Orissa have a number of mining

towns, the chief among which are Jharia, Raniganj, Keonjhar and Asansol. With emergence of the textile industry Ahmedabad also developed extensively during the later half of the nineteenth century around villages on its periphery. These villages gradually turned into industrial townships, slums and chawls mushroomed around the textile mills and other factories. The list of mining towns throughout the world runs into hundreds. They not only include coal mining towns, but also towns specializing mining of iron ore in the country from Rajasthan to Manipur and Tamil Nadu to Kashmir. Advanced technology is being adopted for mining activities in the recent years. On the other hand, apart from a large number of unskilled labourers over the period of time the proportion of highly skilled workers engaged in the mining activities too has significantly increased.

2.5. PARAMETERS OF URBAN GROWTH

Urban growth connotes a wide and complex phenomenon and is amenable to analyse various diverse aspects. At times it is studied in terms of temporal variations in a multiplicity or associated elements such as the proportion of urban population to the total population, number of urban centres, population size and area expansion of individual town, living environment in the town / city, enhancement of rural-urban relationship and various others related issues and other aspects. Although they have their own merits and demerits and can hardly cover all aspects of the urban growth. Moreover, each has its own specific problems of measurement and the availability of suitable statistics.

2.5.1. POPULATION SIZE OF TOWN

This is the most important element and fundamentally signifies the dimensions of urban territory and the process of its expansion. The availability of population figures related to individual urban centres for varying periods from the census reports and Municipal records facilitates their analysis and interpretations. The usefulness of such data is however substantially impaired due to the frequent changes in the statutory limits of certain towns/cities over the period of time as is the case of Ahmedabad City Taluka.

2.5.2. PHYSICAL SIZE

A positive change in this element encompasses both the horizontal expansion of urban territories as well as the vertical rise of buildings to accommodate the increasing population and expanding activities. As the figures of horizontal expansion clearly show, the expanding territory of the towns/cities invariably includes a greater proportion of vacant open land and adjoining rural territories within the municipal limits. This makes the temporal comparison of urban areas difficult, and impairs the density of population.

2.5.3. FUNCTIONAL BASE

This signifies the functional and economic base along with the nature and type of infrastructure available in urban areas, while it appears to be a highly significant criterion for assessing the

growth of a town. However there is not one single concrete measure for its assessment. The number of industrial units with employment figures, and other services, commercial and administrative units together are considered as indicators. Similarly considering the need, the total output of all these units and the income generated by them too are used. However, seldom are records of such data are properly maintained while the labourers involved are also far from being commensurate with the output of such an exercise. Some attempts have been made in this direction, in deciphering the changes in the functional structure of the study region. With the decasualisation of labourers an increase in the number of regular workers between 1987-88 and 1993-94 has been recorded. This clearly indicates the further growth in the informal sector of the economy. This indicator has been used to identify and underline the significance of dominant and/or stagnant sectors influencing the economy of the Ahmedabad City Taluka with an impact of Ahmedabad city.

2.5.4. HINTERLAND

Towns and/or cities hardly can afford to be self contained entities and function essentially in the context of their hinterland which makes their *raison d'etre*. Thus the size and shape of hinterland and the degree of the dominance of the city over it certainly makes it a very important element of the status and its functional potency. However, most of these formidable emerging

problems are considered in reference to the functional base of town/city.

Thus these elements of size and status of urban centre therefore are rarely used while studying the growth of towns, and one ultimately falls back on the population size which is of primary importance and is mostly considered for this purpose.

As regards, the growth in total urbanisation of a region is taken collectively, however the limitations are even more stringent. Thus little can be done beyond pursuing the variation over the period of time in reference to the total urban population, its proportion in total population, size-class and structure of town, and the composition of workers that forms the economic base of town.

2.6. MEASUREMENT OF URBAN GROWTH

The growth of urban population is an outcome of (i) Natural growth i.e. excess of births over deaths (ii) Induction of rural settlements into urban settlements and (iii) Net in-migration (excess of immigration over out migration). Normally, the rate of natural growth is supposed to be almost same in both the rural and urban areas as the reproductive change is roughly the same in both cases. Hence there can be very little addition on this account in the process of urbanisation. The classification and/or upgrading of the converted rural settlements, when they grow and fulfil certain stipulated conditions, and become an important factor in the growth of urban population. In any region where the influence of this factor is not profound and the rate of urbanisation is influenced by the rate of net in-

migration into the urban settlement, the magnitude of the net change is expressed in reference to the initial size of population over and above where this net change has been recorded.

Urbanisation is the most important feature of human evolution. In the contemporary period, throughout the world large urban centres have sprung up and urbanisation has become a universal phenomenon, and now greater proportion of population resides in the cities of the developed countries (206, Tripathi, 1999, p.242). At present urbanisation has become an index of development. The countries which are highly urbanised are considered as developed countries, with the growing impact of modernisation and changing nature of the human society. At present urbanisation is being accepted as a way of life and it has become the essential part of the growth as well as an important index of prosperity along with materialistic progress of Indian society. In the post independence era continuous migration of rural population into the urban centres and rapid growth of urban population has become a dominant and universal phenomenon, and the region under study is not an exception to this.

2.7. TRENDS OF URBAN GROWTH

The factors which promoted urban growth in early historical period were of historic significance rather than of economic, while in post independence era it has been governed by the technical and economic factors which have been responsible for industrial revolution and have been positively correlated with the process of urbanisation. This is how urbanisation is the spatial concomitant phenomena that initiates the social changes,

modernization and also encourages population concentration into selected pockets.

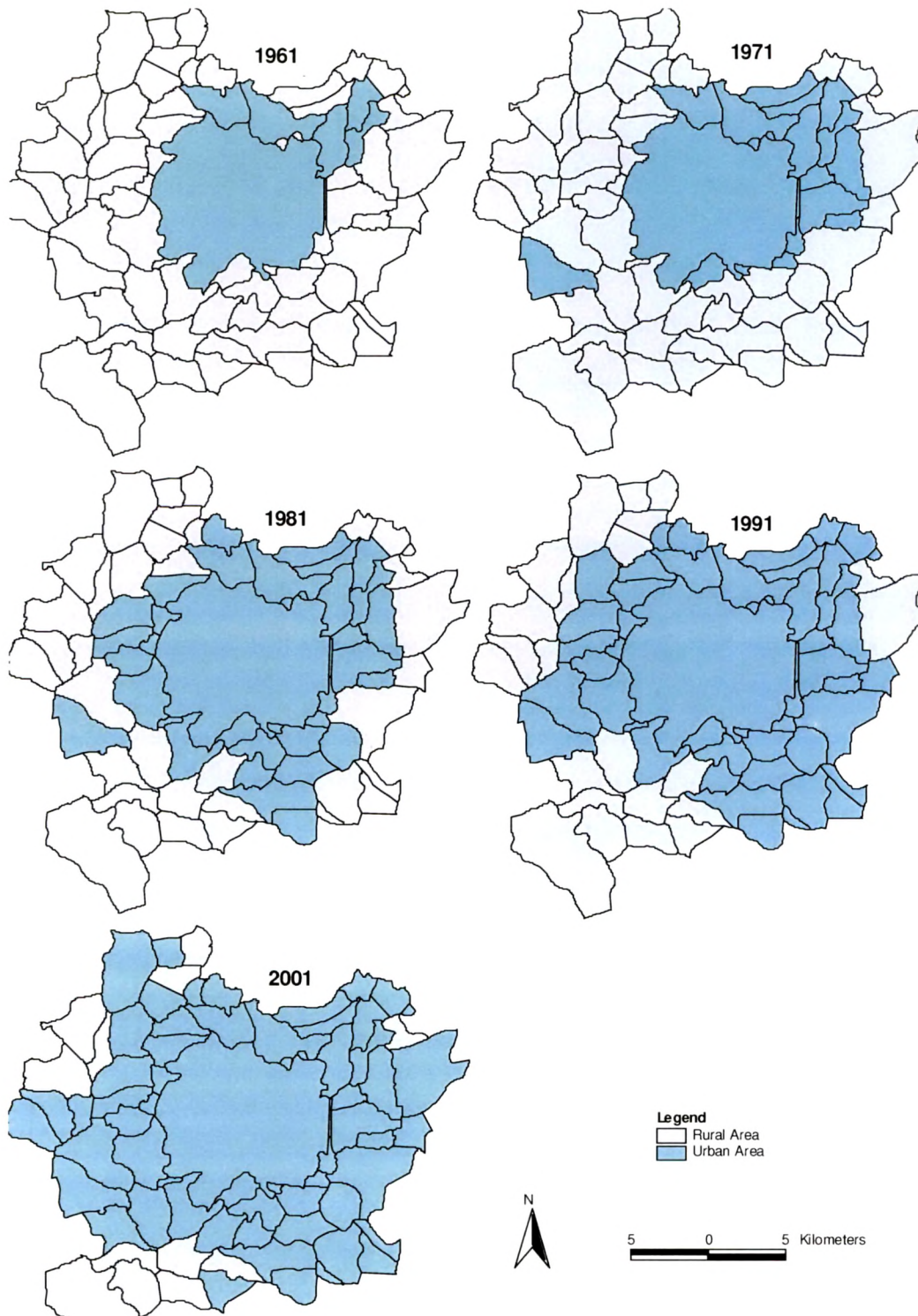


Plate 2.1 – Ahmedabad City Taluka Region: Urban Expansion

Source: Prepared from Base Map, BISAG, Gandhinagar

Urbanisation is considered as an indicator of change in occupation, socio-economic values and systems, way of life, degree of socio-economic awakening, its level of awakening and level of interactions. Urbanisation in demographic sense is an increase in the proportion of the urban population (u) to the total population (t) over a period of time. As long as urban and total population increases there is urbanisation (206, Tripathi, 1999, p.243). Thus, it is quite evident that not a single but a combined set of socio-economic as well as demographic factors are used for measuring the process of urbanisation in a region.

Creation of a new urban centre, initiates the conversion of villages into urban territory as well as migration of people from rural to urban areas are considered as the basic tenets of urbanisation accommodating unemployed and employed persons with lower income. Wide variety of urban facilities like higher education, technical and professional trainings, hospitals, sanitation and growing employment opportunities etc. too have been attracting rural people to adopt urban life style. Thus, the **push** from rural side and **pull** from urban side has been responsible for urban growth in addition to the natural growth of existing urban centres.

The area of Ahmedabad City Taluka as the study region in 1961 in all had the territory of 27 villages and 5 urban areas under the region (Plate 2.1). Gradually, growth of industrial areas gave rise in urbanisation level resulting in surrounding villages becoming a part of the city growth. The change in the study area has been made due to the inclusion of various villages and towns from Daskroi taluka in the Ahmedabad City limits. The area of the present study region has been extended according to the Government of Gujarat notifications in 2006 and all the villages and out

growth areas listed in the notification are tabulated in the Table No.2.1 and 2.2.

Table 2.1 - Ahmedabad City Taluka - Growth of Area and Population (1961-2001)

	1961	1971	1981	1991	2001	
Area	Total (km ²)	290.15	286.7	317.7	292.6	382.78
	Percentage change (%)		-1.19	10.81	-7.90	30.82
	Rural (km ²)	166.27	128.1	125.7	50.1	8.90
	Percentage change rural (%)		-22.96	-1.87	-60.14	-82.24
	Urban (km ²)	123.88	158.6	192	242.5	373.88
	Percentage change urban (%)		28.03	21.06	26.30	54.18
Population	Total population	1260944	1803085	2530920	3250464	4220048
	Percentage change (%)		42.99	40.37	28.43	29.83
	Rural	54943	42135	23510	9607	4551
	Percentage of rural population (%)	4.36	2.34	0.93	0.30	0.11
	Percentage change (%)		-23.31	-44.20	-59.14	-52.63
	Urban	1206001	1760950	2507410	3240857	4215497
	Percentage of urban population (%)	95.64	97.66	99.07	99.70	99.89
	Percentage change		46.02	42.39	29.25	30.07

Source: District Census Handbook, Year 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

Table 2.2 - Ahmedabad City Taluka Region - Growth of Area and Population (2001-2006)

	1961	1971	1981	1991	2001	2006	
Area	Total (km ²)	290.15	286.7	358.56	355.01	504.33	582.84
	Percent change		-1.19	25.06	-99.01	42.06	15.57
	Rural (km ²)	166.27	128.1	125.7	50.1	8.90	0
	Percent change rural		-22.96	-1.87	-60.14	-82.24	0.00
	Urban (km ²)	123.88	158.6	232.86	304.91	495.43	582.84
	Percent change urban		28.03	46.82	30.94	62.48	17.64
Population	Total population	1260944	1803085	2601583	3350986	4452919	4487348
	Percent change		42.99	44.29	28.81	32.88	0.77
	Rural population	54943	42135	23510	9607	4551	0
	Rural population as percent of total population	4.36	2.34	0.90	0.29	0.11	0.00
	Percent change		-23.31	-44.20	-59.14	-52.63	0.00
	Urban population	1206001	1760950	2578073	3341379	4448368	4487348
	Urban population as percent of total population	95.64	97.66	99.10	99.71	99.89	100.00
	Percent change		46.02	46.40	29.61	33.13	0.88

Source: District Census Handbook, Year 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

It is evident from the Table no. 2.1 that for Ahmedabad City Taluka the proportion of urban population to total population has been constantly increasing between 1961 and 2001. In 1961, 95.64 per cent of total population of the region was residing in urban centres, which rose to 97.66 per cent in 1971 and 99.07 per cent in 1981. In 1991 the proportion of urban population to total population reached close to 100.0 per cent standing at 99.70 per cent and difference between the proportion of rural and urban population has been constantly diminishing and the urban share has reached to 99.89 per cent in 2001. In the region, urbanisation has

proceeded at faster rate of growth and as a result in last four decades urban centre has experienced an increase from 95.64 to 99.89 per cent of urban population in proportion to total population (Plate 2,2).

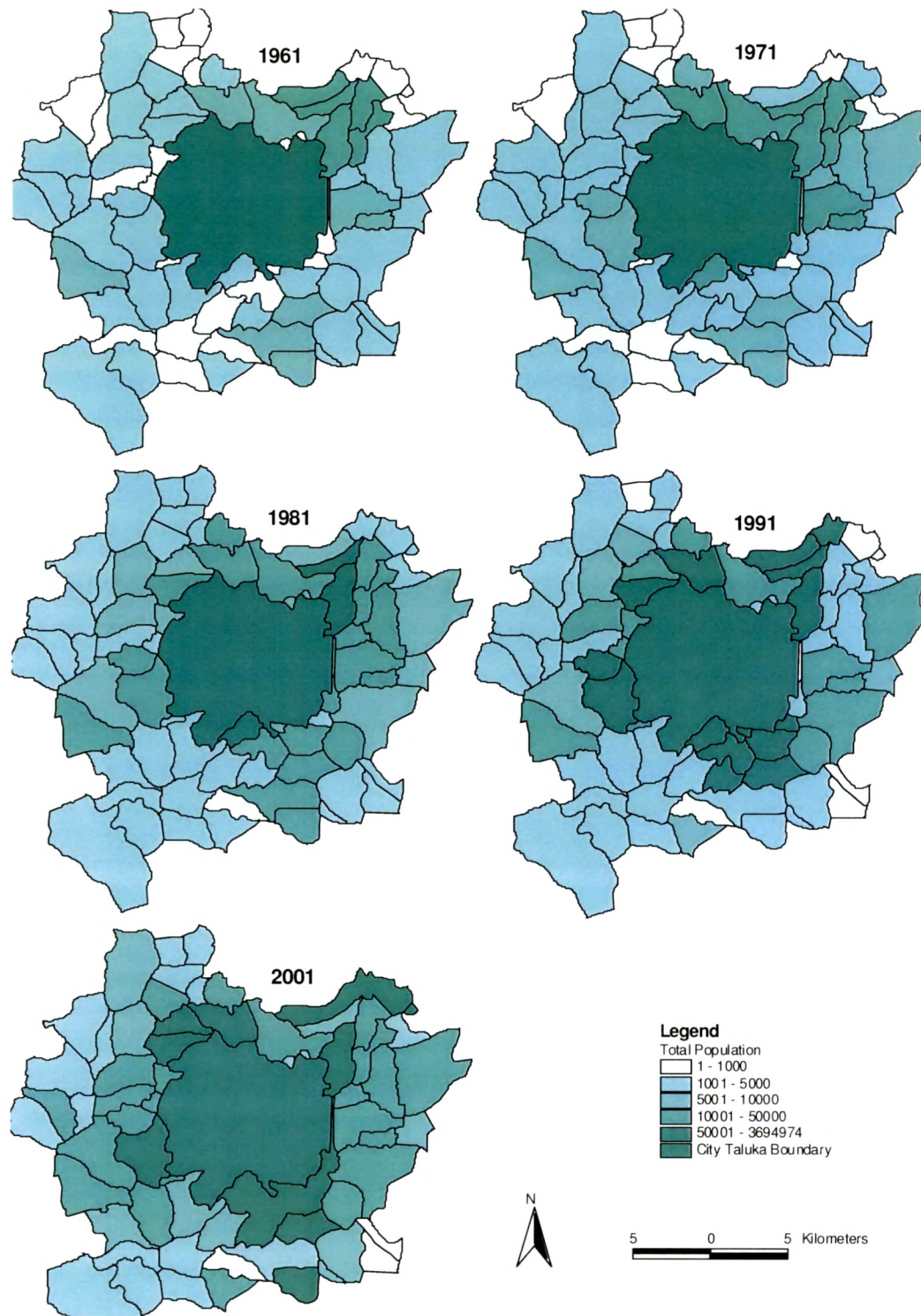
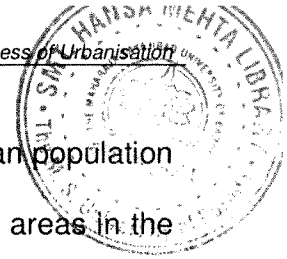


Plate 2.2 – Ahmedabad City Taluka Region: Growth of Population

Source: Prepared from Base Map, BISAG, Gandhinagar



It is also evident from the table no.2.1 that along with the urban population the urban area too has increased with the conversion of rural areas in the last four decades. In 1961 the territory of the Ahmedabad City Taluka under study was covering an area of 290.15 sq. km. and has risen to 382.78 sq. km. in 2001.

In the forty five years the region has recorded an increase of 100.88 percent in the territory of the urban area clearly indicates the level of transformation of agricultural land to non-agricultural uses.

Similarly a close look of the Plate 2.1 also explains that in 1981 pace of urban development was mainly confined to the eastern direction due to the development of industrial estate while in 1991 the process of development gradually shifted towards the western side largely being used to meet the emerging need of adequate space for residential requirements. Thereafter, by 2001 the development has start increasing in all directions and a resolution had to be passed in 2006 to incorporate most of the surrounding villages, and gradually their character was already changing due to increasing pressure of the city. Looking into the development pattern it becomes clear that Ahmedabad City Taluka has been growing in all directions, though river Sabarmati has divided it into two different areas considering the pattern of land use i.e. land use largely remains industrial with its ancillary activities in east and the western part is being transformed into residential zone.

Housing along with other facilities is the basic requirement of man beyond the air, water and food. Nature and size of the residential accommodation is required for the physical and mental health as well as social well being of

a family. Provision of affordable housing besides providing a shelter, is of considerable importance for the socio-economic upliftment of the urban society along with quality of life for the residents of the urban areas. Housing is one of the key sectors, which apart from giving general protection provides access to health, education, general sanitation and other welfare services being ensured by the civic bodies.

Housing in the context of city structure, bears strong spatial relationship and provides an appropriate structure of living areas in relation to work centres, production centres and access to various facilities and becomes a key to the success of development strategy being planned and implemented for the urban areas as has been done in the study region also.

It is evident from Table no.2.3 that during the period 1961-2001 number of households in the Ahmedabad City Taluka (Plate 2.3) has recorded an increase of 235.13 per cent. While during the period of 1961 to 1991 number of occupied residential houses too has increased by 164.24 per cent as has been tabulated in table 2.4.

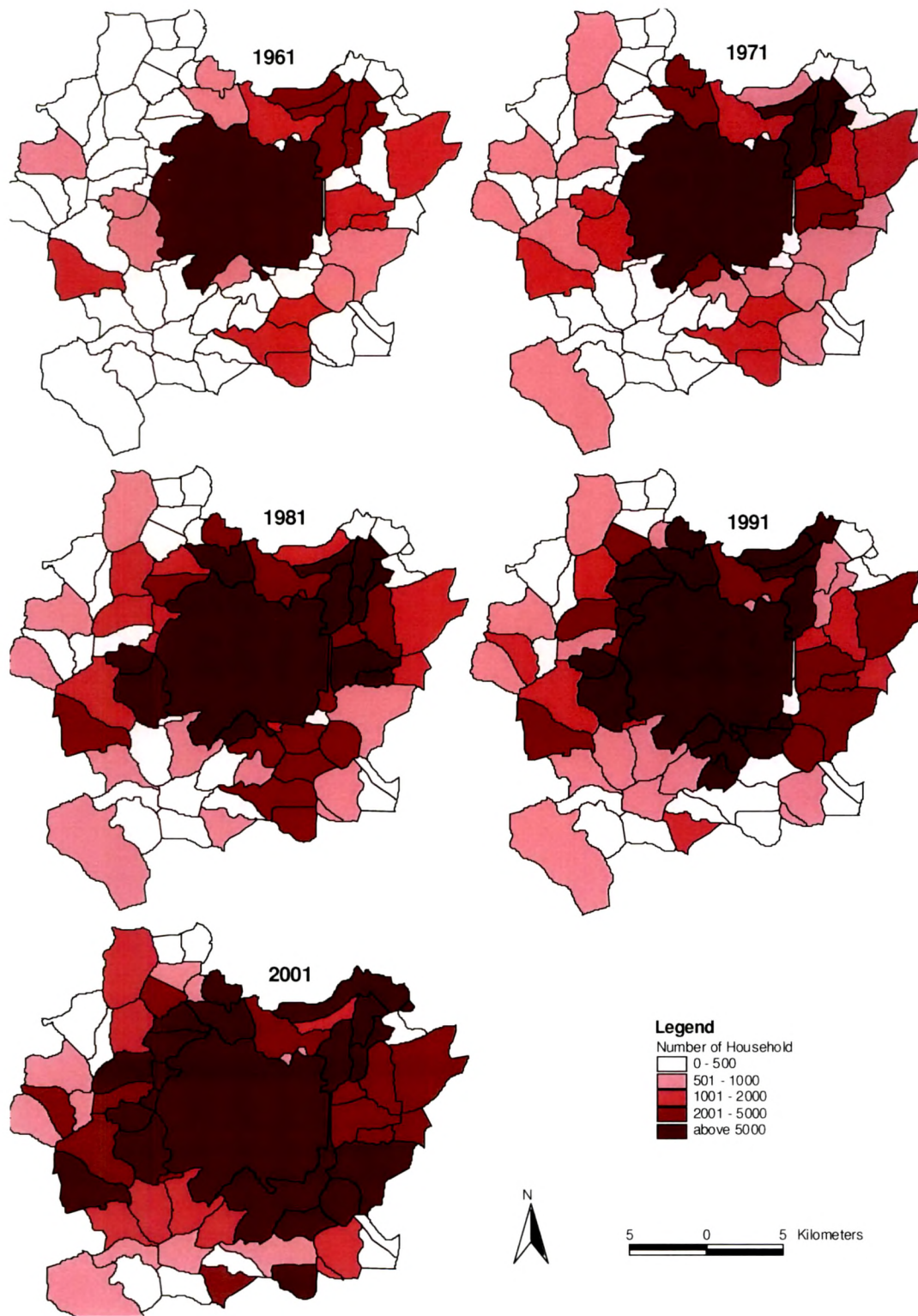


Plate 2.3 – Ahmedabad City Taluka Region: Total Households
Source: Prepared from Base Map, BISAG, Gandhinagar

Table 2.3 - Ahmedabad City Taluka: Composition of Households 1961-2001

Census Years	Total HH	Percentage change	Rural HH	Percentage change	Urban HH	Percentage change
1961	249817		10426		239391	
1971	336070	34.53	8242	-20.95	327828	36.94
1981	467623	39.14	4671	-43.33	462952	41.22
1991	628892	34.49	2169	-53.56	626723	35.38
2001	837223	33.13	1001	-53.85	836222	33.43
1961-2001		235.13		-90.40		249.31

Source: District Census Handbook, Year 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

Table 2.4 - Ahmedabad City Taluka: Composition of Residential Households 1961-1991

Census Years	Total Residential HH	Percentage change	Rural Residential HH	Percentage change	Urban Residential HH	Percentage change
1961	236606		7990		228616	
1971	332144	40.38	7721	-3.37	324423	41.91
1981	465480	40.14	4661	-39.63	460819	42.04
1991	625197	34.31	2146	-53.96	623051	35.21
1961-1991		164.24		-73.14		172.53

Source: District Census Handbook, Year 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

In 1961 the number of occupied residential houses was 2,36,606 and with an increase of 164.24 percent in the year 1991 reached to 6,25,197. While in the case of households in the year 1961, which were 2,49,817, and with an increase of 235.13 percent the number of households reached to 8,37,223 in the year 2001 (Table 2.3). This clearly explains that pressure on the available residential space is constantly increasing. As a result the pressure on the available residential houses with the increase of households too is increasing. To meet the growing and expanding needs the available residential houses have been redesigned to accommodate the additional households and at times the quality of living environment has been compromised. In some of the areas and localities considering the cost not only the size of residential houses has been compromised. The non-availability of adequate common open space too has become responsible for various emerging health disorders and for deterioration of the environmental quality in residential areas.

Table 2.5 - Ahmedabad Urban Area: Composition of Households 1961-2001

Census Year	Total Residential HH	Percentage change	Rural Residential HH	Percentage change	Urban Residential HH	Percentage change
1961	249817		10426		239391	
1971	336070	34.53	9830	-5.72	327828	36.94
1981	481259	43.20	4318	-56.07	476588	45.38
1991	650193	35.10	1467	-66.03	648024	35.97
2001	887511	36.50	1001	-31.77	886510	36.80
2006	894631	0.80			894631	0.92
1961-2006		258.11		-100.00		273.71

Source: District Census Handbook, Year 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

Table 2.6 - Ahmedabad Urban Area: Composition of Residential Households 1961-1991

Census Year	Total Residential HH	Percentage change	Rural Residential HH	Percentage change	Urban Residential HH	Percentage change
1961	236606		7990		228616	
1971	332144	40.38	7721	-3.37	324423	41.91
1981	479028	44.22	4661	-39.63	474367	46.22
1991	646333	34.93	2146	-53.96	644187	35.80
1961-1991		173.17		-73.14		181.78

Source: District Census Handbook, Year 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

The number of households has recorded an increase of 258.11 percent (2,49,817 in 1961 to 8,94,631 in 2006) as shown in Table 2.5. The residential houses too has shown a rise of 173.17 percent (2,36,606 in 1961 to 6,46,333 in 1991) as presented in Table 2.6 and Plate 2.4. However substantial gap between the number of households and residential houses has gradually increased (Table 2.6). Due to this very fact people are forced to live in the unhygienic conditions where at times people have to live with shared civic amenities or even without such amenities.

According to Table 2.7 it is concluded that during the year 1961 total population of Ahmedabad City Taluka rose to 12,60,944, out of which male population was recorded as 6,97,781 while female population was 5,63,163. The urban area in city taluka grew in every decade increasing the population to 42,20,048 in 2001, a rise of 234.67 percent. The sex ratio

has also improved over the last four decades, showing a change with 885 in 2001 as compared to 807 in 1961.

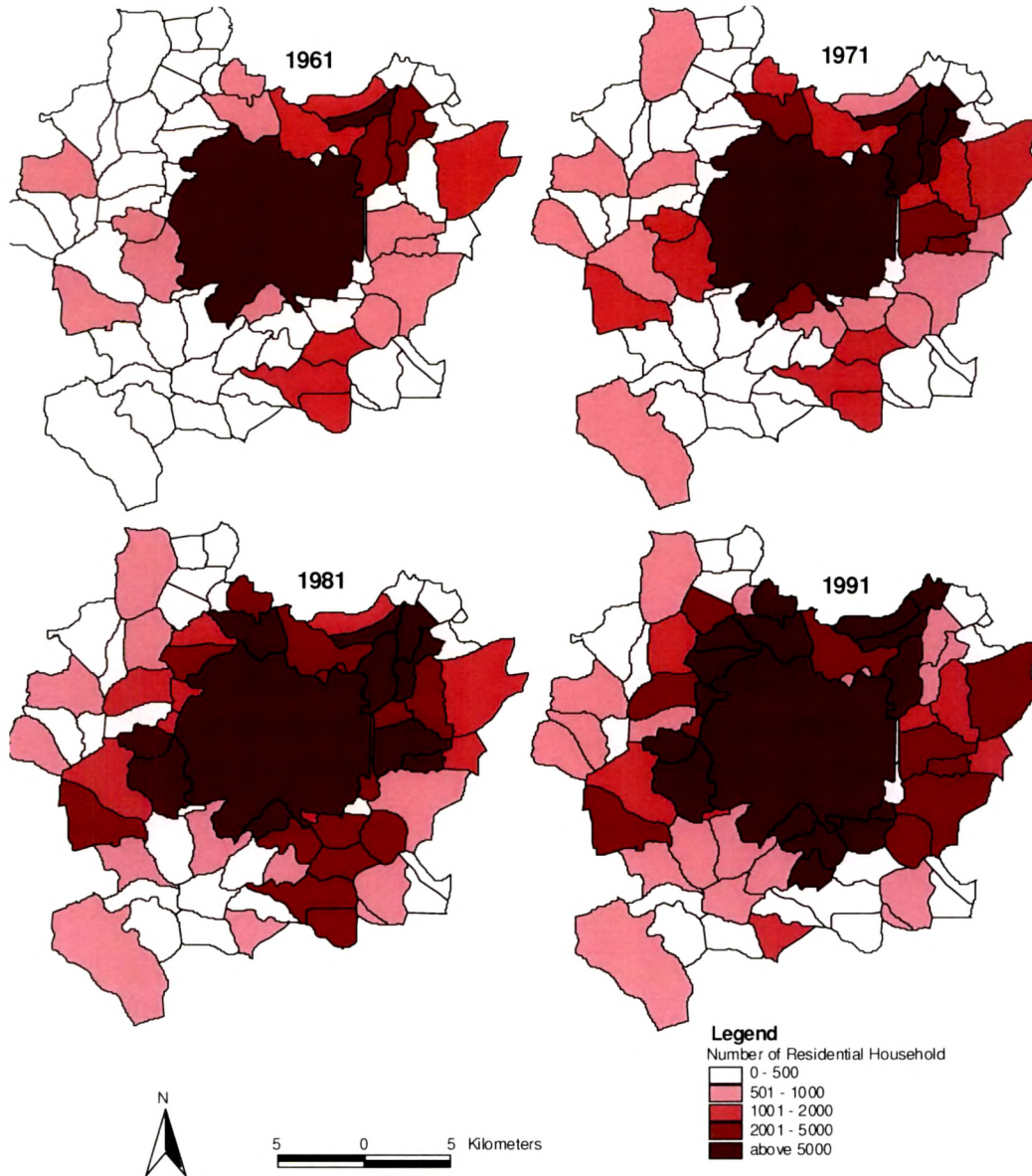


Plate 2.4 – Ahmedabad City Taluka Region: Total Residential Houses

Source: Prepared from Base Map, BISAG, Gandhinagar

Table 2.7 - Ahmedabad City Taluka: Composition of Population 1961-2001

Years	Total Population	Percentage Change	Total Male	Percentage Change	Total Female	Percentage Change	Sex Ratio
1961	1260944		697781		563163		807
1971	1803085	42.99	984652	41.11	818433	45.33	831
1981	2530920	40.37	1353453	37.45	1177467	43.87	870
1991	3250464	28.43	1720413	27.11	1530051	29.94	889
2001	4220048	29.83	2238449	30.11	1981599	29.51	885
1961-2001		234.67		220.79		251.87	

Source: District Census Handbook, Year 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

Table 2.8 - Ahmedabad Urban Area: Composition of Population 1961-2001

Years	Total Population	Percentage Change	Total Male	Percentage Change	Total Female	Percentage Change	Sex Ratio
1961	1260944		697781		563163		807
1971	1803085	42.99	984652	41.11	818433	45.33	831
1981	2601583	44.29	1391631	41.33	1209952	47.84	869
1991	3350986	28.81	1774338	27.50	1576648	30.31	889
2001	4452919	32.88	2363143	33.18	2089776	32.55	884
2006	4487348	0.77	2381478	0.78	2105870	0.77	884
1961-2006		255.87		241.29		273.94	

Source: District Census Handbook, Year 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

Ahmedabad urban area by 2006 recorded an increase of 255.87 per cent in its total population, which rose to 44,87,348 having total male population of with 23,81,478 recording an increase of 241.29 per cent, while total female population with 21,05,870 recorded an increase of 273.94 per cent as compared to 1961 population. The sex ratio has improved from 807 in 1961 to 884 in 2006 (Table 2.8).

2.8. OUTGROWTH CENTRES

With the process of centrifugal force the various activities including the residential activities gradually have moved towards the fringe area, considering the availability of cheap and adequate land from the rural areas which has become the main pull factor. As a result, those activities which require cheap as well as adequate land assessing the future expansion have preferred to shift their activities on the outer margins of the Ahmedabad city area. Some of the activities includes establishment of industries, transport nodes i.e. railway station, bus stand, educational institutions and residential colonies etc. as for horizontal expansion more space is required. The process of decentralisation towards the outer margins has played a key role in the growth and expansion of towns as well as of the villages. As a result the adjoining areas too have emerged as out growth areas of this urban centre.

The development of centrifugal of any town is supported by its situation. The nature of land, transportation and availability of various facilities emerging as main factors became responsible for the development of its adjoining rural areas. Among various factors availability of open space has become the main factor in the transformation of the emerging out growth areas supporting the expansion of urban areas with adequate space gradually transformed for establishing industrial units, transport network and/or for residential colonies. Gradually after gauging the problem of space within the urban areas, outward movement starts to the adjoining areas which emerge as outgrowing areas after assessing the availability of adequate space on reasonable cost as compared to the escalating cost and non-availability of land in the core areas of the urban centres.

With the emergence of such out growth areas accommodating urban population and diversified activities added to urban centres became possible. Such emerging areas remain suitably connected with the main urban centres and in many ways cater to the growing needs of the urban centres as well as of the adjoining rural areas too have supported. Similarly, outgrowth centres are being created in various directions in the study region covering the rural areas. Expansion of the diversified commercial and industrial activities in the study region is being suitably accommodated in these growth centres as well as has supported the adjoining rural areas.

Urbanisation in Ahmedabad City Taluka region is considered to have the main urban complex of Ahmedabad Municipal Corporation (AMC) and the villages around it with the dominance in agricultural activity.

The growth centres of Sanand, Mehamedabad, Dehgam, Kalol and State Capital of Gandhinagar too have contributed to the growth of Ahmedabad. These centres have been encouraged as growth centres on the periphery to absorb the rural migration and reduce the pressure on Ahmedabad city. Ahmedabad Urban Development Authority (AUDA) has also planned townships in these growth centres. However all these measures could not help in releasing the pressure off Ahmedabad city and the immediate surrounding villages.

The pace of urbanisation picked up by 1980s when villages of Daskroi taluka became as part of the out growths of Ahmedabad City Taluka namely Bodakdev, Kali, Ramol, Thaltej and Vatva.

By 1991 additional areas came under the influence of Ahmedabad as an outcome of the urbanisation and Chenpur, Muthiya, Vastral, Hathijan, Sola, Vinzol and Singarva villages from Daskiroi taluka became a part of the city. Similarly Chandkheda and Motera villages from Gandhinagar district too joined the territory of the Ahmedabad Urban Area.

In 2001 Oganaj, Kathwada, Ghuma, Ambli, Fatewadi, Gota, Bopal and Lambha of Daskroi taluka too became the part of this highly urbanising Ahmedabad City Taluka region. In addition to this Adalaj and Chiloda (Naroda) villages from Gandhinagar district too were added as the part of the Ahmedabad Urban Expansion.

Considering time constrain, the villages of Gandhinagar district which are a part of Ahmedabad urban expansion have not been taken up in the present study in order to avoid the possible complexity of the two administrative territories.

2.9. TRANSFORMATION OF LAND USE

Urban land use refers to the spatial distribution of various functions. It mainly includes residential or living areas, industrial, commercial and retail business areas or major work areas, institutional areas and areas for leisure time functions within the territory of the city and/or urban areas.

Land is the basic resource of human society and land use is the surface utilisation of the developed and available vacant land on a specific location at a given time and space. Land use is the systematic arrangement of various classes of land placed for diversified uses on the basis of certain characteristics, mainly to identify and understand the fundamental uses intelligently and effectively to fulfil the emerging needs of human society and other related activities. Hence, land has to be carefully used, so that it may fulfil growing and varied needs, after its proper allocation. Use of land has been changing to meet the varying demands considering the level of the society and the life style of the local people.

Thus land plays an important role in determining man's economic, social and cultural progress. Considering the growth of population and changing needs of population gradually the use of land also changes. Over a period of time, a large proportion of agricultural land has been transformed to meet the growing needs of non-agricultural activities. Attempts have also been made to ensure the proper utilisation of the available land within the urban territory. Patterns of land-use in the region have been presented.

2.9.1. DEVELOPMENT PLAN 1980

In the earlier Development Plans of AUDA, specific zones for cultivation as the predominant activity were demarcated. But due to the increasing pace of urbanisation and pressure on the available resources the agriculture sector became the sufferer due to the speedy conversion of agricultural land into non-agricultural area in order to meet the requirements of the urban expansion. Though the main objectives of the Development Plans to plan the process of development in accordance and harmony with its proposals and promote the development keeping the environment of the area healthy has been defeated.

However, in Development Plan of 1980, though villages have been included in the AMC area but substantial area was spared for agriculture activities, specially from Shilaj, Hebatpur, Memnagar, Fatewadi, Bakrol Badrabad, Bhadaj, Tragad, Vanzar, Chenpur, Jagatpur, Navapura, Visalpur, Lambha, Jodhpur, Sarkhej, Vastrapur, Gyaspur, Piplaj, Saijpur, Gopalpur and Oganaj villages. On the other hand some residential schemes were also proposed by Gujarat Housing Board, Mahatama Gandhi Vasahat, Gujarat Slum Clearance Board, Bhagavat Vidyapeeth and Sola Civil Hospital etc. in these areas.

The landuse classification has been done according to the orientation of National Highway and Railway Line. The area lying between these two routes was designated as residential zone from the villages of Gota, Jagatpura, Chandlodiya,

Makarba and Ghatlodiya, Thaltej had Bhaktinagar and Space Application Centre. Area beyond the highway was kept for various agricultural activities. The Development Plan of 1980 incorporated AMC areas beyond Navrangpura and also the then Octroi Check Post, Vejalpur and Chandkheda were proposed for residential activities, Kali village land was provided to Railways. TP schemes were proposed in Ranip, Chenpur and Chandkheda villages while areas for recreational activities were proposed in old and new Kotarpur.

Industrial area was defined by the 24 metre road and most of the area falling on the North of this road is the industrially developed villages which were further designated as industrial zones. Naroda, Narol, Odhav, Vatva, Singarva, Ramol, Muthiya, Vinzol were designated as industrial zones. However in Saijpur Gopalpur and Piplaj villages along with a few others illegal encroachment for industrial development with great magnitude can be witnessed.

2.9.2. LAND USE IN 1990

As per existing landuse of 1997 (Table 2.9) more than one third (38%) of the total area was transformed into residential use, followed by 15.29 per cent of the area lying vacant including the gauchar land of the villages, 12.23 per cent of the land under industries and 7.54 per cent of the total area being demarcated for transportation network.

Table 2.9 - Ahmedabad City Taluka Region: Landuse Pattern in 1997

S. No.	Land Use / Designation	Total area in km ²	Percent of total area
1	Residential including Gamtal	111.18	38.00
2	Open/Vacant Land	44.73	15.29
3	Agricultural Land	10.5	3.69
4	Commercial	7.48	2.56
5	Industrial	35.79	12.23
6	Amenities	16.11	5.49
7	Water bodies and tanks	44.76	15.30
8	Transportation network	22.05	7.54
	Total	292.60	100.0

Source: Revised Draft Development Plan of AUDA–2011AD Part-I, Vol.2

2.9.3. LAND USE IN 2011

The Ahmedabad Urban Development Authority is responsible for the land use planning of the areas lying in its administrative territory. The area under AUDA may be seen as various sub-units depending on the administrative jurisdictional limits and extent of development of the total area of 478.71 sq. km. (Plate 2.5) 50.0 per cent of the total area has become the built up area. Water bodies and wastelands cover 3.05 percent of the total area. Industries cover 8.0 percent of the area. As per the State Government Policy no major industrial development within 24 km of AMC limit is permitted in AUDA area. Considering the existing development conditions certain areas for industrial use are designated for light industries as well as for general industry, along with existing industries at Vatva, Naroda and Odhav (all lying within AMC) villages.

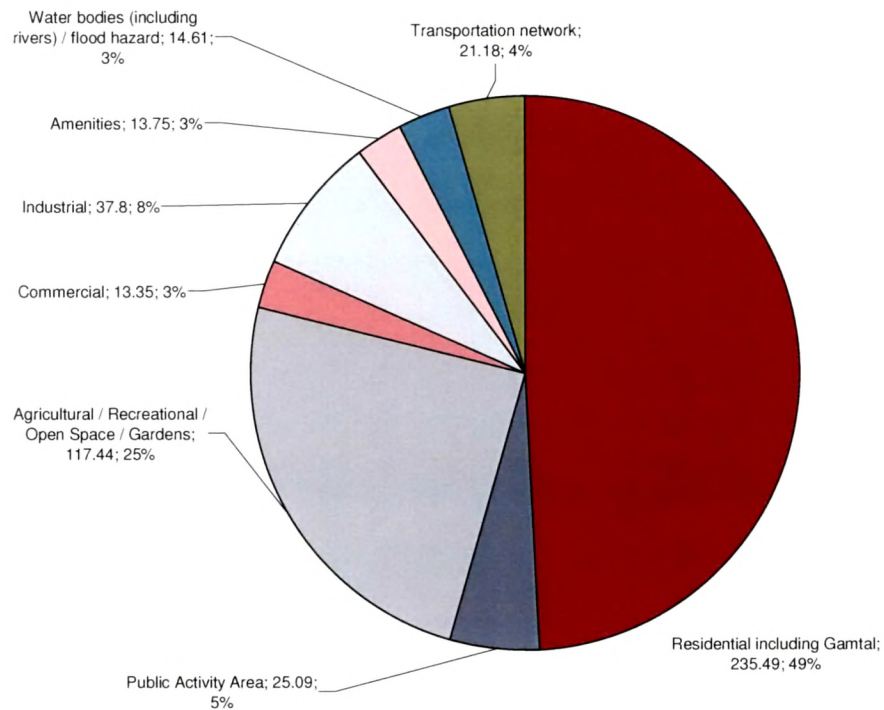


Plate 2.5 – Ahmedabad City Taluka Region: Landuse in 2011

Source: Revised Draft Development Plan of AUDA–2011AD Part-I, Vol.2

2.9.4. PROPOSED LAND USE PLAN (2011)

The Development Plan 2011 proposes further increase in residential areas from 38.0 per cent to 50.0 per cent. No significant change has been proposed in industrial area due to the State Government's restrictive policy. Though 15.0 per cent of the area still exists as open the city still lacks adequate number of gardens and parks. Looking at the population pressure, it is proposed to develop 25.0 per cent area as Agricultural / Recreational / Open Space / Gardens. 3.0 per cent decrease in the area under transportation from 7.5 per cent to 4.5 per cent is envisaged and this probably will pose certain problems as numbers of vehicles registered are increasing everyday.

2.10. OCCUPATIONAL STRUCTURE

The economic opportunities offered by a developed city initiates a series of diversified activities for the villagers, signalling a point of departure from their traditional occupation. For instance in and around the large cities like Ahmedabad in our country, villages have entered the market oriented economy not only by selling vegetables and milk products but also by providing labourers to meet the expanding and increasing demand for labourers. The cities have opened up for the villagers and wide range of employment opportunities are being offered.

Occupational structure presents the magnitude of people living in a region and who are engaged in various economic activities to earn their livelihood. Persons who are not engaged in an economic activity are treated as non-workers or dependents. The capacity of a city to provide variety of jobs and to absorb its working population in various sectors of economy directly and indirectly indicates the economic ability of the region and this dynamics can be witnessed in the Ahmedabad city taluka region. The participation rate also gives an idea about the share of working population in proportion to the dependent and non-working population residing in the study region. Proportion of Marginal workers was considered from 1981 census onwards.

The activities of the main workers have been classified further into Primary, Secondary and Tertiary. Here Primary workers are Cultivators, Agriculture Labourers, Livestock, Fishery, Forestry, Hunting and Plantation, Orchards and allied activities whose proportion has recorded a constant decline.

Secondary activities include mining and quarrying, manufacturing, processing, servicing and repairs and construction. These are activities of an industrial economy, which forms an integral part of study region.

Tertiary activities are the ones depends on the previous two and include trade and commerce, transport, storage and communication and other services. It may be noted here that the percentage of primary activities has gone down and very few farmers are actually dependent on cultivation. The motive remains to be recognised as farmers in Form no. 7/12. Their dependency only on cultivation has been greatly reduced and most of them are into business like trading, transport, etc. It may be seen from the Table 2.10 that percent of main workers in the city taluka has not reduced drastically. The difference is only from 31.39 percent in 1961 to 30.41 percent in 2001. This may highlight the fact that occupation as farmers is still there but cultivation has suffered. Percent of non-workers has also not changed. The percentage of marginal workers has gone up from 0.33 in 1981 to 1.48 in 2001.

Table 2.10 - Ahmedabad City Taluka: Occupational Structure

Percent Workers		1961	1971	1981	1991	2001
Total	Main	31.39	28.59	28.68	28.69	30.41
	Marginal			0.33	0.32	1.48
	Non	68.61	71.41	70.99	70.71	68.11
Rural	Main	37.33	28.74	29.02	37.54	31.31
	Marginal			1.13	0.42	2.94
	Non	62.67	71.26	69.85	62.05	65.74
Urban	Main	31.12	28.59	28.67	28.67	30.41
	Marginal			0.32	0.32	1.48
	Non	68.88	71.41	71.00	70.74	68.11

Source: District Census Handbook; 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

In rural areas the main workers has gone down from 37.33 percent in 1961 to 31.31 percent in 2001 (Plate 2.6). Proportion of marginal and non-workers has increased over the decades.

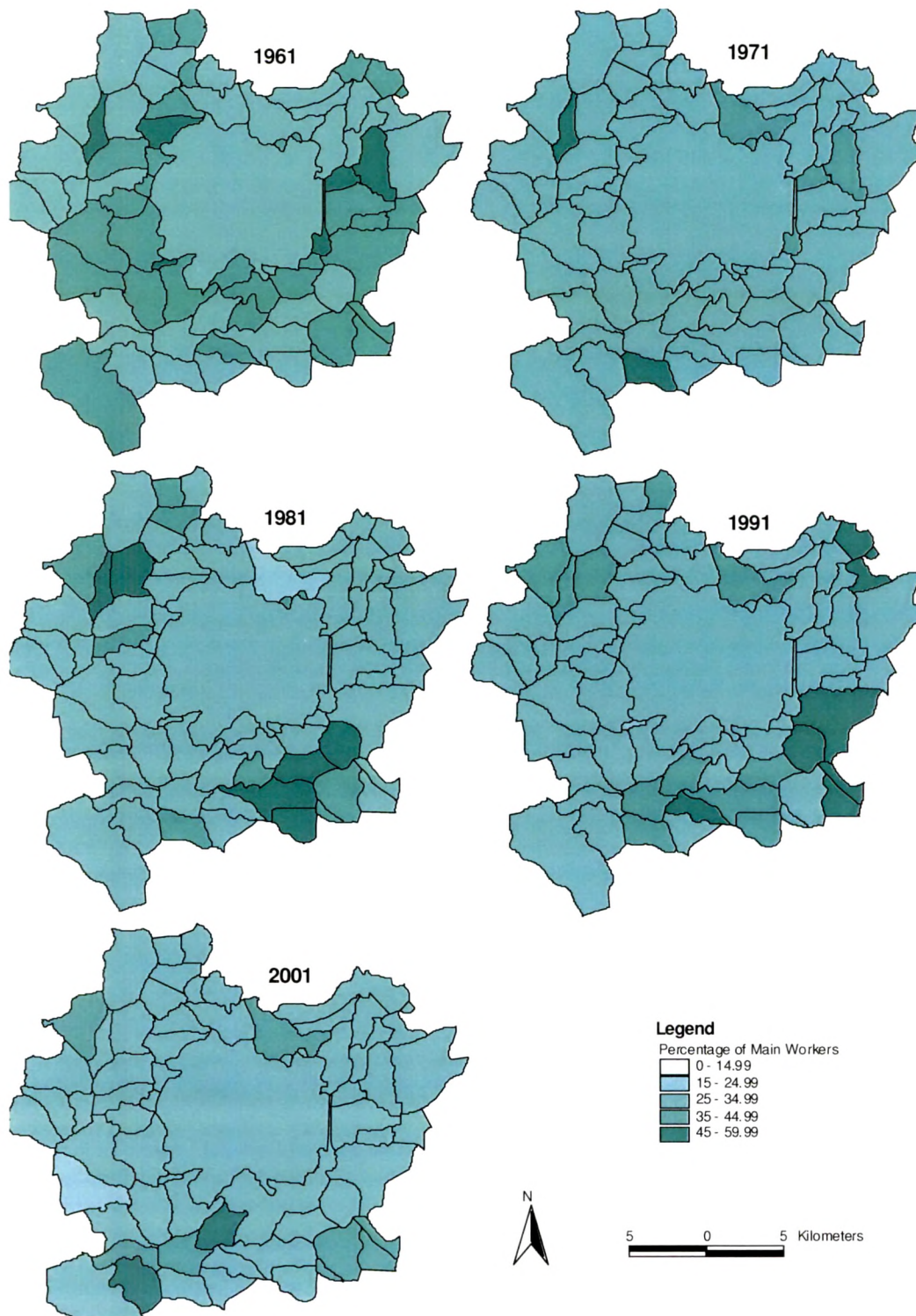


Plate 2.6 – Ahmedabad City Taluka Region: Per cent of Main Workers

Source: Prepared from Base Map, BISAG, Gandhinagar

Looking at the different types of main workers in the City Taluka it is observed that there is tremendous increase in tertiary activities rising from

42.75 percent in 1961 to 97.53 in 2001, primary activity remain only at 0.43 percent in 2001. Secondary activities have also reduced from 55.01 percent in 1961 to 2.03 percent in 2001. The change observed is that in 1961 secondary activities formed more than 50 percent of the main workers but by 2001 tertiary activities are at 97.53 percent and the other two form a nominal part of the main working population (Table no. 2.11). Primary workers in the rural areas have reduced from 29.41 percent in 1961 to 14.46 percent in 2001.

Table 2.11 - Ahmedabad City Taluka: Composition of Main Workers

Percent Main Workers		1961	1971	1981	1991	2001
Total	Primary	2.24	2.30	0.95	1.78	0.43
	Secondary	55.01	49.50	2.10	41.56	2.03
	Tertiary	42.75	48.20	96.94	56.66	97.53
Rural	Primary	29.41	37.16	30.81	39.41	14.46
	Secondary	43.60	29.33	3.74	40.27	1.54
	Tertiary	26.98	33.52	65.46	20.33	84.00
Urban	Primary	0.75	1.46	0.67	1.64	0.42
	Secondary	55.63	49.98	2.09	41.56	2.03
	Tertiary	43.61	48.55	97.24	56.80	97.55

Source: District Census Handbook; 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

Considering the Ahmedabad Urban area which includes the out growth villages from Daskroi taluka, the picture is no different from Ahmedabad City Taluka (Table 2.12).

Table 2.12 - Ahmedabad Urban Area: Occupational Structure

Percent Workers		1961	1971	1981	1991	2001	2006
Total	Main	31.39	28.59	28.71	29.00	30.46	30.49
	Marginal			0.33	0.33	1.52	1.54
	Non	68.61	71.41	70.96	70.67	68.02	67.98
Rural	Main	37.33	28.74	29.02	37.54	31.31	0.00
	Marginal			1.13	0.42	2.94	0.00
	Non	62.67	71.26	69.85	62.05	65.74	0.00
Urban	Main	31.12	28.59	28.71	28.98	30.46	30.49
	Marginal			0.32	0.33	1.52	1.54
	Non	68.88	71.41	70.97	70.70	68.02	67.98

Source: District Census Handbook; 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

But looking at the composition of the main workers it may be observed that proportion of primary workers stands at 0.81 percent in 2001 and 1.09

percent in 2006. This is due to the villages that have been included as part of Ahmedabad Municipal Corporation in the delimitation exercise done in 2006 (Table 2.13).

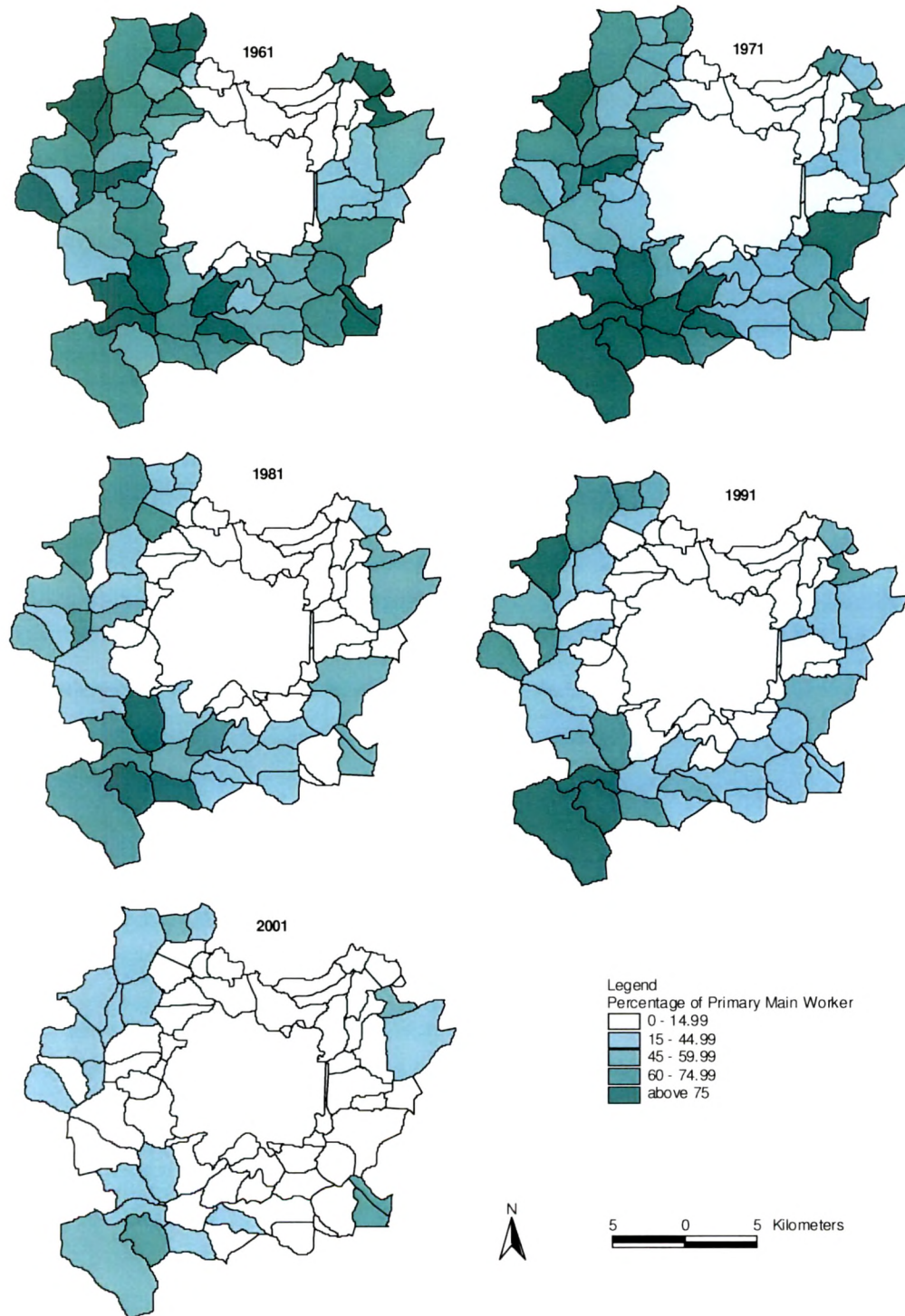


Plate 2.7 – Ahmedabad City Taluka Region: Per cent of Primary Main Workers

Source: Prepared from Base Map, BISAG, Gandhinagar

The change by addition of area on composition of workers was not much in 1981 with very slight rise of 0.03 percent in main workers; in 1991 this addition rose to 0.31 percent, proportion of non workers reduced by same percent. 2001 saw a marginal increase of 0.05 percent in main workers.

Table 2.13 - Ahmedabad Urban Area: Composition of Main Workers

Percent	Main Workers	1961	1971	1981	1991	2001	2006
Total	Primary	2.24	2.30	1.21	2.02	0.81	1.09
	Secondary	55.01	49.50	2.10	41.60	2.01	2.01
	Tertiary	42.75	48.20	96.69	56.37	97.17	96.90
Rural	Primary	29.41	37.16	30.81	39.41	14.46	0.00
	Secondary	43.60	29.33	3.74	40.27	1.54	0.00
	Tertiary	26.98	33.52	65.46	20.33	84.00	0.00
Urban	Primary	0.75	1.46	0.94	1.88	0.80	1.09
	Secondary	55.63	49.98	2.09	41.61	2.01	2.01
	Tertiary	43.61	48.55	96.98	56.51	97.19	96.90

Source: District Census Handbook; 1961, 1971, 1981, 1991 and District Census Handbook on CD for 2001

With the delimitation of AMC rural main workers reduced by 31.31 percent. In proportion of primary workers there has been an increase of 0.26 percent to 0.24 percent to 0.38 percent to 0.65 percent in the years 1981, 1991, 2001 and 2006 respectively. This clearly shows that over a period of time with the expansion of the urban territory, rural character has been transformed with the inclusion of their area into the urban limits.